St. MARY'S UNIVERSITY

SCHOOL OF GRADUATE STUDIES

PRACTICES AND CHALLENGES OF LOGISTICS MANAGEMENT THE CASE OF PLAN INTERNATIONAL ETHIOPIA

BY

GELMESSA MULETA FUFA

May, 2017

ADDIS ABABA, ETHIOPIA

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APPROVED BY BOARD OF EXAMINERS

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Internal Examiner	**Signature**

DECLARATION

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

Gelmessa Muleta Fufa _____

St. Mary's University, Addis Ababa May, 2017

ENDORSEMENT

This thesis has been submitted to St. Mary's University school of graduate studies for examination with my approval as a university advisor.

Solomon Markos (PhD) _____

Advisor Signature

St. Mary's University, Addis Ababa **May, 2017**

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Acronyms

A PA-	Amhara program area
AA PA-	Addis Ababa program area
CO-	Central office
G PA-	Gambella program area
IT-	Information technology
LM-	Logistics management
PIE-	Plan International Ethiopia
SAP-	System application package
SC-	Supply chain
SCM-	Supply chain management
SNNP PA-	South people nation & nationalities program area
SCR	Supplier and customer relationship
TM-	Transport Management

ABSTRACT

Supply chain management has become a fundamental element in the modern organizations to help them to improve effectiveness, efficiency, and productivity of their companies in recent decades. Logistics management is part of supply chain management which deals with short term supply of goods and services. It is *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 customer requirements*," which includes inbound, outbound, internal, and external movements and return of materials for environmental purposes(Mentzer,et al. 2001; Naslund and Williamson 2010).

For achieving the objective of this study census survey was used and questionnaires were distributed to all Plan International Ethiopia logistics, finance and IT employees and 35 filled and returned the questionnaires and analyzed using descriptive statistics by making use of mean and standard deviation. Structured interviews questions were prepared and has taken place with PIE head of logistics and finance and the logistics coordinator who is in charge of the procurement of goods and services at PIE CO.

The major findings indicate that the most logistics practice of PIE are practiced in good conditions and some areas need improvement. The finding shows PIE has good relationship with its suppliers/customers but need to work on: Shared risk, Accurate ordering, Employee capacity building, Information sharing.

CHAPTER ONE

INTRODUCTION

1.1. Background of the study

Logistics management is a supply chain management component that is used to meet customer demands through the planning, control and implementation of the effective movement and storage of related information, goods and services from origin to destination. In a general business sense, *logistics* is the *management* of the flow of things between the point of origin and the point of consumption in order to meet requirements of customers or corporations. Logistics management activities typically include inbound and outbound transportation management, fleet management, warehousing, materials handling, order fulfillment, logistics network design, inventory management, supply/demand planning, and management of third party logistics services providers. To varying degrees, the logistics function also includes customer service, sourcing and procurement, production planning and scheduling, packaging and assembly. It is an integrating function, which coordinates all logistics activities, as well as integrates logistics activities with other functions including marketing, sales manufacturing, finance, and information technology(Mentzer, et al. 2001)

Logistics is the system of acquiring the right goods in the right quantity, in the right condition and deliver to the right place at the right time for the right cost (Tseng and Yue (2005).

Logistics management plays a significant role in the success of any company's operations and has a direct impact on its bottom line. More importantly, logistics processes play a big part in customer satisfaction, which is a more important than low product cost. Logistics professionals should think of themselves as a customer-facing portion of the company and strive every day to add value for their customers(Mentzer, et al. 2001).

Logistics management is often confused with supply chain management. Supply chain management has broader objectives and actually encompasses logistics management. Supply chain management (SCM) includes inter-enterprise, multi-functional processes that target everything from the supplier's inbound freight to the end consumer. Logistics management (LM) is the more practical, hands-on part of the supply chain where goods are transported into a facility, properly stored, handled and transported out. LM focuses on short-term procedures and SCM is focused on the long-term(Sliwczynski 2006).

Logistics is more than an incurred cost, as transportation and distribution can be instrumental in achieving competitive advantage. An effective logistics operation can provide a competitive advantage for a firm and increase a firm's market share(Chao 2011).

There is an increasing recognition that firms may need to build and manage closer, longer-term relationships with customers. These so called "partnerships" are tailored, mutually beneficial business relationships in which the coordinative forces include not only financial considerations, but also relational considerations (Naslund and Williamson 2010).

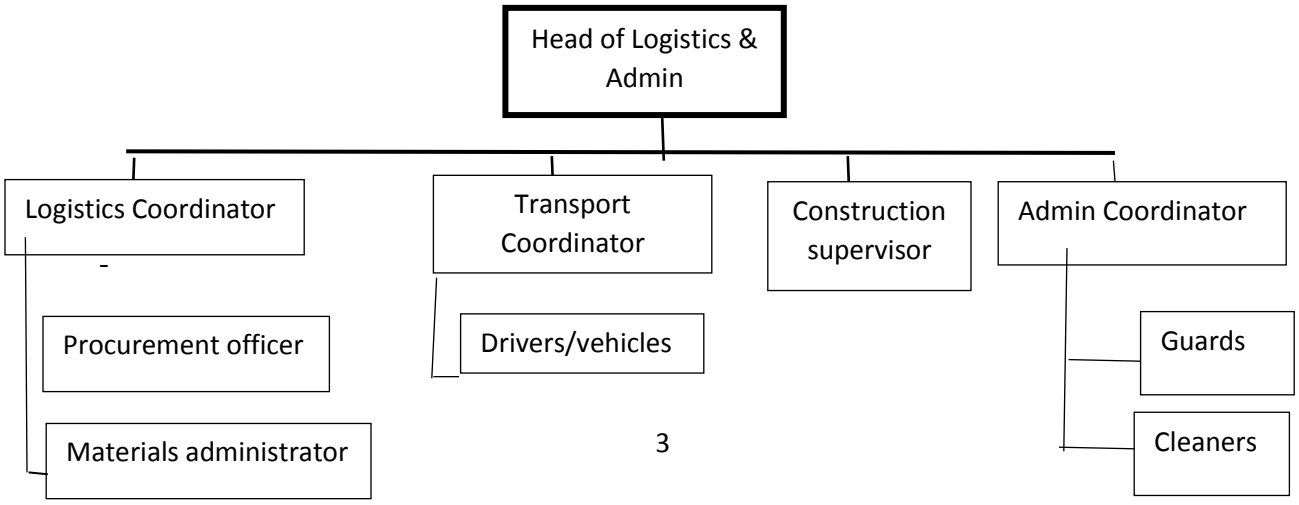
".....As the world moves from the industrial economy to the global competitive economy in form of information technology system capability, it is very important for firms to maintain their competitive advantage. In response to this challenge, firms are seeking the proper logistics innovation that will enable them to meet an increasing variety of customer expectations while keeping costs, delays, problems, disruptions, and performance losses at or near zero because it helps firms achieve competitive advantage by enabling rapid and cost-effective responses to specific customer requests. This research bases upon concept of logistics innovation of firms in order to be able to maintain competitive advantage"(Sakchutchawan, et al. 2011)

1.1.1. Organization Profile Study and Logistics Management System

Plan International is an independent non-profit organization that advances children's well-being and equality for girls. Working in building powerful partnerships for children for over 75 years and present in 70 countries, Plan International strives for a just world, tackling the root causes of the challenges facing girls and all vulnerable children while working together with children, young people, our supporters and partners. PIE has 304 employees of which 80 are at central office (CO) and the rest are in five project areas named: Addis Ababa project area (AA PA), Amhara project area (A PA), Oromia project area (O PA), Southern people's nations and nationalities project area (SNN PA), and Gambella project area (G PA).

Plan International Ethiopia fund sources are sponsor ships and grants. Every transaction is allocated to its work breakdown structure (WBS) created approved and linked in the SIP/SAP system. About 70% of Plan International Ethiopia expenditure goes for purchase of goods and services to meet the demand of its beneficiaries.

PIE Logistics Department has the following sections as seen in the work structure/Organo gram below:



1.1.2 Procurement

Procurement section takes care of all acquisition and delivery of goods and services of PIE of the central office (CO). Procurement of goods and services begins with procurement plan, purchase requisition, purchase order creation, goods receiving and storage, delivery and transport.

PIE uses on line procurement software called SAP/SIP and every procurement process is done in this live system. SIP/SAP is software used in the whole transaction throughout Plan International. The system works on online network and every data created in the system is stored at the remote server. Goods/service procurement is done only from pre-qualified suppliers/venders created in the system. A newly selected vender can be entered into the system with country director approval.

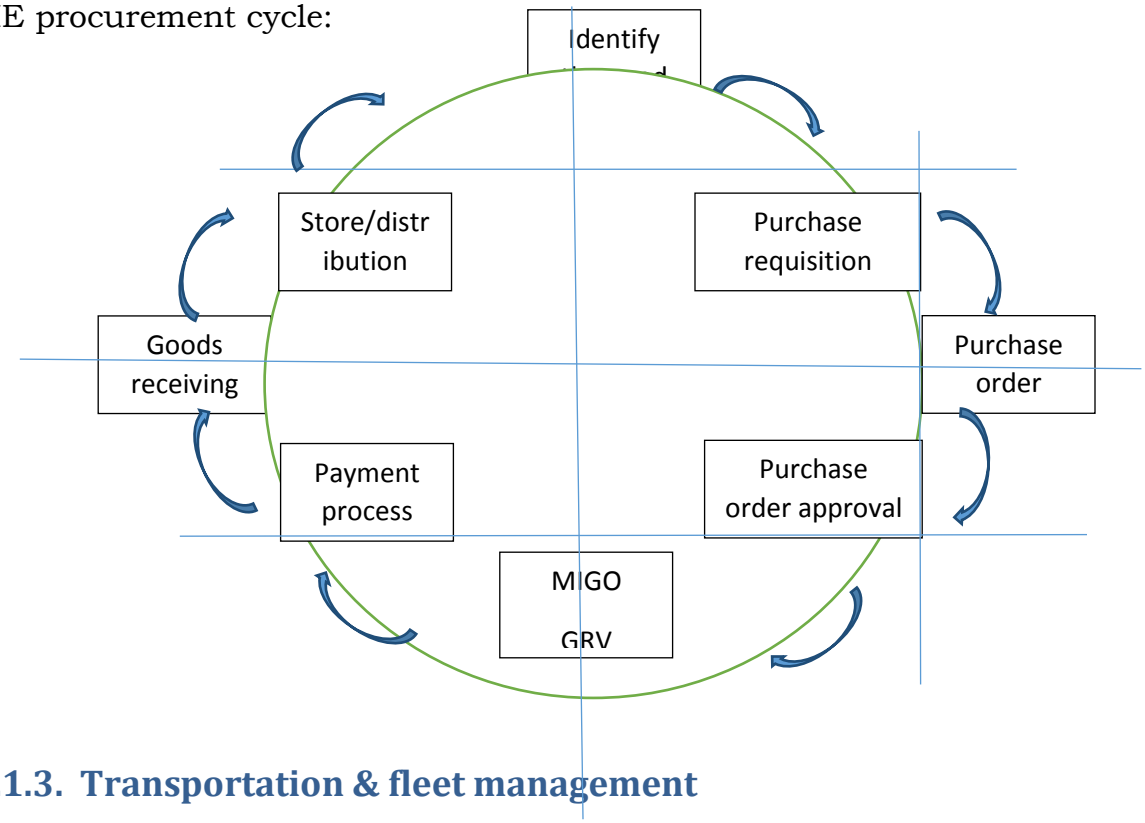
All suppliers pre-qualified and listed in the SIP/SAP to supply any purchase item will be contacted to receive request for quotation form (RFQ) according to PIE procurement guide line and threshold. Based on the threshold a single pro-forma can be collected from one supplier when the expected price of the item to be purchased is less than 10,000 ETB.

The procurement officer collects pro-forma from at least three suppliers based on the RFQ and the sealed envelopes containing pro-forma will be signed by the purchase committee members, and get opened.

Then logistics coordinator produces another purchase document called “Canvas sheet” which will be used to compare prices with respect to quality and quantity. Then the selected supplier will be highlighted and the form will print out and get signed by procurement committee.

The same item with the same price can procured from the supplier within 3 months and when the time interval goes beyond 3 months the old canvas sheet will be invalid other pro-forma will be collected.-

PIE procurement cycle:



1.1.3. Transportation & fleet management

PIE uses own light vehicles, motor bikes and rental cars to fulfill the transportation need of the organization. PIE has about thirty light vehicles & twenty motor bikes.

When the transport need exceeds beyond the number of vehicles the organization possesses, PIE hires vehicles from pre-qualified venders which have contractual agreement with it.

Transport risk management: PIE has comprehensive insurance for all its vehicles and hires rental vehicles with drivers which have comprehensive insurance and the management is done by PIE. PIE uses pool system to deploy its vehicle and drivers. Transport need request is supposed to be submitted to transport section ahead of the movement schedule, one week earlier for long field trip and one day earlier for intercity movement.

1.1.4 Training

PIE provides training to its employees through online trainings by getting registered for available and job related trainings.

1.2. Statement of the problem

Companies which have recognized opportunities that exist there in the supply chain management and directed their effort towards developing a competitive supply chain based on speed, flexibility, innovation, quality and responsiveness had significant improvement in customer service and their profitability. Therefore, the primary goal of supply chain management is to enhance competitive performance by closely integrating the internal function within a company & closely linking them with external operation of suppliers, customers, and other channel members(Fabbe-Costes, *et al.* 2008; Singh and Sohani 2011; Wright 2016).

The researcher of this study believes that the logistics service performance of the organization under this research is not optimum and there is a gap in logistics service like: service delivery delay, logistics service quality, etc due to unknown reasons.

Seeking an efficient and effective cooperation between supply chain organizations and each chain member must seek not only to improve its own individual competitiveness (i.e. quality, cost, delivery lead time, etc.) but also improves the competitiveness and performance of all enterprises in its supply chain. This improves information sharing, working together to reduce costs, cut lead time and building total quality into all the stages of the supply chain(Pateman, *et al.* 2016).

In order to make the supply chain management effective there must be effective implementation of the supply chain management practices namely good supplier and customer relationship, information sharing, internal operation, information technology(SCM) and training of employees among the upstream, internal and downstream of the supply chain. This would be applicable to the extent of expected degree when there is trust and honest among the SC members(Singh and Sohani 2011; Watabaji, *et al.* 2016)

The contribution of high delivery lead time, lack of training on logistics management, lack of appropriate warehouse, poor road infrastructure, transport systems and routing selections, finance and legal process, poor supplier-customer relation, poor coordination in between departments inside the organizations and others are little known and investigated.

If companies want to be effective and efficient in their work, implementing effective supply chain management is not questionable.

Therefore, conducting a research on practices and challenges of logistics management of private companies help to identify what adversely influences their success.

1.3. Research questions

To identify the challenges and practices of logistics management, the study will be guided by the following research questions.

1. What logistics practices take place in PIE?
2. What are the main challenges of logistics management in PIE?
3. How often does PIE provide training to its log employees to improve their knowledge?
4. How is PIE relationship to its suppliers and service providers?
5. How is the integration/collaboration among the key logistics staffs?
6. What is IT role in enhancing the logistics management in PIE?

1.4. Objective of the study

1.4.1. General objective

The general objective of this research is to examine the existing practices and challenges in logistics management in PIE.

1.4.2. Specific objectives

The specific objectives of this study are:-

a. To examine the challenges of LM in PIE.

b. To assess the employee's orientation of internal operation towards customer service.

c. To assess the extent of collaboration/integration among its supply chain partners.

1.5. Significance of the study

This study will create opportunity for the study organization and to other similar organizations to identify gap in performance related to logistics management practices and competitive advantage, and ways to improve performance. It can also create awareness to decision makers and concerned staffs of the firm on how and to what extent supply chain practice affects firm's operational performance. In addition the findings from the research will add more knowledge on the existing body of knowledge in the subject area and can be used as basis for those researchers who want to make further study in the same subject area in the future.

1.6. Scope of the study

The scope of this study is delimited on practices and challenges in PIE head office, Program area offices. The study focused on practice of the logistics management practice and challenges faced from purchase up to customer delivery point. Questionnaire for quantitative and interview conducted for qualitative data collection from PIE logistics and finance workers. The PIE and suppliers customers

relationship, Internal operation practices, Information sharing practices, IT use in PIE for all its supply chain management, training practices, Challenges/barriers of effective SCM implementation, Supply chain collaboration, companies integration with suppliers, Company's integration with customers/projects, Cross functional integration within the company, Customer service were assessed in this study.

The study was focused on the following points:

- Logistics management practice and logistics management challenges
- socio demographic variables (sex, age, education)
- work experience related variables(Year of services in PIE and out in logistics management)
- PIE and supplier relationship
- Information sharing practice
- IT use in PIE
- training practices,
- Supply chain collaboration
- companies integration with suppliers
- Company's integration with customers/projects
- Cross functional integration within the company

1.7. Limitation of the study

The scope of this study is done on practices and challenges at all PIE offices including central office (CO) and Program areas like: Addis Ababa program area (A.A PA), Oromiya Addis Ababa program area (O PA), Amhara program area (A PA), South Nations and Nationalities People program area (SNNP PA) and Gambella program area (G PA) to access all PIE logistics, finance and IT employees. The study focused on practice of the logistics management practice and challenges faced from purchase up to customer delivery point. Questionnaire and interview based on quantitative qualitative data collection from PIE head office logistics and finance workers was conducted as well as project area logistics, supply and IT employees. The PIE and suppliers customers relationship, Internal operation practices,

Information sharing practices, IT use in PIE for all its supply chain management, training practices, Challenges/barriers of effective SCM implementation, Supply chain collaboration, companies integration with suppliers, Company's integration with customers/projects, Cross functional integration within the company, Customer service will be assessed in this study.

An interview was carried out with PIE head of logistics & admin and CO logistics coordinator.

1.1. Limitation of the study

Due to time, finance and other constraints, the researcher could not be able to visit the program areas (PAs) to include the view of PIE beneficiaries in the project areas which have direct relation to the logistics activities. Due to time and resource constraint to reach the respondents at the PAs, the questionnaire was sent via e-mail to respondents and latter filled and sent back to the researcher.

Employee who always complains on the logistics performance of the PIE may be reluctant to give genuine because they believe that the problem will not be solved ever and the researcher also not sure on the implementation of the finding.

CHAPTER TWO

LITERATURE REVIEW

2.1. Definition of Logistics and Supply chain Management

Logistics is the management of the flow of goods between the point of origin and the point of consumption in order to meet some requirements, for example, of customers or corporations. The resources managed in logistics can include physical items, such as food, materials, animals, equipment, and liquids, as well as abstract items, such as time, information, particles, and energy. The logistics of physical items usually involves the integration of information flow, material handling, production, packaging, inventory, transportation, warehousing, and often security. The complexity of logistics can be modeled, analyzed, visualized, and optimized by dedicated simulation software. (Li 2014).

US Council of Logistics Management (now renamed as Council of Supply Chain Management Professionals) referred to logistics 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 customer requirements*," which includes inbound, outbound, internal, and external movements and return of materials for environmental purposes(Mentzer, *et al.* 2001; Naslund and Williamson 2010).

A supply chain is a network of facilities and distribution options that performs the functions of procurement of materials, transformation of these materials into intermediate & finished products, and the distribution of these finished products to customers.(Ganeshan and Harrison 1995).

Supply chain Management (SCM) framework consists of three major closely related elements: business processes, management components and structure of the supply chain (Sahay, *et al.* 2006).

In today's global economy, companies face increasing pressure to reduce costs while maintaining production quality service levels to deliver results to the customers. The basic drivers for SC development as: ever increasing customer demand in terms of product and service cost, quality, delivery, technology, and cycle time brought by global competition(Koprulu and Albayrakoglu, 2007)

Companies all over the world are pursuing supply chain as the latest methodology to reduce costs, increase customer satisfaction, better asset utilization and build new revenues. In order to achieve these goals companies most successfully overcome a number of challenges/ problems. Makweba and Xu, (2009)

Supply chain concept has both a strategic as well as an operational importance. To understand this point of view one has to recognize that the supply chain has two dimensions. The first can be referred to as the operational supply chain; the second can be referred to as the entrepreneurial supply chain. The operational supply chain refers to the series of primary and support supply chains that have to be constructed to provide the inputs and outputs that deliver products and services to the customers of any company. All companies have operational supply chains, and these supply chains are normally unique to the company creating them, because they have choices about the input and output supply chains that they create operationally, when they position themselves strategically to provide a particular product and service within a specific primary supply chain (Cox 1997).

Logistics is a channel of the supply chain which adds the value of time and place utility. It is defined as the management of the flow of goods, information, service and other resources between the point of origin and the point of consumption in order to meet the requirements of consumers. Logistics involves the integration of information, transportation, inventory, warehouse, material handling, security, and packaging. He also pointed out that it is the supply of service or product to the demander or demanding unit at the right time, with the right quantity, in the right quality, with the right cost and at right place. Innovation can occur within services, processes, or any business system. It does not only emerge from the realms of

logistics, supply chain management, computer science, or manufacturing(Sakchutchawan, Hong *et al.* 2011; Hung and Yuan 2014).

In the past decade, logistics firms have been faced with increasingly competitive pressure and increasingly discerning customers. These firms have been forced to restructure both internal and external relationships to respond flexibly, innovatively, and rapidly to shifting and splintering market demand. The rapidly change and uncertain environment forces firms to face the major challenge, that is, how to break the touch situation and capture their competitive advantage. Researches pointed out the importance of information communication technology (ICT) in the determination of firms' competitive advantages on firms' performance since it contributes to decrease costs and improve the service level(Wongpinunwatana ; Tsenga, *et al.* 2011; Han, *et al.* 2017).

The performance of the transport carrier may influence the effectiveness of the entire logistics function of a company. It follows the process of selecting an appropriate transport carrier is important to the firm's success (Hesse and Rodrigue (2004); Tseng and Yue (2005); Butta and Abegaz (2016).

The term SCM best explained by Kampastra, Ashayerin and Gattorna, as the integration of all activities associated with the flow and transformation of goods, information, and the associated funds, through improved supply chain relationships of all involved entities(Mentzer, *et al.* 2001).

Mistakes done in procurement planning have a direct impact on operating costs, firms profitability, return on investment, balance sheet size and capital adequacy. According to Cousins and Spekman (2003), procurement is largely based on the fact that firms are slowly acknowledging the value added capabilities of a function that is typically responsible for procuring assets that equal about 65% of the average company sales(Altayyar and Beaumont-Kerridge 2016; Edler and Yeow 2016).

The simultaneous integration of customer requirements, internal processes and upstream supplier performance is commonly referred to as supply chain management (Tan *et al.*, 1999). As cited in the work of (Zailani, Graham *et al.* 2005).

The approach of SCM is derived from the fact that there are dependencies between levels in channels from the point of origin to the point of consumption SCM might be seen as a business philosophy that strives to integrate the dependent activities, actors, and resources between the different levels of the points of origin and consumption in channels. This means that SCM comprises different kinds of dependencies in, between and across companies in channels from manufacturers/suppliers to customers/consumers(Svensson, Goran *et al.* 2011).

The empirical study of states that efficiency in meeting customer requirement is significantly differentiated by the level and quality of information sharing among SC partners(Koçoğlu, *et al.* 2011)

Organizations almost engaged in more than in single supply chain which can be a complex issue involving design of collaborative chain which helps entities to interact successfully to provide necessary coordinated outputs (Hao, *et al.* 2012)

2.2. Practice of Logistics and Supply Chain Management

Within an organization, supply chain refers to a wide range of functional areas. These include Supply Chain Management-related activities such as inbound and outbound transportation, warehousing, and inventory control. Sourcing, procurement, and supply management fall under the supply-chain umbrella, too. Forecasting, production planning and scheduling, order processing, and customer service all are part of the process as well. Importantly, it also embodies the information systems so necessary to monitor all of these activities. Simply stated, "The supply chain encompasses all of those activities associated with moving goods from the raw materials stage through to the end user(Zigiaris, 2000).

The main functional Areas of logistics management are Network Design, Information Technology, Transportation, Inventory and Storage, Warehousing, Materials Handling, Loading and unloading, Customer service performance monitoring, Order processing/customer service Supply Chain Management budget forecasting(Zigiaris 2000)

Improved organizational performance is determined by how an entity strategically trade-off cost (efficiency) and responsiveness at all levels. Incorporating supply chain practices into existing structures has the potential of yielding positive returns to the organization. A study done in Gahanna, Accra revealed a number of supply chain practices which include: product quality, joint problem-solving with suppliers, continuous improvement, customer interaction, periodic evaluation of performance, among others, are practiced at West Africa Examination councils where the study done. About 53% responses showed that one of the bases for selecting suppliers is product quality, 31% responses revealed that the Council solves supply chain related issues on a joint consultation with members within the supply chain and 45% responses confirmed that necessary support is given by the Council to suppliers. (Annan, *et al.* 2013).

Enterprise Resource Planning (ERP) system is an important tool for business processes planning, information flowing, executing and controlling deployed premises in different places. Supply Chain Management (SCM) practices are extroverted doors of the companies in order to ensure mutual advantages in their own processes. Successfully implemented and integrated ERP system and SCM practices provide advantages in planning, decision-making, execution and increases the performance of firms(Ince, *et al.* 2013).

According to a study done by Sotiris Zigiaris, among all logistical transactions 35% not supplied, 33% wrong quantity, 17% not ordered, 13% damaged, 1% wrong label and 1% are wrong product (Zigiaris 2000).

More than 25% of purchase orders are not shipped as planned or are not delivered as planned. This significant statistic presents a real opportunity to reduce waste. Supplier performance and supplier lead times are important areas for potential waste reduction and process improvement(Deveshwar and Rathee 2010).

2.3. Success Factors of Effective logistics & Supply Chain Management

A literature survey done by Mohamed Syazwan Ab Talib and Abu Bakar Abdul Hamid shows the main critical success factors for effective logistics & supply chain managements are four: collaborative partnership, information technology, top management support and human resource(Talib and Hamid 2014).

The critical success factors in humanitarian organizations logistics and supply chain management highly determined by Strategic planning; resource management; transport planning; capacity planning; information management; technology utilization; human resource management; continuous improvement; supplier relationship; supply chain strategy(Pettit, S., Beresford,. A, 2009).

A study done in Turkish companies by Ince, *et.al*, 2013 revealed an organizations performance deepened on Enterprise Resource Planning (ERP): system and information quality, system use, Individual Impact, Organizational impact and Supply Chain Management (SCM): strategic partnership with suppliers, customer relationship, level of information sharing and quality(Ince, Imamoglu et al. 2013).
A study done by Abidi, Leeuw et.al, 2013 on two German, two Dutch and US Humanitarian organization Identified key success factors for humanitarian supply chains such as **Strategic**: sustainability, cooperation, performance measurement, standardization of relief items (process), growth, security, Independence and impartiality, continuum of care; **Tactical**: coordination, beneficiary involvement, proper assessment and planning, Qualified and experienced staff, inventory management, long term contracts, quality management; **Operational**: speed, flexibility, local procurement, order management, cost efficiency Enough staff

members in the field , Availability of relief items are the key success factors(Abidi, *et al.* 2013)

2.4. Challenges of Logistics and Supply Chain management

A study done in Gahanna Accra revealed challenges on Inadequate information system, difficulty in partnering with key customers and suppliers, and difficulty in managing procurement processes of the organization has seen in the study organization that led to an increased total supply chain cost, thereby reducing profitability in the long run, making it difficult to reap the benefits of an effective supply chain management practices(Annan, *et al.* 2013).

The major challenge faced by researchers in Supply Chain literature is to analyze the SC system's performance. The analysis of supply chain performance becomes complex because of different entities involved such as suppliers, manufacturers, wholesalers, and customers. So, supply chain management performance is defined as the multiple measures of performance developed by the organization to gauge the ability of a supply chain to meet an organization's long-term and short-term objectives. Three major SCM performance measures such as SC delivery flexibility, inventory cost, and customer responsiveness time were identified.(Deshpande 2012).

A study done in Australia by (Pateman, et al. 2016) explains collaboration as: the means by which companies link their supply chain work to their mutual objectives through sharing of ideas, information, knowledge, risk and rewards(Pateman, et al. 2016)

A survey conducted by Supply Chain Management Review and Computer Science Corporation (SCMR and CSC, 2004) observes that collaboration is cited as the single most pressing issue; but how to achieve it is not well understood. The survey showed that 44 percent of the organizations in the sample have functions

specifically for supplier and customer collaboration. However, only about 35 percent of the collaboration initiatives turned out to be even moderately successful. Practically, coordination and collaboration in supply chain in upstream and downstream is difficult because of uncertainty in demand and supply and lack of communication between members of supply chain which is amplified through successive linkages(Kampstra, et al. 2006).

Cooperative logistics relationships require the sharing of information which must be enabled by the integration of disparate information systems across partners. Managers tend to think of relationships with firms as polar opposites and view them as entirely cooperative or competitive. Collaborative customer relationships and integrated partnerships have been gaining popularity in business-to-business markets. Traditional intermediaries for logistics and distribution are changing their roles and value positions through digital networks (Kampstra, Ashayeri et al. ; Daudi, Hauge et al. 2016; Pateman, Cahoon et al. 2016).

2.5 Information Sharing & Technology

PIE makes information sharing in two ways: Internal and external. Internal information sharing is done to the employees through outlook express email as required to all PIE staff, To CO staff, etc. External information sharing is done through newspapers, websites for example to invite potential bidders for certain goods/service purchase, employee procurement/vacancy announcement is done in the same. PIE uses Information technology (IT) for its information management.

2.6 The Impact of Human Resources Management in Logistic Service Providers and Supply Chain capabilities.

The increasing pressures from the rapid changes that are occurring in the business environment have led to a variety of responses among industrial organizations. Globalization of logistics and supply chain services, the rate of technological

innovation and fluctuation in consumer demand are among the factors that have increased the dynamism of the competitive environment to which organizations must respond. More prominent, however, is the distinct shortage of logistics and supply chain expertise, including information system support capabilities, which have become hurdles to logistics and supply chain development (Long, 2003). The inadequate logistics infrastructure coupled with lack of skilled workers and management is blamed for the high level of loss, damage and deterioration of stocks experienced, especially for perishable products (Dolven 2002, kerr 2005). The challenges, however, also generate opportunities for companies with advanced logistics system and skilled employee to grow their market.

Logistics is the process of strategically managing the acquisition, movement and storage of materials, parts and finished inventory (and the related information flows) through the organization and its marketing channel in such a way that profitability is maximized through cost effective fulfillment of orders (Somuyiwa, 2010; Somuyiwa and Sangosanya, 2007; Christopher, 1992; CLM, 1998).

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

2. Research design

In this study an institutional based census survey has been conducted. The data were collected mainly quantitatively using questionnaire with a supportive semi structured qualitative interviews. The purpose of this study is to assess practices and challenges of logistics management performance of PIE using Key Performance indicators and identify the poor performance inside the whole logistics and then come up with the finding and recommend on the best practices. The finding and conclusion of the study depended on the full utilization of data collection and statistical analysis.

3.3. Study population

Census survey was used for this study among all logistics and finance department employees at head office and program areas as well with target 36 population. Due to unwillingness of one employee from the target population to fill the questionnaires, from the 36 questionnaires distributed 35 filled and returned.

3.4. Source and tools of data collection

Data was collected both from primary and secondary sources. Primary data was collected through questionnaires and interviews and secondary data gathered from relevant documents like: PIE procurement guideline, PIE transport guideline, PIE warehouse/transit store files. The questionnaire and observation were the most suitable data collection method used for the primary source because the researcher is one of the logistics team member and it was easy to observe each and every activities in the logistics department and can reduce non response rate.

3.4.1 Primary data collection

Questionnaire and interview were used for primary data collection through structured questions and semi-structured interviews. Questionnaires were

distributed to all PIE CO logistics and finance department employees and the interview will be with head of logistics and Administration and with PIE logistics coordinator who is in charge of all procurement activities.

3.4.2 Secondary data collection

PIE logistics guideline, PIE transport management guideline, PIE material administration (stock management) files, PIE SIP/SAP and IT were used as source of secondary data for this study.

3.5 Validity & reliability of questionnaire

The questioner tool will be adapted from previous similar thesis researches and validated using pretest of the study population.

Case Processing Summary

		N	%
Cases	Valid	35	92.1
	Excluded	3	7.9
	Total	38	100.0

a. List wise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
0.794	7

3.6 Method of data analysis

The quantitative data which was collected from the respondents has been entered into computer using Epi-Data version 3.1and exported to SPSS version 20 for analysis. **Descriptive statistics** analysis was employed to determine the relation

between the dependent and independent variables by employing **mean and standard deviation.**

3.7 Ethical consideration

The researcher respects the rights of the respondents and ensures their willingness to be interviewed, volunteer to fill and return back questionnaires and did not force to do none of the above activities without their willingness. Only volunteer respondents were administered for the questionnaires and interview. The researcher explained the objectives of the research to the respondents and that the feedback obtained from the respondents will be used for the research purpose only and will be kept confidential. The researcher explains ensures to the respondents that their identity will not be disclosed to anyone.

CHAPTER FOUR

DATA ANALYSIS AND INTERPRETATION

This chapter summarizes the results of analyzed data collected and interview conducted on current Logistics management. The discussion particularly focused on respondents profile, LM practices, supply chain integration, challenges of logistics management, cooperatives in supply chain management and customer relation.

4.1. Analysis of respondent's profile

Table 4.1 Demographics of respondents

Demographic of respondents		**Frequency**	Percent
Sex	Female	5	14.3
	male	30	85.7
	Total	**35**	**100.0**
Age	20-35	16	45.7
	36-45	15	42.9
	46-65	4	11.4
	Total	**35**	**100.0**
level of education	Grade 12 completed	6	17.1
	Certificate or Diploma	4	11.4
	First Degree	17	48.6
	second degree	8	22.9
	Total	**35**	**100.0**
Related service years in logistics	<5 years	16	45.7
	5-10	9	25.7
	>10	10	28.6
	Total	**35**	**100.0**
service years PIE	1-5	14	40.0
	5-10	13	37.1
	10-15	7	20.0
	>15	1	2.9
	Total	**35**	**100.0**

Source: Own survey, 2017

Thirty six (36) questionnaires were distributed to respondents and thirty five returned. The returned responses were found valid and used for the analysis and it accounts 97.22%. Based on the responses obtained from respondents data presentation and analysis were made as follows.

The demographic profile of the sample respondents is presented and analyzed as follows: The purpose of assessing the respondents age, sex, etc is to determine whether the researcher considered the heterogeneity of sample units. On the other hand assessing work experience, education level of the respondents help to know they are educated and have better knowledge to understand the case and respond better.

4.1.1 Gender of the respondents

Gender frequency of the respondents, the number of male respondents were seven times of female respondents. 30(85.71%) were male and 5(14.29%) female. This implies that the number of male logistics and finance employees is dominant to female logistics and finance employees.

4.1.2 Respondents work experience

As clearly seen in table 4.1 below, the frequency distribution of respondents work experience, 14(40%) of the respondents have 1-5 years, 13(37%) 5-10 service years, 7(20%) 10-15 years and 1(2.9%) >15 years. This implies that 20% of the respondents have more than 5 years experience and have good knowledge about the organization and have better opportunity to explain the logistics system of their organization.

4.1.3 Education level of the respondents

Education is the factor that have positive impact on the company's improvement of practice and also gives better opportunity to the employees to understand the case and give the right respond. As indicated in the table 4.1 below, the highest educational level attained from the sample respondents is second degree 8(22.9%) and the least education level is Grade 12 complete 6(17.1%). Certificate and Diploma holders are 4(11.4%) and 17(48.6%) have 1st degree.

4.1.4 Age of respondents

Respondent's age is one of the variables and it has impact on organizations logistics system. 16(45.7%) 20-35, 15(42.9%) is 36-45 & 4(11.4%) 46-65. This implies that the majority age group is young and understand the case to give the right response.

4.1.5 Demographic and Descriptive statistics

The result of the statistics shows, from all 35 participants 5(14.3%) were female and 30(85.7%) were male. The age group of participants 20-35 were 16(45.7%), 36-45 age group were 14(42.9%) and 46-65 age group were 4(11.4%). This implies that the majority of respondents age group is young.

4.1.6 Respondents work experience

Frequency distribution of respondents work experience & logistics related experience is clearly indicated in table 4.1 and the largest of the number of respondents 19(54.29%) have more than five years logistics related work experience and 16(45.71%) have less than five years logistics related experience. This shows that most respondents have good experience in logistics.

4.2. Logistics management practices

The data on each point from each category of logistics management practices collected based on the Likert scale 1=strongly Disagree to 5=strongly Agree and analyzed and Mean of response value & standard deviation summarized below in the table 4.2.

The logistics management practices was assessed based on the 5 point Likert scale ranged from 1= very low agree to 5= highly agree and the result summary on PIE & suppliers customers relationship **3.24 (0.6221),** Internal operation practices **3.19(0.79),** Information sharing practices **3.11(0.82),** Information technology **2.94(.684),** Training practices **3.18(0.86),** Supply chain collaboration **2.97(0.70), 2.91(0.84)**, Company's integration with customers/projects Cross functional integration within the company **3.11(0.76),** Customer service **3.17(.618)** are the Mean (Standard deviation) value of respondents agreement on each part of the variables. This means the agreement level on the points raised ranges from 3.24(0.6221) to 2.91(0.84) i.e. from Average to low agreement on the points raised. The average company's LM practices mean average is 3.0911 and looks to be in moderate level.

4.2.1 PIE supplier/customer relationship practices (SCR)

Table 4.2.1 PIE suppliers & customer relationship practices

Descriptive Statistics PIE suppliers customers relationship	Mean	Std. Deviation	Analysis N
1- PIE suppliers customers relationship	**3.24**	**0.6221**	**35**
Level of cooperativeness with suppliers	3.37	.598	35
Level of cooperativeness with customer	3.37	.646	35
supplier selection level	3.17	.631	35
Customer service request level	3.17	.618	35
compliance customer delivery on time and requirement	3.11	.618	35
Average	**3.24**	**0.6221**	**35**

Source: Own Survey, 2017

According to Sunil, (2004) the most common known characteristics of suppliers and customers relationships are: Joint product planning, cooperativeness, frequent meeting and others. To measure PIE orientation concerning the SCR, five items were developed by the researcher. Table 4.2.1 above shows the extent of relationships that exists between suppliers, customers and PIE. Accordingly the group mean is 3.24(0.6221) and it implies organization's relationship with its customers /suppliers is good and above average but need to work more to maximize its SCR.

Table 4.2.2 PIE internal operation practice

	Mean	Std. Deviation	Analysis N
2- Internal operation practices	**3.19**	**0.79**	**35.00**
Up-to-datedness of service	3.31	.631	35
level of service flexibility to handle orders	3.34	.802	35
Management knowhow on logistics management	3.23	.942	35
level of efficient resource utilization	3.31	.676	35
Extent of internal logistics work follow	2.77	.877	35

Source: Own Survey, 2017

4.2.2 Internal operation practices

Internal operation assessment has been done based on the 5 point Likert scale ranged from 1= very low agree to 5= highly agree and the result summary finding on PIE Internal operation practices of the company was studied based on evaluating five factors mean: The group mean found 3.19(0.79). The highest mean is level of service flexibility to handle orders 3.34(0.802) and the lowest is Extent of internal logistics work follow with mean value 2.77(0.877). Other internal operation practices like: Up-to-datedness of service & level of efficient resource utilization mean value found to be 3.31 which is moderate. The extent of internal logistics work follow mean found 2.77(0.877) which implies the organization has to work more on improvement of internal logistics work flow. Internal operation is the starting point to make the environment favorable for integration with the external partners. Handfield and Nicholas (1999), states that poor internal operations can lead to failure in coordinating with external partners.

4.2.3 Information sharing practices

PIE information sharing practices were assessed on 5 point Likert scale 1= strongly disagree to 5= strongly agree. The evaluation of this group mean exhibited

3.11(0.82). The highest mean score in this group is for adequacy of information sharing 3.31(0.900) & the lowest is for material supply forecast information sharing with customers 2.77(0.77). The other information sharing practices in the group like information sharing on goods and service requirement mean is 3.17(0.90) and

3.2(0.759) for material supply forecast information sharing with project sites and relatively moderate. The study finding in this group implies the company has to improve its material supply forecast information sharing with customers.

According to Lee and whang, 2000) poor information sharing b/n partners in sc will lead to many serious problems such as high inventory level, high demand uncertainity, inaccurate forecasts, low resource utilization and high mterial supplycost. The empirical study of Lazarovic et al. (2007), States that efficiency in meeting customers requirements is significantly differentiated by the level and quality of information sharingamong sc partners.

Table 4.2.3 Information sharing practices

	Mean	Std. Deviation	Analysis N
3- Information sharing practices	**3.11**	**0.82**	**35.00**
Material supply forecast information sharing with customers	2.77	.770	35
Material supply forecast information sharing with project sites	3.20	.759	35
Information sharing on goods and service requirement	3.17	.857	35
Adequacy of information sharing	3.31	.900	35

4.2.4 Information technology

Table 4.4 Information technology.

(Source: Own Survey, 2017)

Theoretical evidence confirms that supply chain management rides on the back of information in order to meet the required resources at the right time, at right place. Seamless and instantenous information flow should exist across the value chain(Russsel, 2006). The maximum mean in information sharing technology is 3.20(0.901) and lowest mean in this group is 3.00(0.767) for Adequateness of IT in supply chain. However the mean of all group members is above average it essential

to maximize information technology usage in the study organization in order to cope up with global IT advancement.

Table 4.2.5 PIE training practices

Training practices	Mean	Std. Deviation	Analysis N
Level of training adequacy for management	3.08	0.83	35
Level of training adequacy for Employee on SC	3.00	.840	35
Level of training on Diversified skill for Employee	2.91	.887	35
Average	**2.997**	**0.807**	**35.00**

Source: Own Survey, 2017

4.2.5 Training practices

PIE training practices were assessed on 5 point Likert scale 1= strongly disagree to 5= strongly agree. The evaluation of this group mean exhibited 2.997(0.807). The highest mean score in this group is 3.08(0.83) for level of training adequacy for management & the lowest mean is 2.91(0.887) for level of training on Diversified skill for Employee. The rest mean is 3.00 for level of training adequacy for Employee on SC. The study shows that the organization has to improve level of training on diversified skill for its employees.

According to Bowersox et al. (2004), the succesful supply chain mgt implementation coceptualy and largely depends on human aspects of the organization. With respct to this theory, effective training and knowledge based learning for both managers and emplyees of the organizations is essential in developing and maintaing scm skills.

4.2.6 SC collaboration, company's integration with suppliers

Company's Supply chain collaboration, companies integration with suppliers assessment is done on the same 5 point Likert scale 1= strongly disagree to 5- strongly agree. The group mean is 2.97(0.70), the highest mean is 3.00(0.728) for level of strategic partnership with suppliers and the lowest mean is 2.94(0.639) for establishment of quick ordering system. The rest mean in the group is 2,97(0.747) for stable procurement which is moderate. The study for this group shows that the establishment of quick ordering system mean of the organization in the study is relatively poor and requires system revision.

Table 4.2.6 Supply chain collaboration, Company's integration with suppliers

Supply chain collaboration, companies integration with suppliers	Mean	Std. Deviation	Analysis N
level of strategic partnership with suppliers	3.00	.728	35
Establishment of quick ordering system	2.94	.639	35
stable procurement	2.97	.747	35
Average	**2.97**	**0.70**	**35.00**

Source: Own Survey, 2017

4.2.7 Company's integration with customers/projects

This group mean is 2.91(0.84). The highest mean is 3.00(0.84) for level information sharing with major customers and the lowest is 2.77(0.877) for follow up customer for feedback. The remaining mean are 2.91 & 2.94 for monitor and measure customer service level & frequency of contacts with major customers respectively. The study reveals that company's for customer feedback, monitor & measure customer service level as well as handling frequency of contacts with major customers is and the organization in this study has make change in order to enhance the service level.

Table 4.2.7 Company's integration with customers/projects

Company's integration with customers/projects	Mean	Std. Deviation	Analysis N
Follow up customer for feedback	2.77	.877	35
monitor and measure customer service level	2.91	.853	35
level information sharing with major customers	3.00	.840	35
Frequency of contacts with major customers	2.94	.802	35
Average	**2.91**	**0.84**	**35.00**

Source: Own Survey, 2017

Company's integration with customers/projects group mean is 2.91(0.84) which is above average. The highest mean in the group is for 3.00(0.84) whereas the lowest for this group is 2.77(0.877) for customer for feedback Follow up. The rest is 2.91(0.853) for monitor and measure customer service level and 2.94(0.802) for frequency of contacts with major customers. The overall group members have good mean score though customer feedback follow up has relatively low mean.

4.2.8 Cross functional integration within the company

Table 4.8 Cross functional integration within the company

Cross functional integration within the organization statistics	Mean	Std. Deviation	Analysis N
Data integration among internal functions through network	3.14	.772	35
Information integration in internal function units	3.06	.765	35
Intra organization coordination	3.06	.802	35
Interaction between main supply and project warehouse	3.20	.719	35
Average	**3.11**	**0.76**	**35.00**

Source: Own Survey, 2017

The group mean of Cross functional integration within the company is 3.11(0.76). The mean in this group is 3.20(0.719) for Interaction between main supply and project warehouse while the lowest is for 3.06(0.765,0.802) for Information integration in internal function units and Intra organization coordination respectively. In general this group has good mean score which are all above average.

4.2.9 Customer service

Table 4.2.9 Customer service

Customer service	Mean	Std. Deviation	Analysis N
Accuracy of order processing for customers	3.26	.657	35
Required material accessibility	3.11	.832	35
Effectiveness and flexibility in meeting customer requirement	3.20	.677	35
Reduction of lead time	3.00	.686	35
Effectiveness on customer Compliant management	3.16	0.76	35.00
Average	**3.17**	**.618**	**35**

Source: Own Survey, 2017

The group mean for customer service is 3.17(0.618). The **highest mean** in this group is **3.26(0.657)** for Accuracy of order processing for customers whereas the **lowest is 3.00(0.686)** for reduction of lead time. This implies there is a gap in the

organizations customer service level and make efforts to maximize to 4or 5. The rest 3.11(0.832) for required material accessibility, 3.2(0.677) for effectiveness and flexibility in meeting customer requirement and 3.16(0.76) for effectiveness on customer Compliant management as it is clearly seen in the table 4.2.9.

4.3. Challenges in PIE Related to Logistics Management

Table 4.3 Logistics related challenges

Challenge related variables	Mean	Std.	N	Rank
Challenges	**3.15**	**0.72**	**35.00**	**M**
Challenge related to supplier inability	3.34	.747	35	1
Challenge related to institutional trust	3.26	.701	35	2
Challenge related to share risk	3.26	.684	35	3
Challenge related to Employee ineffectiveness	3.17	.822	35	4
Challenge related to Financial impact	3.14	.822	35	5
Challenge related to infrastructure	2.97	.810	35	6
Challenge related to vendor evaluation	2.97	.741	35	7

Source: Own survey, 2017

Based on the above table the challenges related to logistics management the agreement on the challenges mentioned scaled from 1=very low to 5=very high and the identified challenges ranked like they put on the table from 1 to 7 from challenges related to supplier inability the first challenge to challenges related to vendor evaluation by order.

4.4. Company's orientation of internal operation towards customer service

Table 4.4 Company's orientation towards customer services

	Mean	SD	N
Internal operation practices Variables	**3.19**	**0.79**	**35.00**
Up-to-datedness of service	3.31	.631	35
level of service flexibility to handle orders	3.34	.802	35
Management knowhow on logistics management	3.23	.942	35
level of efficient resource utilization	3.31	.676	35
Extent of internal logistics work follow	2.77	.877	35

Source: Own survey, 2017

In the internal operational practice respondents agree from a little more than the average range 3.34(0.802) to low 2.77(0.877) agreement level. The variables **Level of service flexibility** (3.34(0.802), Service up-to-datedness 3.31(0.631), Management Know how on logistics management 3.23(0.942), Extent of internal logistics work flow 2.77(0.877) we the order of respondents' mean value of agreement range from Average to low agreement level. This shows most of the respondents evaluated the raised issues on average scale.

4.5. The extent of collaboration/integration among its supply chain partners

Table 4.5. The extent of collaboration/integration among its supply chain partners

Supply chain collaboration, companies integration with suppliers	**2.97**	**0.70**	**35.00**
level of strategic partnership with suppliers	3.00	.728	35
Establishment of quick ordering system	2.94	.639	35
stable procurement	2.97	.747	35

Source: Own survey, 2017

The levels of collaboration have been assessed based on 3 main points which comprises different points inside them. When we see the average response on the

points the response was on Supply chain collaboration & companies integration with suppliers 2.97(0.70), Company's integration with customers/projects 2.91(0.84), and Cross functional integration within the company 3.11 (0.76) scored. This means the agreement response on Supply chain collaboration & company's integration with suppliers and Company's integration with customers/projects are on the low agreement scale and Cross functional integration within the company is in the average agreement scale.

The three different category of variable from Fa to Fc reduced in to three factors. The three factors are factor one comprises five variables with 22.6% variance account. And this variable suggested be naming **internal integration** and holding for next regression analysis. The second factor comprises 3 variables and **External coordination** and express 18.8 % of variance. The third factor comprises 2 variable and named **Information integration** and account 16.2% of variance. All the three factors held as variable for regression.

Most services in PIE are half outsourced and some services are sub-contracted. For transport service partially outsourced, security service is also partially outsourced (eg. Gambella PA security guards). PIE doesn't have its own warehouse but rent warehouses based on requirements like: Proximity to the CO, warehouse quality, safety (secured and safe) area to store transit materials, etc

Construction works are done by potential contractors by inviting all potential bidders, evaluating and selecting by bid committee.

PIE also outsource program base line survey, monitoring & evaluation works, large scale assessments and other consultant services to external consultants. Only pre-qualified venders registered and recognized in the SAP are eligible to compete for any advertised bid.

Getting good quality service is the most challenge. PIE faces many challenges like short lead time (delivery time), inability to attract higher potential suppliers (following low price), payment delays also affects PIE relation to its suppliers.

- Unclear request from the service seekers
- Last minute requests (short lead time) results in compliance issues.

Transport service challenges:

- No road worthy vehicles available (old model cars, sometimes cars with more than 500,000km)
- Favoritism by transport venders (give good condition cars to big agencies like UN, UNICEF, etc)
- Lack of Quality maintenance service to PIE cars, spare part originality problem, MOENCO is level 4 technical service organization but due high maintenance cost we can't take our vehicles to MOENCO for all types of services.

Internal challenges:

- Inconsistency in planning (lack of planning)
- Budget constraint
- SAP system is new under implementation and requires time to familiar to it

Level of cooperativeness with suppliers:

- We provide important information to our suppliers
- We give fair and equal opportunity to all suppliers.
- Our communication with suppliers is transparent
- We give equal chance to all suppliers and give room to rectify their problem.

Yes, there is procurement service delay in your department due to different circumstances like:

- Lengthy procurement time in SAP system
- Searching for good quality material takes time (suppliers do not supply exactly they ought to supply)
- Crowded roads/high traffic jam delays procurement process.
- Our customer service perspective has two sides: because there are good and bad supplier

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1. Summary

Logistics management is part of supply chain management which deals with the day to activities of the organization in order to fulfill the organizations need of goods and services.

There are different literature regarding the concept of supply chain and logistics management as indicated in the literature review part, SCM has different benefits like: to acquire the right product with the right quality at the right price at the right quantity at the right time and place. It helps to increase productivity, reduce production cost, reduce inventory level and enhance to achieve competitive advantage, increase market share and increase profit. As it has been stated on the statement of the problem, organizations are not achieving improvement in their performance due to failure to address the whole spectrum of SCM. Having these facts in mind, this research has tried to identify the current challenges and practices in the organization under study.

Based on these facts the analysis and interpretation of data, findings is presented as follows:

The degree of relationship with suppliers across the supply chain of PIE, information sharing practices, and internal operations is good except for Extent of internal logistics work follow which exhibited the least mean in the group. Information technology practice and training practice of PIE look to be in adequate level and standard except for Level of training on Diversified skill for Employee which showed the least mean in the group. Company's integration with customers/projects needs improvement however level information sharing with major customers in the group shows average mean.

With regard to Cross functional integration within the company and Customer service level practice the descriptive data and interview analysis reveals that there is good and continuous instantaneous service improvement with flexible service giving system.

According to data descriptive statistics and findings, the organization (PIE) IT, cross functional integration with customers and SC collaboration integration with suppliers are relatively low and need improvement.

Among the major challenges of SCM in the company in this study are: Challenge related to supplier inability, challenge related to institutional trust, challenge related to share risk, challenge related to employee ineffectiveness and challenge related to financial impact.

Qualitative analysis reveals that most PIE services are half outsourced and some services are sub-contracted. For transport service is partially outsourced, security service is also partially outsourced.

The qualitative data analysis also reveals that the organization (PIE) is facing many challenges in finding potential and quality suppliers and getting good quality service is the most challenge. PIE faces many challenges like short lead time (delivery time), inability to attract higher potential suppliers (following low price. payment delays due to newly introduced SIP/SAP system also affects PIE relation to its suppliers. Unclear request from the service seekers and last minute requests (short lead time) has also affected the organization logistics quality and results in compliance issues.

5.2. Conclusion

Logistics is the management of the flow of goods and services between the point of origin and the point of consumption in order to meet some requirements, for example, of customers or corporations. The resources managed in logistics can include physical items, such as food, materials, animals, equipment, and liquids, as well as abstract items, such as time, information, particles, and energy. SC is a network of organizations that are involved in the upstream and downstream linkages in different process and activities that produce value of the form of the products and service in the hands of the ultimate customer.

Based on the results of the study and summary of findings, the following conclusions are drawn:

The case company under the study has the following problems need work much to improve in the :

Information technology system implementation is poor and need to training to its employees in order to go along with global IT advancement.

- Level of training on Diversified skill for Employee
- The level of Supply chain collaboration, companies integration with suppliers is relatively poor has to improve.
- Its level of strategic partnership with suppliers is poor and has to make close relationship with its suppliers.
- Establishment of quick ordering system
- Its procurement system need to stable however procurement bases with need.
- Follow up customer for feedback to learn when to cope with situations and fulfil customer needs.
- Monitoring and measuring customer service level is which need much improvement to have good logistics system

5.3. Recommendation

- The organizations' supply chain and logistics management system show Employee capacity 36.7% , shared risk 28.2%, Accurate ordering 47.9%, lead time 51.3% and supply chain practice 63.9% account for the existing supply chain management situation knowhow, so efforts on the poor area of the system on shared risk system, employee capacity development, accurate ordering system, are recommended to improve the system.

So capacity building work need to be done on employee, in order to minimize shared risks, and accurate ordering and lead time shortening mechanism should designed.

- Further study on the lead time limiting factors, employee capacity problems is recommended.

- Qualitative data analysis emphasizes the findings obtained from the quantitative analysis.

On the bases of the findings and conclusions reached, the following recommendation were forwarded in order to improve the logistics management of the case organization.

- The current information practice of the case company is relatively poor compared to other logistics management practices and noticeably explained that company's IT is vital in sharing information and performing the day-to day activity of the logistics unit. Therefore the company has to check its IT systems and give IT trainings to its employees for better logistics work performance. Establishing better IT & information sharing practice is vital to PIE in order to coordinate its logistics activities which need agile responses specially to fulfil goods and service needs to beneficiaries.
- Challenge related to supplier inability, Challenge related to institutional trust, Challenge related to share risk, and Challenge related to Employee ineffectiveness is found high in this study and it is recommended to look into its logistics systems to overcome these challenges.

- However the overall LM practice mean of the case organization is above average 3.091, the researcher recommends that the internal operation practice and extent of logistics work flow found relatively low with compared to other LM practices in the organization by improving the service levels in these area through fast mail services and good IT use practices.
- Information sharing practice plays great role in LM activities of any organization and the case company's position is good in this regard but need to improve its material forecast information sharing practice with customers/projects which exhibits the lowest mean in the group of the organization LM practices compared to others.
- Now days IT is major tool in planning, organizing coordinating and implementing every activities of an organization including LM activities. Though the overall IT practice of the case company is satisfactory, its mean value in the table is relatively small compared to other LM practices studied and the organization (PIE) has to work more to improve its IT usage among its employees by providing extensive IT trainings.
- An employee with diversified skill is an asset to an organization. The overall training practice of PIE is above average and exhibits 3.18 but the company has to organize diversified skill training to its employees in order to get better logistics service and meet customer service needs which has the mean in the group.
- The current SC collaboration & integration with suppliers mean is relatively low with compared to other LM practices studied. The case company has to establish quick ordering system in order to have stable procurement of goods and services by encouraging its SC partners by creating linkage mechanism to have better integration with its SC partners.
- PIE's integration with customers/projects mean in the study is above average but it hast to work more on customer feedback follow-up management measuring customer service level by establishing effective & efficient LM system through a mechanism which enables projects to know an item running out of stock, item available in the stock with sufficient quantity to

run the activities, expiry date details for (food items & medical supplies), stock balance report, items in pipeline with lead time, fast moving items, daily consumption reports in order to avoid stock ruptures which leads to LM activity seizure.

Generally the organization has to work closely with its SC partners, customers and with its employees by improving its information sharing level.

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APPENDICES

APPENDIX 1

ST MARY'S UNIVERSITY

SCHOOL OF GRADUATE STUDIES

MBA PROGRAM

Dear respondents:-

This questionnaire is designed for preparing a thesis on **Practice and challenges of Logistics management the Case of Plan International Ethiopia.** The outcome of the study will be used to suggest possible solutions for problems identified while conducting the research. I kindly request you to spend your precious time to fill the questionnaire as frank and reasonable as possible. I would like to you inform you that the information you provide will be kept confidential and consumed only for academic purpose. Therefore, you are not expected to write your name.

If you have any question and comments, don't hesitate to contact me at:

E-mail: gelmessa65@gmail.com

Thank you very much for your cooperation.

Appendix 2

GENERAL BACKGROUND OF THE RESPONDENTS

(Tick only one mark)

QUESTIONNAIRE

Practice and challenges of logistics management: the case of Plan International Ethiopia.

The purpose of this questionnaire is to gather data on the challenges and practices of logistics management in PIE. The research is fully for academic purpose and any response given will be kept confidential and will not be used for any other purpose. So, your timely, genuine and frank response to the questionnaire is vital for the successfulness of the study and accordingly please take few part of your precious time and reply to the questionnaire. The first part is demographic question requiring respondents' age, sex, level of education and service year the organization.

The respondents are requested to tick on one from the alternatives that can represent them.

Please put ✓ mark for your response.

Part one demographic question:

1- Sex Female ☐ Male ☐

2- Age 20- 35 years ☐ 36- 45 years ☐ 46- 65 years ☐

3- Education level : Below grade 12 ☐ Grade12complete ☐

Certificate or Diploma ☐ First degree ☐ Second degree ☐ PhD ☐

4- Year of service in PIE: Below 1 year ☐ 1- 5 years ☐ 5-10 years ☐

10- 15 ☐ 15 years & above. ☐

5- Related service year in in logistics works

Less than 5 years ☐ 5- 10 years ☐ ten years and above ☐

6- Your current position _____

Using the following rating scales under the columns, tick (X) only in one cell.

A	PIE & suppliers customers relationship	Very low 1	Low 2	Average 3	High 4	Very High 5
1	Level of cooperativeness with suppliers					
2	Level of cooperativeness with customers					
3	Supplier selection level					
4	Customer service request planning					
5	Compliance customer delivery on time requirements					
B	Internal operation practices	Very low 1	Low 2	Average 3	High 4	Very High 5
1	Up to datedness of giving services					
2	Level of service giving flexibility system to handle orders					
3	Management know-how regarding logistics management					
4	Level of efficient utilization of resources					
5	The extent of internal logistics work flow					

C	Information sharing practices	1	2	3	4	5
1	Material supply forecast information sharing with customers					
2	Material supply forecast information sharing with projects					
3	Goods & service requirement information sharing by projects					
4	Adequacy of quality information sharing throughout the supply chain					
PIE uses IT for all its supply chain management						
D	Information technology	1	2	3	4	5
1	Level of IT based automated ordering from projects					
2	Level of IT based automated ordering to major suppliers					
3	Up to datedness IT systems throughout the SC					
4	The adequacy of IT systems throughout the SC					
E	Training practices	1	2	3	4	5
1	Level of training adequacy for management					

2	Employee training in SC (concepts & management practices)					
3	Over all adequacy of employee training					
4	Provision of diversified skill training for employees					
Fa	**Supply chain collaboration, companies integration with suppliers**	1	2	3	4	5
1	Level of strategic partnership with suppliers					
2	The establishment of quick ordering system					
3	Stable procurement					
Fb	**Company's integration with customers/projects**	1	2	3	4	5
1	Follow up customers for feedback					
2	Monitoring & measuring customer service level					
3	Level of SC information sharing with major customers					
4	Frequency of contacts with major customers/clients					

Fc	**Cross functional integration within the company**	1	2	3	4	5
1	Data integration among internal functions through network					
2	Information system integration among internal function units					
3	Team work intra- organizational coordination					
4	Extent of interaction between main office supply & project warehouse					
G	**Customer service**	1	2	3	4	5
1	The accuracy of order processing for customers					
2	Required material accessibility					
3	Effectiveness & flexibility in meeting customers requirement					
4	Reduction of lead time/ speed of order handling					
5	Effectiveness in customer complaint management					

Please indicate to which you agree with the following challenges that have direct influence your company supply chain management performance.

	General Factor	1	2	3	4	5
1	Challenge related to supplier inability					
2	Challenge related to institutional trust					
3	Challenge related to share risk					
4	Challenge related to employee ineffectiveness					
5	Challenge related to financial impact					
6	Challenge related to infrastructure					
7	Challenge related to vender evaluation					

Appendix 3

Interview Question (Logistics & Admin head)

1. How do you manage your supply chain (close partnership with suppliers, out sourcing, subcontracting, few supplier, many supplier, holding safety stock, or use of external consultants)?
2. What is the min internal & external challenges your department facing in managing supply chain?
3. What about the level of your cooperativeness with suppliers and customers?
4. What do you think are the major factors contributing to the existing challenges?
5. How do you express the extent of information technology practice b/n your company and our partner?
6. How do you express the effectiveness and flexibility in meeting customers need?
7. How do you express the relationship b/n your company & your supplier?

Appendix 4

Interview Question (Logistics coordinator, procurement)

1. Is there procurement service delay in your department?
2. What do you think are the causes for the procurement delay?
3. How do you see your customer service in different perspective?
4. How do you evaluate the extent of information sharing practice between your company and your supplier?
5. How is the interaction of your company and your customers/suppliers?
6. Is there uncertainty of suppliers' sense of trust?