

ADDIS ABABA UNIVERSITY
SCHOOL OF COMMERCE



**Assessment on logistics management practices and challenges in
retailing industry: some selected foodstuff retail stores in Addis**

Ababa

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**A Thesis Submitted in Partial Fulfillment of the Requirements for
Award of Master of Arts Degree in Logistics and Supply Chain
Management.**

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Declaration

I, Leelt Desta declare that, this paper prepared for the partial fulfillment of the requirements for the award of Master of Arts degree on Logistics and Supply Chain Management entitled “Assessment on Logistics Management Practices and Challenges In Retailing Industry: some selected food stuff retail stores in Addis Ababa” is prepared with my own effort. I have made it independently with the close advice and guidance of my advisor.

Leelt Desta

Signature _____

Date _____

Certification

This is to certify that Leelt Desta has carried out this research work on the topic entitled “Assessment on Logistics Management Practices and Challenges in Retailing Industry: some selected food stuff retail stores in Addis Ababa” under my supervision. This work is original in nature and it is sufficient for submission to the partial fulfillment for the award of masters of Arts degree in logistics and supply chain management.

Solomon (PhD)

Signature _____

Date _____

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Abstract

Retail activities turn out to be one of the significant themes playing the role in supply chain management and logistics. The major goal of the retail industry or retail merchandising system is to influence possible consumers to purchase a particular products assortment at a particular retail store (Risch, 1991).

The main purpose of this study is to assess the current status of logistics management practice in the food stuff retail stores with the aim of identifying gaps, potentials and constraints for development of effective and efficient logistics management. The outcome of this research will help the retail stores to understand the strength and weakness of their activity, it will help them to realize the gaps, which needs further improvement and it will provide good information for further researchers.

The study focuses on foodstuff retail stores found in Addis Ababa. The subject is studied by using stores found in merkato area specifically Gesho tera and Arab tera as a reference. The study uses descriptive type of research. using a convenience sampling method 30 questioners were distributed to the target area, and the data collected is presented using descriptive statistical tools such as frequencies and percentage. The evidence from this study shows the current relation of the retail stores with their suppliers and customers, the quality of the stores stock management, the level of managing retille data and their current position on the market. This study revealed that the influence of supplier on the retail stores performance is high, customer relation plays vital role to enhance performance of the organization(the power of customers is high), the level of stock out on the stores is medium and the current position of the stores on the supply chain is good.

To be more competitive in the market, the study recommends the retail stores to provide continuous training to their employees, should hire a trained store keeper, Manage a good retail data, has to hold variety of products and also they have to decrease their dependency on their supplier.

Key word logistics management, logistics management practices and challenges, supply chain, retailing industry and food staff retail.

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Abbreviation

ARP: Automatic replenishment programs.
ARMAX: Auto regressive moving average models.
ASO: Automated store ordering.
BOM: Bill of materials.
CSCMP: Council of Supply Chain Management Principle.
FML: Food marketing institute.
FML: Food marketing institute.
FRM: Floor ready merchandise.
FRM: Floor ready merchandise .
FTL: Full truckload.
LTL: Less than truckload.
MPS: Master production schedule.
MRP: Material requirements planning.
OOS: Out of stock.
POS: point of sales.
SCM: Supply chain management.
SKUs: Stock keeping units.

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Logistics transformation derives from cost and service requirements as well as consumer and retailer change (Ferne, 1990; Fernie and Sparks, 1998). Elements of logistics are remarkably expensive, if not controlled effectively. Holding stock or inventory in warehouses just in case it is needed is a highly costly activity. The stock itself is expensive and might not sell or could become obsolete. Warehouses and distribution centers generally are expensive to build, operate and maintain. Vehicles to transport goods between warehouses and shops are expensive, in terms of both capital and running costs. There is thus a cost imperative to making sure that logistics is carried out effectively and efficiently, through the most appropriate allocation of resources along the supply chain.

Retailing is a significant part of economic activities of both developed and developing countries' economies. The major goal of the retail industry or retail merchandising system is to influence possible consumers to purchase a particular products assortment at a particular retail store (Risch, 1991). Retail activities turn out to be one of the significant themes playing the role in supply chain management and logistics.

It should also be clear, however, that retailers are but one part of the supply system. Retailers are involved in the selling of goods and services to the consumer. For this they draw upon manufacturers to provide the necessary products. They may outsource certain functions such as transport and warehousing to specialist logistics services providers. (John Fernie & Leigh sparks ,1998)

The main purpose of this study is to assess the current status of logistics management practice in the food stuff retail stores with the aim of identifying gaps, potentials and constraints for development of effective and efficient logistics management

The study uses descriptive type of research. Using a convenience-sampling method, 30 questioners were distributed to the target area and the data collected through the questioner is presented using descriptive statistical tools such as frequencies and percent.

1.2. Problem statement

This study is focusing on only foodstuff retailing stores found in Addis Ababa. The subject is studied by using food stores found in merkato as a reference.

Retailers are the active designers and controllers of product supply in reaction to known customer demand. They control, organize and manage the supply chain from production to consumption. (John Fernie & Leigh sparks ,1998)

If operating properly, a good logistics system can therefore both reduce costs and improve service, providing a competitive advantage for the retailer. Retailers must be concerned with the flows of product and information both within the business and in the wider supply chain. In order to make products available retailers have to manage their logistics in terms of product movement and demand management. They need to know what is selling in the stores and both anticipate and react quickly to changes in this demand. At the same time, they need to be able to move less demand-volatile products in an efficient and cost-effective manner. (John Fernie & Leigh sparks,1998)

If a retailer is effective, but its suppliers are not, errors and delays in supply from the manufacturer or logistics services provider will impact the retailer and the retailer's consumers, in terms of either higher prices or stock-outs (no products available on the store shelves). If a retailer can integrate effectively its logistics system with that of its suppliers, such problems may be minimized. (John Fernie & Leigh sparks ,1998)

The retail stores that this study will focus are food staff retail stores found in merkato area, these stores are very competitive stores and they control and influence other retail stores found

throughout the country. The major customers of these stores are cafeterias, super markets, min markets and other stores found within and out of Addis Ababa and final customers.

From preliminary interviews conducted with some selected retailers, the following challenges were observed:

- **Pricing challenges:** This challenge is observed in two ways
 - The influence of suppliers on the price of the products sold in the stores (for instance some suppliers distribute their products door to door including small shops and cafeterias, which become difficult for this retailers to sale this particular product and its substitute with the price they need to sale a good e.g. is fortified milks like Ancor, Nido..).
 - The influence of the retailers to increase price on final customers (for instance, when there is shortage of products on the market the stores raise high price on this goods for e.g. price of vegetable ghee's from December 2015 to February2016 the price increased from 75 birr for one can to 150-160 birr)
- **Time challenges:** This challenge is related to time of delivery of products (some suppliers don't deliver their products if they don't get big order like if the order is not a full car order they will try to collect other orders until the specific amount is reached so the retailers will not get what they ordered on the time they want the product)
- **Stock outs:** This challenge occurs when the retailers are poor on store keeping (some retailers receive customers orders and accept payment without knowing they don't have that product on their hand)

Generally, the purpose of this study is to investigate more about how efficiently the food staff retailers are managing the retail supply chain (how much are they influenced by the suppliers, how they manage stock outs, which customers are more power full in this stores) and give suggestions on the findings.

Therefore, this study addresses the following research questions:

1. Which suppliers are more powerful and how do they influence the stores and the markets?
2. Which customers are more powerful and how do they influence the market?
3. What kind of ordering process do the suppliers have?
4. How do the retailers manage stock outs?
5. is there integration of information among retailers, suppliers and customers?

1.3. Research objective

1.3.1 General objective

To assess the logistics management practice in the food stuff retail stores with the aim of identifying gaps, potentials and constraints for development of effective and efficient logistics management.

1.3.2 Specific objectives

- To identify retail store suppliers and customers, and determine their relative power.
- To determine the causes of stock outs.
- To identify practices of managing the stock outs.
- To investigate the level of information integration among retailers, suppliers and customers.

1.4 Significance of the research

The outcome of this research will help the retail stores to understand the strength and weakness of their activity, it will help them to realize the gaps, which needs further improvement and it will provide good information for further researchers.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

The literature has two parts theoretical and empirical. The theoretical part describes about supply chain and logistics and the empirical part describes about retail management in store level

2.1 Theoretical Review

2.1.1 Supply chain management

The origin of the supply chain management (SCM) seems a mystery compared to logistics which has a long antecedent in business history. There has been an attempt to distinguish between the SCM from logistics, while there are many authors who have argued about the similarity of both concepts. Some say that it is a fulfillment of the activity integration promise implied in early definitions, while others think it is a new and bold concept (Ballou, 2007).

Supply Chain Management encompasses the planning and management of all activities involved in sourcing and procurement, conversion, and all Logistics Management activities. Importantly, it also includes coordination and collaboration with channel partners, which can be suppliers, intermediaries, third-party service providers, and customers. In essence, Supply Chain Management integrates supply and demand management within and across companies. Council of Supply Chain Management Professionals (former Council of Logistics Management)

Logistics management is that part of SCM that plans, implements, and controls the efficient forward and reverse flow and storage of goods, services, and related information between the point of origin and point of consumption in order to meet customers' requirements. , (CSCMP)

To achieve maximum effectiveness of supply chains, it became clear that integration, or 'the linking together of previously separated activities within a single system' was required. Companies have had therefore to review their internal organization to eliminate duplication and ensure that total costs can be reduced, rather than allow separate functions to control their costs in a sub-optimal manner. Similarly, supply chain integration can be achieved by establishing ongoing relationships with trading partners throughout the supply chain. (Slack *et al*, 1998)

The aim for retailers (and their supply partners) is to manage this chain to create value for the customer at an acceptable cost. The managing of this so-called 'pipeline' has been a key

challenge for logistics professionals, especially with the realization that the reduction of time not only reduced costs, but also gave competitive advantage. (Christopher, 1997)

There are three dimensions to time-based competition that must be managed effectively if an organization is going to be responsive to market changes. These are:

- Time to market: the speed at bringing a business opportunity to market;
- Time to serve: the speed at meeting a customer's order;
- Time to react: the speed at adjusting output to volatile responses in demand. (Christopher, 1997)

If the lead times of the integrated web of suppliers necessary to manufacture a product are understood, he argues that a 'pipeline map' can be drawn to represent each stage in the supply chain process from raw materials to customer. (Christopher, 1997)

➤ **Why Supply Chain Management?**

Demand uncertainty, shortened lead time, close competition, and so forth, are just some characteristics of today's business environment. Working and competing alone does not make sense any more since the tasks are being specialized, and each company tries to focus more on its core competencies. Firms can no longer effectively compete in isolation of their suppliers and other entities in the supply chain. Interest in the concept of supply chain management has steadily increased since the 1980s when companies saw the benefits of collaborative relationships within and beyond their own organization (Lummus, 1999).

In the 1980s companies discovered new manufacturing technologies and strategies that allowed them to reduce costs and better compete in different markets. Strategies such as just in- time manufacturing, lean manufacturing, total quality management, and others become more popular, and vast quantities of resources were invested in implementing these strategies. In the last few years, however, it has become clear that many companies have reduced manufacturing costs as much as is practically possible (Levi *et al.*, 2003).

Many professionals in the area of SCM expressed the idea of the value chain. (Martin Christopher, 2006) states the concept of value chain from Michael Porter's work, the Harvard Business School professor, as follow: Competitive advantage cannot be understood by looking at a firm as a whole. It stems from the many discrete activities a firm performs in designing, producing, marketing, delivering, and supporting its product. Each of these activities can contribute to a firm's relative cost position and create a basis for differentiation.

The value chain disaggregates a firm into its strategically relevant activities in order to understand the behavior of costs and the existing and potential sources of differentiation. A firm gains competitive advantage by performing these strategically important activities more cheaply or better than its competitors perform. (Martin Christopher, 2006)

The implication of Michael Porter's thesis is that organization should look at each activity in their value chain and assess whether they have a real competitive advantage in the activity. If they do not, the argument goes, so perhaps they should consider outsourcing that activity to a partner who can provide that cost or value advantage (ibid).

Significantly, it becomes clear that in order to optimize overall performance, companies need to consider the entire network of supply. These organizations have realized that whenever one-company deals with another company that performs the next phase of the supply chain, both stand to benefit from the other's success (Lummus, 1999).

2.1.2 Logistics

Early references to logistics are found primarily in military application (Lummus *et al.*, 2001). Throughout the history of humankind wars have been won and lost through logistics strengths and capabilities or the lack of them (Christopher, 2005)

(Martin Christopher, 2005) defines logistics as:

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

Logistics management is vital not only to manufacturing and to assembly industries, which are goods oriented, but also to retailing, transport and other distribution or service oriented industries (Huan, 1995).

Logistics exists to allow inventory to achieve desired time, place and possession benefits at the lowest total cost. Inventory has little value until it's positioned at the right and location to support ownership transfer or value added creation. If a firm does not consistently satisfy time and place requirements it has nothing to sell. To achieve maximum strategic benefits of logistics the full range of functional work must be performed on an integrated base (Donald J.B and David J.C, 2009).

Both cost advantage and value advantage are the issues that can be achieved by effective implementation of logistics management. Furthermore, some new requirements are added to the customer expectations that were not essential to consider before. In addition to the product requirements, customers request for a variety of services. Occasionally these services become more vital in the eyes of customers rather than product itself, i.e. it is harder to maintain a competitive edge through the product itself. In a situation like this it is customer service that can provide the distinctive difference between one company's offer and that of its competitors (Christopher, 2005).

Lambert and Stock (2001)

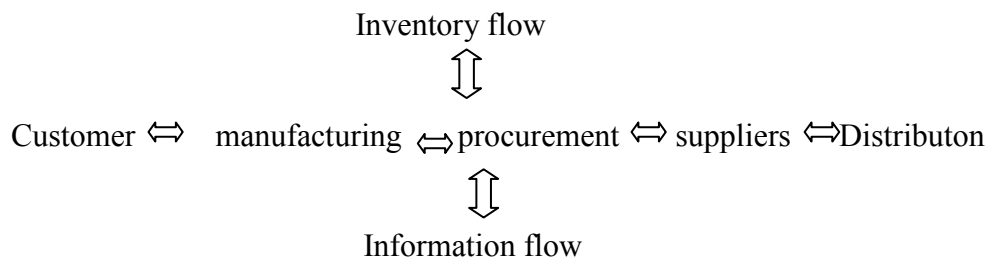
Define customer services as "a customer oriented philosophy that integrates and manages all elements of the customer interface within a predetermined optimum cost services mix." Generally, the final goal of any logistics system is to satisfy the customer. In fact each

component of the logistics system can effect whether a customer receives the right product, at the right place, in the right condition, for the right cost, at the right time (Lambert and Stock, 2001)

2.1.2.1 Integrated logistics

Logistics is viewed as the competency that links an enterprise with its customer and supplier information from and about customer flows throw the enterprise in the formed sales activity, forecast and orders thus, the process is viewed in terms of two interrelated efforts, inventory flow and information flow (Donald J. Bowersox *et al.*, 2009).

Fig 1. Logistics flow (Donald J. Bowersox *et al.*, 2009).



2.1.2.2 Flows in logistics

➤ *Material and resource flow*

The final goal of any logistics system is to satisfy the customer. In fact, each component of the logistics system can effect whether a customer receives the right product, at the right place, in the right condition, for the right cost, at the right time (Lambert and Stock 2001). Among these criteria, place and time utility have the greater importance and are considering as a measure in determination of efficiency for material and resource flow in the logistics system. (Donald J. Bowersox *et al.*, 2009).

Material flow representing the movement of products or merchandises from a point 'sender' to another 'receiver' and it consists of raw material, work in process, and finished goods while resource flow makes the material flow possible. Furthermore material and resource flow are the two physical flows in the logistics system. (Donald J. Bowersox *et al.*, 2009).

According to (Lumsden, 2006), resources could be divided in two structures, static and dynamic. Static structure like storage while dynamic structure is either consumed over time such as labor or in circulation for instance carrier.

Essentially these two flows constitute the main function of a logistics system and due to their nature and structure; they bring a level of complexity into the system. The complexity arises since these two flows must join each other in order to create value. (Donald J. Bowersox *et al.*, 2009).

Lumsden (2006) points out that one of the most important reasons for inefficient resource utilization is that resource and material flow do coincide in neither space nor time. Consequently, existence of a balance in the system appears essential between these two flows. Either the material flow be greater than resource flow which then surplus should be stored until resource being available or resource be greater than material which same resultant recognizable, these imbalances in the system incur high expenses for the system. A typical example for such these situations is utilizing full truck load (FTL) instead of less than truck load (LTL). This will happen in the case of greatness of resource flow on material flow. So one cannot employ all the capability of the available resources and this impose some costs which would otherwise be replaced with benefits. (Lumsden, 2006)

Another concerning aspects in the matter of material and resource flow are economical parameters. These are factors that determine variations in costs. According to Lumsden (2006), these economical parameters include economy of scale, economy of scope, economy of density, economy of experience, and economy of presence. He has described each parameter intention as follows:

- Economy of scale: aims at the usage of larger and more resources which lead to a lower cost of operation.
- Economy of scope: is present if it is cheaper to operate two services in one single entity than it is to produce the services separately.
- Economy of density: aims at working on larger markets, which leads to more efficient utilization of resources.

- Economy of experience: means that the cost per item decreases when it is produced in greater amounts or when the operator stays on the market for a longer time since the advantages of 'learning by doing' be achieved.
- Economy of presences: means that there is an economic value in being physically present or available. (Lumsden, 2006)

Fixed costs are costs that do not change regardless of the amount of use, or at least change relatively little as a function of use. That is, they are costs that must be incurred even if production were to drop to zero. Examples of fixed costs could include factories, warehouses, machinery, electrical transmission systems and railways. Variable or marginal costs, in contrast to fixed costs, change directly as a function of use. Examples of variable costs are fuel, labor, etc. (Lumsden, 2006)

Logistics activity needs huge amounts of investment, large fix costs, and hence could be characterized by large economy of scale. This feature together with the fact that it is almost impossible for a typical company to be expert in all the business area force the organizations either to do the business jointly or contract out a part of trade to professional company. In consideration of economy of scale, it is the reason why many companies outsource the logistics activity to the third company, which in turn already has available resources to recompense the enormous expenditure of the trade. In other words, it can be said that from the economical perspective it is more efficient and beneficial to collaborate, since taking the cost advantages obtain from scalability will increase through more available resources. As an example to this expression cross-docking technique, a perfect logistics solution could be mentioned. (Lumsden, 2006)

According to Reeves (2007), a cross dock is simply an intermediate staging area for freight. Instead of having geographically dispersed suppliers ship less than full truckloads of material directly to the point of use at assembly plants, full truckloads of material destined for multiple assembly plants are shipped from suppliers to a cross duck facility where the inbound materials are disaggregated, and then re-aggregated for outbound shipment to individual final assembly plant. Actually a truly exploitation of economy of scale could be recognized by implementing cross docking in logistics management system. (Reeves, 2007)

- **Inventory flow:** is concerned with movement and storage of materials and finished product. (Donald J. Bowersox *et al.*, 2009)
- **Information flow:** In recent times, information has become a key player in determination of productivity of a complex enterprise. Customer order together with all other information flowing between different company's department and even in beyond the four walls of the company, through the entire supply chain, are so critical in order to support other operations in the system (Donald J. Bowersox *et al.*, 2009).

The speed and quality of the information flow have a direct impact on the cost and efficiency of the entire operation. Slow, erratic communication can lead to not only lost customers but also excessive transportation, inventory and warehousing cost, as well as possible production inefficiencies. In fact, the cost of misunderstanding the actual customer demand is enormous so organizations try to have real and on time information in order to make a proper decision. In such a scenario, it is necessary to forecast and estimate the demand as exactly as possible, supply raw materials to the point of sale and reorganize the business structure if necessary. To realize these goals a system must seamlessly integrate both information and material flow. Such a system can provide access to information, aid decision making and execution. Therefore, it is quite evident that one of the key constituent of logistics management strategies is information sharing. (Lambert and Stock, 2001).

In other words, the key challenges are how a company can quickly integrate its information systems with those of partners, suppliers and customers to form a smart supply chain. In addition, a thoughtful investment in an information infrastructure that will not become obsolete in a year or a less period of time must be made. To meet these challenges, an enterprise must move from a monolithic information system (using a central database in a neutral format) to a software agents approach in which agents anywhere on the net can sense and act on a defined environment. Therefore, we need to establish a new collaboration infrastructure for the entire supply chain net so that a supply chain management system could act based upon a dynamic environment and be able to easily communicate and collaborate with other systems running in partners' or suppliers' computers (Liu, 2006).

According to Tan (2000), adopting electronic commerce (e-commerce) via the Web has become a key strategy to manage the supply chain. Firms capable of taking advantage of the WWW have a highly developed culture of internal and external collaboration, a vision for process and technological enabled change, and an information system infrastructure capable of supporting WWW based collaboration (ibid).

Another point in this matter is the role of information flow in effectiveness of material and resource flow. There is no doubt that in order for material and company's resources to flow smoothly through different logistical activities, a comprehensive information system is required. This is also needed to support other flows of logistics system including monetary flow. (Donald J. Bowersox *et al.*, 2009).

Material flows are triggered by information, as information is needed for decision-making. (Emmet, 2006).

Information is also used to:

- implement other activities,
- Plan,
- organize,
- Direct,
- coordinate, and
- Control

Information flows therefore link internal company activities and also link external suppliers and customers. Effective information and communication technology will process orders, track and trace progress and provide timely and real time visibility. (Emmet, 2006).

Information flow identifies specific location within a logistics system that have requirements it is concerned with directing operations to receive and ship inventory as required to support customer and purchase orders. (Donald J. Bowersox *et al.*, 2009)

Operations requirement deal with

1. Order management
2. Order processing

3. Distributions operations
4. Inventory management
5. Transportation and shipping and
6. Procurement (Donald J.Bowersox *et al.*, 2009)

➤ **Monetary flow**

Although cash flow is one of the four activities in the logistics, it has failed to attract enough attention from academics. Fewer researches have focused on cash flow performance than on materials or information flows. Actually, Cash is the fuel that drives businesses. Financial flow consists of credit terms, payments and payment schedules, plus consignment and title ownership (Key, 2001). Managing this flow involves record keeping, tracking and analysis by many entities.

Generally, monetary flow is dependent on other logistics flows. Product should be moved from supplier to customer and the ownership must be transferred in order to cash be paid and flow backward. (Key, 2001).

2.1.2.3 Logistics excellence

Effective logistics is one of the most important means of competition in the business world and distribution logistics has always been a key factor for the competitiveness of industrial companies. This can be emphasized by some new evaluation in both market and production systems. Delocalization of the manufacturing capacity in order to employ the cheap resources and quick response to the customers' expectation which meting their future demands is very difficult are just two of these evaluations. (John Fernie & Leigh sparks, 1998)

This review of the evaluation of supply chain strategies in various industries suggests the following insight: the Internet and the associated new supply chain paradigms introduce a shift in fulfillment strategies from cases and bulk shipment to single items and smaller-size shipments and from shipping to a small number of stores to serving highly geographically dispersed

customers. This shift has also increased the importance and the complexity of reverse logistics (Levi *et al.*, 2003).

Customers' expectations in terms of delivery service are constantly growing. Such factors make the distributive logistic system, and the related costs, increasingly important and often critical for competitiveness of companies (Caputo, 2006).

2.1.2.4 Logistics fulfillment

According to Levi *et al.* (2003), as with any business function, there are four basic ways for a firm to ensure that a logistics related business function is completed. These are:

- **Internal activities**, when a company has resources and expertise available, logistics activity could perform internally. Especially if this logistics is one of the firm's core competencies, this may be the best way to perform the activity. If not, this may not a logical option since logistics activity requires huge amounts of investment including infrastructure, resources and expertise. Most importantly these assets should be updated periodically, causing more and unnecessary consideration which will then make the company disregard other important and essential activities in its system. (Levi *et al.*, 2003).

- **Acquisitions**, if a firm has not resource available internally, another firm could be acquired to perform the task. As an example a joint venture could be mentioned that involves shared ownership between the two parties. Although this method will gives a full control over the acquired company and might be useful in some circumstances, still it has its own drawbacks. Generally, it is very expensive and difficult to obtain a suitable company. Furthermore, normally acquired company has not the same culture and organizational structure. Therefore it may impose an additional cost to adjust its structure to the desired condition. (Levi *et al.*, 2003).

- **Arm's length transactions**, most of the relationships between the organizations are of this type where a seller typically offers standard products or services to the variety of customers. Normally this kind of arrangement does not exceed a specific and short period of time. While this method is suitable in many situations, still there are areas which a company in its logistics

activity need closer and integrated kind of relationship with either the supplier or customer. (Levi *et al.*, 2003).

- **Strategic alliance**, this kind of fulfillment is not the same as acquisition which involves shared ownership between the partners, nor is the same as arm's length (Levi *et al.*, 2003).

2.1.2.5 The logistics task

Retailing and logistics are concerned with product availability. Many have described this as 'getting the right products to the right place at the right time'. Unfortunately however that description does not do justice to the amount of effort that has to go into a logistics supply system and the multitude of ways that supply systems can go wrong. The very simplicity of the statement suggests logistics is an easy process. As the boxed example shows, problems and mistakes can be all too apparent. The real management 'trick' is in making logistics look easy, day in and day out, whilst reacting to quite volatile consumer demand and cost-effective manner. (John Fernie and Leigh Sparks, 2004)

The logistics management task is therefore initially concerned with managing the components of the 'logistics mix'. We can identify five components:

- **Storage facilities:** these might be warehouses, distribution centers, or simply the stock rooms of retail stores. Retailers manage these facilities to enable them to keep stock in anticipation of or to react to, demand for products. (John Fernie and Leigh Sparks, 2004)
- **Inventory:** all retailers hold stock to some extent. The question for retailers is the amount of stock or inventory (finished products and/or component parts) that has to be held for each product, and the location of this stock to meet demand changes. (John Fernie and Leigh Sparks, 2004)
- **Transportation:** most products have to be transported in some way at some stage of their journey from production to consumption. Retailers therefore have to manage a transport operation that might involve different forms of transport, different sizes of containers and

vehicles and the scheduling and availability of drivers and vehicles. (John Fernie and Leigh Sparks, 2004)

- **Unitization and packaging:** consumers generally buy products in small quantities. They sometimes make purchase decisions based on product presentation and packaging. Retailers are concerned to develop products that are easy to handle in logistics terms, do not cost too much to package or handle, yet retain their selling ability on the shelves. (John Fernie and Leigh Sparks, 2004)

- **Communications:** to get products to where retailers need them, it is necessary to have information, not only about demand and supply, but also about volumes, stock, prices and movements. Retailers have thus become increasingly concerned with being able to capture data at appropriate points in the system and to use that information to have a more efficient and effective logistics operation. (John Fernie and Leigh Sparks, 2004)

It should be clear that all of these elements are interlinked. In the past they were often managed as functional areas or ‘silos’, and while potentially optimal within each function, the business as a whole was sub-optimal in logistics terms. More recently, the management approach has been to integrate these logistics tasks and reduce the functional barriers. So, if a retailer gets good sales data from the checkout system, this can be used in scheduling transport and deciding levels and locations of stock holding. If the level of inventory can be reduced, perhaps fewer warehouses are needed. If communications and transport can be linked effectively, a retailer can move from keeping stock in a warehouse to running a distribution centre, which sorts products for immediate store delivery: that is, approaching a ‘Just-In-Time’ system. Internal integration has therefore been a major concern. (John Fernie and Leigh Sparks, 2004)

It should also be clear, however, that retailers are but one part of the supply system. Retailers are involved in the selling of goods and services to the consumer. For this, they draw upon manufacturers to provide the necessary products. They may outsource certain functions such as transport and warehousing to specialist logistics services providers.(John Fernie and Leigh Sparks, 2004)

Retailers therefore have a direct interest in the logistics systems of their suppliers and other intermediaries. If a retailer is effective, but its suppliers are not, errors and delays in supply from the manufacturer or logistics services provider will impact the retailer and the retailer's consumers, in terms of either higher prices or stock-outs (no products available on the store shelves). If a retailer can integrate effectively its logistics system with that of its suppliers, such problems may be minimized. (John Fernie and Leigh Sparks, 2004)

The logistics task therefore can be described as the process of strategically managing the procurement, movement and storage of materials, parts and finished inventory (and the related information flows) through the organization and its marketing channels in such a way that current and future profitability are maximized through the cost effective fulfillment of orders. (Christopher, 1998)

Managing the logistics mix in an integrated retail supply chain, while aiming to balance cost and service requirements, is the essential element of logistics management. As retailers have begun to embrace this logistics approach and examine their wider supply chains, many have realized that to carry out logistics properly, there has to be a transformation of approach and operations (Sparks, 1998).

1. Distribution management

Distribution can be defined as the channel structure used to transfer product from an organization to its customer. (Rahulu altekar, 2008)

Distribution organization manage the activities associated with the movement of materials usually finished goods parts from suppliers – customers (Rahulu altekar, 2008)

Distribution channels can include

- Retail stores selling to final buyers (one/ chain of stores)
- Whole sale an intermediary distribution channel that usually seeks to retail stores

- Direct mail
- Tele marketing
- Cyber marketing
- Sales force (Rahulu altekar, 2008)

Distribution planning applications are designed to calculate what product need to be received at which location and at what time (Rahulu altekar, 2008)

2.2 EMPIRICAL LITERATURE

2.2.1 Retail logistics: changes and challenges

It is often taken for granted that products will be available to buy in the shops. The cornucopia of goods that is available in a hypermarket or a department store sometimes means that we forget how the products were supplied. We expect our lettuces to be fresh, the new Play station to be available on launch day and our clothes to be in good condition and ready to wear. With the introduction of e-commerce we have come to demand complete availability and home delivery at times of our choosing. (John Fernie and Leigh Sparks, 2004)

Consumer beliefs and needs have altered. Our willingness to wait to be satisfied or served has reduced and we expect instant product availability and gratification. It should be obvious from this that the supply or logistics system that gets products from production through retailing to consumption has also needed to be transformed. Logistics management and a subsequent concern for the whole supply chain have replaced physical distribution and materials management. (John Fernie and Leigh Sparks, 2004)

This logistics transformation derives from cost and service requirements as well as consumer and retailer change (Fernie and Sparks, 1998). Elements of logistics are remarkably expensive, if not controlled effectively. Holding stock or inventory in warehouses just in case it is needed is a highly costly activity. The stock itself is expensive and might not sell or could become obsolete. Warehouses and distribution centers generally are expensive to build, operate and maintain. Vehicles to transport goods between warehouses and shops are expensive, in terms of both

capital and running costs. There is thus a cost imperative to making sure that logistics is carried out effectively and efficiently, through the most appropriate allocation of resources along the supply chain. (John Fernie and Leigh Sparks, 2004)

At the same time, there can be service benefits. By appropriate integration of demand and supply, mainly through the widespread use of information technology and systems, retailers can provide a better service to consumers by, for example, having fresher, higher quality produce arriving to meet consumer demand for such products. With the appropriate logistics, products should be of a better presentational quality, could possibly be cheaper, have a longer shelf life and there should be far fewer instances of stock outs. Reaction time to spurts in demand can be radically improved through the use of information transmission and dissemination technologies. If operating properly, a good logistics system can therefore both reduce costs and improve service, providing a competitive advantage for the retailer. (John Fernie and Leigh Sparks, 2004)

Retail logistics

(Carl Michael Falck, 2005)

Retail industry has been increasingly competitive, which has led to development efforts to improve efficiency (Ellram *et al.*, 1999; Anon. 2001). However, a lot of work still remains, and currently, some of the biggest problems and improvement potential seem to be at store level (Corsten and Gruen, 2003; Pal and Byron, 2003).

2.2.2 Special characteristics of stores and store operations

Store processes are crucial for retail success (Pal and Byron, 2003): It is in the stores that customers make their final purchasing decisions and the performance of the whole supply chain is ultimately measured. In addition, it is well known that in-store costs account for a major part of the total supply chain costs (Foster, 2003, Broekmeulen *et al.*, 2004; Finegan and Patel, 2001).

2.2.3 Supply chain cost structure in retailing

Broekmeulen *et al.* (2004) have investigated the costs of retail operations. They divide the total operational costs into inventory holding, handling and transportation costs. The most noteworthy

result is that significant part of the total logistics costs – i.e. 60 percent – come from store level. Furthermore, according to statistics gathered by Food Marketing Institute (FMI) labor costs make up more than 57 percent of store operating costs. (Broekmeulen *et al.*, 2004)

Not surprisingly, many retailers are continuously developing ways to streamline their store operations. For instance, pre-packed displays and floor ready merchandise (FRM) have been used to reduce the number of employees required for shelving and stocking in stores (Phipps and Ross, 2004); i.e. some of the work has been transferred upstream the supply chain, where it could be performed more efficiently. Streamlining store operations is, however, not straightforward. The special characteristics of store operations often make optimization work difficult. (Phipps and Ross, 2004)

Stores are not warehouses

The store environment is challenging in particular because both logistical and marketing aspects have to be taken into consideration: stores need to be designed for efficient replenishment but also planned to attract customers and make their shopping experiences enjoyable (Beringe, 2002). Thus, it is crucial to remember the fundamental concept that stores are not warehouses.

To start with, this means that shelves must have a certain look that may dictate presentation stock over sales need; i.e. shelf space and store inventories are often not determined as a part of the replenishment decision, but are first and foremost a consequence of marketing decisions (Broekmeulen *et al.*, 2004; Dubelaar *et al.*, 2001)

For example, many slow moving items in stores are not going to be sold today, tomorrow or even this week, and still, there must be plenty of them stocked on the shelves because much of the product at the average retailer is for creating the store look. Thus, a large part of the products are held and ordered to stores for other reasons than immediate store sales. (Larson and DeMarais, 1999).

Store look is not the only factor affecting optimal inventory and shelf size considerations in stores: Also the pack size of an item – which is often determined by the manufacturer – weighs heavily when store planograms, shelf capacities and inventory levels for items are determined (Larson and DeMarais, 1999).

Usually, there are not many different pack or delivery sizes available for an item, and at the same time, there are various types of retail chains, retail formats, and stores of different sizes. This means that the pack size is seldom optimal for store processes. For example, in a smaller store one delivery package can even last for several months making inventory optimization virtually impossible. (Carl Michael Falck May 26, 2005)

Furthermore, in many stores the replenishment intervals for different items are not always optimal. Unlike warehouses, retail stores were not designed for rapid re-stocking. Shelving and stocking products in stores are labor-intensive processes, and are sometimes even more complicated by the fact that many items can be carried in multiple locations in the store (Rutner *et al.*, 2004). Often, products can also be misplaced in the store, and because of this, the product space for another item may be faced out. Therefore, when orders are done manually, the store clerk may not notice that the product is needed. And finally, it must be remembered that unlike warehouses, retail stores are open environments where customers can come and go as they like. (Rutner *et al.*, 2004).

POS and inventory inaccuracy

Electronic checkout scanners using bar codes have been used in retail stores already since the 1970s (Baron and Lock, 1995). The scanners made it possible to capture and store the stores' sales data or point-of-sales (POS) data electronically. During the eighties and the early nineties, POS systems became more commonly used in retailing, and nowadays, checkout scanners are used practically in all retail stores. However, many retailers have not been – and are still not – using the collected data efficiently.

The POS data varies in quality by retailer. In addition, often the quality is related to how much the POS is used by the retailer. At first, retailers did not make use of the POS data themselves at all, but only sold it to manufacturers or third parties. Then, some of the opportunities offered by the data were found at retail headquarter level: POS data could be used, for example, to support category management and when centrally determining store planograms, to analyze promotion sales and performance or the effects of pricing decisions (Huchzermeier et al., 2002; Orenstein, 1999; Baron and Lock, 1995). Some retailers have even started using POS for improved ordering systems at store level (Sambogna, 2002; van der Vorst et al., 1998; Thayer, 1991). However, making more use of POS data also puts increased pressure on the quality of the data.

The consequences of inaccurate store inventories can be substantial: (Raman and DeHoratius, 2001) estimated that companies could lose as much as 10 percent of their profits because of inaccurate inventory records. The problem is severe especially for companies that use computerized replenishment systems for managing store inventory (Raman and DeHoratius, 2001).

Another, less important consequence of the erroneous inventory records is that it is difficult to automatically estimate the level of out-of-stocks at store level.

2.2.4 Store level challenges

Overall, POS data and inventory record inaccuracy along with the conflict between logistics efficiency and marketing aspects make it difficult to manage inventories and ordering and replenishment processes at store level. (Raman and DeHoratius, 2001).

To begin with, inventory record inaccuracy should be, reduced when possible. However, the open environment of the stores, which is prone to create some kind of divergence, should also be considered as a factor when ordering, replenishment methods are developed, and inventory parameters are determined. Moreover, inventory and replenishment parameters and methods cannot be determined based on logistics efficiency alone to optimize costs: Carrying variety and presenting a full store look simply costs more money than not carrying variety, but it is often beneficial in the end (Dhar et al., 2001). Sometimes it is not even possible to influence certain

parameters – like the pack size. And to make things even more complicated, store-level decisions and processes naturally affect warehouse-level and supplier activities

What makes the store processes difficult to manage efficiently is, however, first the sheer amount of the items: Even in a smaller store, there are usually thousands of stock keeping units (SKUs). Because of the usually very limited and costly labor resources in stores, it is clear that the time that can be spent for monitoring and ordering a single product line is extremely limited. Then, with changing assortments, promotions and other activities, with the fact that there are various types of products that have, for example, different seasonal demand patterns – it should not be surprising that there is still a lot of potential for improvement in store operations. (Carl Michael Falck, 2005)

Retail performance – availability and stock loss in the retail supply chain

Replenishment methods are changing, technology is improving, the retail sector is growing more competitive, and the customers are becoming more demanding. How effective is then the retail supply chain? Is it keeping up with these challenges, or are retailers under pressure to further optimize their supply chains? Next, availability and stock loss in the retail supply chain are covered. (Carl Michael Falck, 2005)

2.2.5 Availability in retail

Customer service is increasingly important to retailers (Ellram et al., 1999). In fact, stock-outs have even been reported as the most frequently mentioned cause of frustration for dissatisfied customers (Taylor and Fawcett, 2001). With a growing assortment in many retail stores, guaranteeing availability is also increasingly difficult. (Taylor and Fawcett, 2001).

According to Corsten and Gruen (2003) retail out-of-stocks have not declined during the last ten years, this despite new technologies and industry initiatives like ECR.

The level of out-of-stocks

As already discussed earlier, accurately measuring shelf availability or product availability at the store level automatically is difficult. Manual availability measurement, on the other hand, is time-consuming and costly. Not surprisingly, despite the importance of product availability, only a few retailers systematically measure their out-of-stock levels (Småros et al., 2004). Upstream the supply chain, tracking service level is much easier: it can be done simply comparing incoming orders and deliveries. However, the biggest problems in availability do not seem to be found upstream the supply chain but at the store level. In fact, it appears that there is a drop in availability after products arrive in stores (Tierney, 2003).

Somewhat different methods can be used to measure out-of-stocks, and of course, out-of-stock rates vary among countries, retailer formats, retailers and their outlets depending on a lot of different factors (Corsten and Gruen, 2003; Anon, 1996; Emmelhainz et al., 1991).

- The potential for dissatisfaction increases when the out-of-stock item is promoted (Taylor and Fawcett, 2001).

Customer responses to stock-outs

Guaranteeing the availability in stores, promotions or not, is important both for retailers and suppliers. For retailers, the immediate effect of a stock-out is possible loss of turnover. However, the bigger concern for the retailer is the loss of customers. This will result if stock-out levels are continually unacceptable. (Carl Michael Falck, 2005)

The classification of possible customer responses in a stock-out situation varies slightly in different studies. Usually, at least three types of reactions are considered:

- (1) Substitution of the item that was sought,
 - (2) Delaying the purchase, and
 - (3) Leaving the store and either abandoning the purchase or searching for the item elsewhere.
- (Carl Michael Falck, 2005)

Using this categorization, (Zinn and Liu, 2001) conducted a survey and found that 62 percent of the respondents bought a substitutive product, 15.1 percent delayed their purchase, and 22.9 left the store. Research Council study: Faced with a stock-out, 34 percent of the shoppers did not buy alternative items on that shopping trip, about 50 percent of the shoppers did not make any

purchases, and the rest of the time, shoppers delayed their purchases to their next shopping trips (Anon, 1996).

In the most recent study by (Corsten and Gruen, 2003), it was stated that managerial researchers typically measure five primary responses:

- (1) Buy item at another store,
- (2) delay purchase,
- (3) Substitute – same brand,
- (4) Substitute – different brand, and
- (5) Do not purchase the item. (Corsten and Gruen, 2003)

(Emmelhainz *et al.*,1991) examined whether consumers are more likely to switch the brand or buy an item of the same brand but in different color or size. However, they concluded that there are at least fifteen different behaviors taken by customers in a stock-out situation. (Corsten and Gruen, 2003)

Costs of stock-outs

Understanding the consumer reaction is a key step in calculating the cost of a stock-out. Indeed, measuring the costs of a stock-out is difficult primarily because it depends on the customer's response to the stock-out. (Corsten and Gruen, 2003) divide the costs of stock-outs into four areas:

- (1) Retailer shopper loss risk – Shoppers switch permanently stores due to high levels of out-of-stocks;
- (2) Retailer sales loss risk – The risk consists of consumers shopping for OOS items at another store, substituting the item for a smaller or lower price one, and consumers canceling their purchase;
- (3) Manufacturer shopper loss risk – Consumers switch to a competitor's brand;
- (4) Manufacturer sales loss risk – Consumers cancels their purchases or buys substitutive items of a competitor. (Corsten and Gruen, 2003)

Although difficult to calculate, there are several estimates of the overall losses due to stock-outs. The estimates are also rather similar. The 1996 Coca Cola Retailing Research Council study stated that OOSs cost retailers more than 15 percent of potential sales of advertised items and reduce consumer purchases on average by 3.1 percent (Anon., 1996a; Anon., 1996b). (Corsten and Gruen, 2003) concluded that the worldwide average sales loss due to OOS is 3.9 percent.

The causes of stock-outs

Indeed, the costs of OOSs are considerable. But what is really causing the problem?

(Corsten and Gruen, 2003) conclude that 72 percent of all OOSs across the world are caused in the store. And according to the Coca Cola Study, even 97 percent of OOSs for warehouse supplied items are due to store level processes (Anon., 1996).

(Corsten and Gruen, 2003) found the greatest reason for OOS to be store ordering – causing 34 percent of stock-outs. In contrast to the Coca Cola Study, the second most important reason deduced was store shelving (25 percent), followed by retail headquarter or manufacturer problems (14 percent), and inaccurate forecasting (13 percent).

Store operations are, by far, the greater cause for stock-outs than upstream operations, and furthermore, the most important cause for store level OOSs is that store employees have failed to order the right amount of products. Also store shelving and store forecasting seem to cause problems. (Corsten and Gruen, 2003)

➤ Ways to combat OOSs

Examining the causes of OOSs is a key to providing answers on how to address the problem. As the previous discussion indicated, the majority of the root causes for OOSs are in store. Thus, it is only natural that the development of different store level processes is in key position when aiming to improve shelf availability (Anon., 1996a).

Four fundamental areas where actions are needed in order to improve product availability:

- (1) Enhancing store ordering quality,
- (2) Strengthening merchandise planning and execution,
- (3) Aligning the store replenishment cycle with consumer demand, and
- (4) Improving delivery effectiveness of DSD suppliers. (Carl Michael Falck, 2005)

The practical recommendations vary from employee training and better support tools for ordering to strengthening promotion forecasting and applying computer-assisted ordering. (Carl Michael Falck, 2005)

(Corsten and Gruen, 2003) give similar recommendations. They suggest that sustainable level of availability can be achieved, for instance, through optimizing frequency and quantity of ordering and replenishment, better assortment planning and space allocation, and automatic ordering systems.

➤ **Inventory, stock loss and spoilage**

For goods with long shelf lives, it is possible to use inventory as a buffer to ensure availability, of course taking into consideration the sometimes-limited shelf space in stores. However, especially for perishable products, maintaining the proper balance between inventory and service level can be challenging: Ample stocks lead quickly to spoilage when products that are not sold before their best before dates must be thrown away. (Carl Michael Falck, 2005).

There are studies available that report inventory levels and their development in retail supply chains. One of the most recent studies by Accenture indicates of rising inventory levels in retailing during the last few years (Accenture, 2004).

In the same report, management of inventory levels was found out to be the most important development opportunity. Perhaps, there are almost no studies available that distinguish between inventory levels in different parts of the supply chain, e.g. inventories at store level and distribution center level. (Småros *et al.*, 2004)

(Småros *et al.*, 2004) have collected this kind of inventory data, and they discovered that a large part of retail inventories is, needed, in stores

Large inventories increase the potential for stock loss. Stock loss or shrink consists of factors such as employee and customer theft, vendor dishonesty, receiving errors, accounting errors and damages during warehousing or transportation (Fitzgerald, 2003).

An important element of stock loss, when it comes to perishable product groups, is also spoilage. In the 2003/2004 Supermarket Shrink Survey, conducted by National Supermarket Research Group, overall reported retail shrink in 2002 was 2.32 percent of total retail sales. Considering that the margins in retailing are often quite small – according to Food Marketing Institute (FMI) the average net profit as a percentage of sales for U.S. food retailers in 2002/2003 was only 0.95 percent – a reduction in the amount of shrink could result in a big increase in net bottom line. For example, a 10 percent reduction in shrink would result in almost a 25 percent increase in profit. (Fitzgerald, 2003).

➤ **Retail performance and improvement potential**

Retail supply chain performance can certainly be further improved, especially at the store level. Better inventory management and enhanced ordering processes could be some of the solutions needed for better efficiency. At the same time, there are problems with stock-outs, excess inventories and spoilage. (Anon, 1997).

Although there are also other ways to address both of these issues, automated store ordering surely holds much promise: ASO can help to lower inventories in stores and thus also product spoilage for perishable items (Van der Vorst et al., 1997). Furthermore, automating store ordering is one of the most important ways to address the out-of-stock problem (Anon., 1996a; Sambogna, 2002; Corsten and Gruen, 2003).

2.2.6 Inventory and demand management

Inventory and demand management are crucial for success in retailing (Dubelaar *et al.*, 2001).

Managing inventories

The objective of inventory management is to keep enough inventories to meet customer demand and guarantee availability while at the same time be cost-effective and avoid carrying excessive buffer stocks. In practice, this means controlling inventory levels and scheduling replenishment shipments. In the context of inventory management, the importance of having demand-based ordering and replenishment systems – or pull systems – has been stressed in academic literature

(Cottrill, 1997). The aim is to reduce inventory levels, cycle times and uncertainty and thus make the supply chain more efficient (Closs *et al.*, 1998). Automatic replenishment programs (ARP) are how companies in practice implement the ideas of these pull-systems. (Closs *et al.*, 1998).

Material requirements planning

The inventory management problem becomes more complicated when some kind of demand forecast is included in the decision making process. The problem is sometimes referred to as the combined inventory management and forecasting problem (Kurawarwala and Matsuo, 1996; Davies, 1993).

One much-used approach in determining and meeting requirements for parts and products is material requirements planning (MRP). Here, the most important concern is usually the coordination of the materials at the different stages of the production process. Indeed, MRP is typically used by manufacturing companies with production processes that include several assemblies and sub-assemblies. Often, it is stated that MRP is best suited for items with dependent demand, i.e. in situations where no item-specific demand forecasting is needed. However, the approach can also be used with independent demand items. Basically, material requirements planning takes the master production schedule (MPS) and explodes it into detailed production and procurement schedules of all components and raw materials (Vollman, 1992).

The main steps in the MRP method are the following:

- 1) The MPS for a product is exploded by using the bill of materials (BOM) to determine the specific part and component requirements
- 2) The requirements for different products' parts are summed to determine the total requirements for each component during a given period of time
- 3) Current inventory levels and outstanding orders are reviewed to determine whether new orders are needed, and then, the orders are time-phased. (Vollman, 1992).

Principles of forecasting and forecasting methods

Companies that have put more emphasis on developing their demand and sales forecasting processes have also better control of their inventory and customer service levels (Langabeer and

Stoughton, 2001). Usually, demand forecasts are developed based on historical sales data and mathematical models, subjective assessments, or a combination of the above (Pindyck and Rubinfeld, 1998).

Qualitative and quantitative forecasting

Forecasts that are based on subjective assessments are called qualitative or judgmental.

These estimates are premised on managerial or an expert's judgment and knowledge and experience. Therefore, different individuals can, of course, obtain different results from the same information. Often, qualitative methods are used when there is not enough relevant data to develop quantitative forecasts applying statistical methods. However, also assessments and judgmental methods should be based on facts and careful analysis. (Chase, 1997)

Quantitative forecasting methods rely on mathematical models and presume that past data and other relevant variables can be combined into predictors of the future. (Carl Michael Falck, 2005)

Quantitative forecasting methods are typically grouped into time series and causal models. Time series models only use the historical data of the time series itself to develop estimates of the future. The basic idea is to model, for example, seasonal and cyclical patterns and trend. In causal models, cause and effect relationships between the dependent and independent variables are developed. As was already stated, time series and causal models can also be combined, for example, as in case of autoregressive moving average models with deterministic or independent variables (ARMAX). In general, quantitative methods give more accurate results than qualitative methods, but extensive historical data is required for choosing and determining the values of the correct set of variables. (Silver *et al.*, 1998)

The most common time series methods used are exponential smoothing and moving average (Sani and Kingsman, 1997). Linear single or multiple regression models are most prevalent of the causal techniques. In practice, relatively simple forecasting methods are used in companies: for example the naïve method or simple exponential smoothing. (Sani and Kingsman, 1997)

2.2.7 Inventory control and forecasting at the store level

It is difficult to apply basic inventory management principles at store level. Next, store level automated ordering and forecasting practices are reviewed. (Carl Michael Falck, 2005)

2.2.8 Automated store ordering and replenishment

There is still surprisingly little published information on store ordering systems. A few shorter articles can be found in more practitioner-oriented journals (Shulman, 2003; Tarnowski, 2004; Sambogna, 2002; Howell, 2000).

The basic elements of an ASO system

The main components of an ASO system are perpetual inventory, order determination method, and possibly some kind of forecasting engine (Garry, 1994).

- Perpetual inventory record keeps track of current stock levels. It is updated by point-of-sales data, received deliveries etc.
- Order determination includes calculations to decide how much product to order and when.
- Forecasting is the actual engine that drives the ASO system. In actuality, forecasting is the ability to analyze current data and use demand history to identify patterns and predict future sales. (Garry, 1994).

Level of automation

The level of automation of ordering processes at store level may vary. Basically, there are three primary methods for ordering products to stores:

- (1) Completely manual ordering,
- (2) Assisted ordering, and
- (3) Automated ordering. (Garry, 2004)

- Manual ordering: Traditionally, store orders have been made by store clerks, for example when refilling the shelf. Usually, some sort of hand-held device can be used for ordering.
- Assisted ordering: Computer generates order suggestions, which must be accepted by the store personnel.
- Automated ordering: Computer algorithms are used to automatically order products to stores. (Garry, 2004)

Although the above classification is often fairly practical, it must be kept in mind that in practice the differences between the three methods are somewhat blurry. For example, if computer generated reports and forecasts are used to aid in ordering, are we still dealing with manual ordering? Also, even if the normal procedure in a company is to let the automated store ordering system manage the ordering, it is still very often in practice possible for store personnel to make alterations. (Carl Michael Falck, 2005)

Benefits of ASO systems

According to previous studies, automation of ordering and replenishment in general has often had positive impact on inventory levels and inventory turns (Daugherty *et al.*, 1999). As already discussed earlier in this literature section, in connection with studies dealing with availability and out-of-stocks, automated and assisted ordering are also repeatedly mentioned as potential solutions for these problems (Corsten and Gruen, 2003).

The key benefits of automation of store ordering as listed by GS1 France (2005):

- Reduced stock holdings in the supply chain
- Reduced cost of issuing purchase orders
- Reduced errors during order processing
- Reduced level of commercial disputes between the supplier and the retailer
- Reduce need for end of season price mark-down in products due to over-stocking
- Reduced out of stock on the shelves and increase turn over
- Un-interrupted flow of deliveries
- Better response to the consumer demand and as a result increased loyalty
- Consumer behavior data warehouses
- Forecasts of the supplier's production planning based on day to day sales.

This general, and perhaps even rather utopian, list gives a picture of the *potential* benefits of automated store ordering. An interesting question is, however, what benefits have actually, in practice, been achieved by assisted and automated ordering at store. (Carl Michael Falck, 2005)

Demand forecasting at store level

Managing store and product specific forecasts is one of the challenges when automating store ordering. Forecasting at store level differs from distribution center level forecasting in that the DC is forecasting for the time when the stores will want the product and the stores are predicting for when the consumers will want it. The important differences have to do with timing and lead-times. Usually, managing the normal material flow for basic products is relatively straightforward; the demand should be fairly stable and thus easy to predict (Småros et al., 2004). For short term forecasting, basic methods like some sort of exponential smoothing seem common (Baron and Lock, 1995).

In conclusion it can be stated that rather simple forecasting approaches are used in practice at store level. These methods may be sufficient for managing the normal material flow but exception situation usually cause problems. At single SKU level, it is difficult and laborious to develop causal relationships between different variables affecting demand (Huchzermeier et al., 2002). Indeed, for example the most widespread industry approach to promotional forecasting is the base-times-lift method. In this approach the idea is to simply compare the average baseline sales for an item to the lift – i.e. the multiple of baseline sales expected when the item is promoted in a particular way (Cooper et al., 1999). In addition, for instance (Baron and Lock, 1995) state that forecasting methods based on statistical models are still in their infancy. This is fairly natural considering that traditionally store level demand forecasting has, in practice, also been done at store level; and store personnel cannot be expected to handle very complex mathematical algorithms (Beringe, 2002).

2.3 Conceptual Framework

Based on overall review of related literature, and the problem statement of the research, the following conceptual framework in which this specific study governed was developed as follows:

Fig 2 conceptual framework of the study

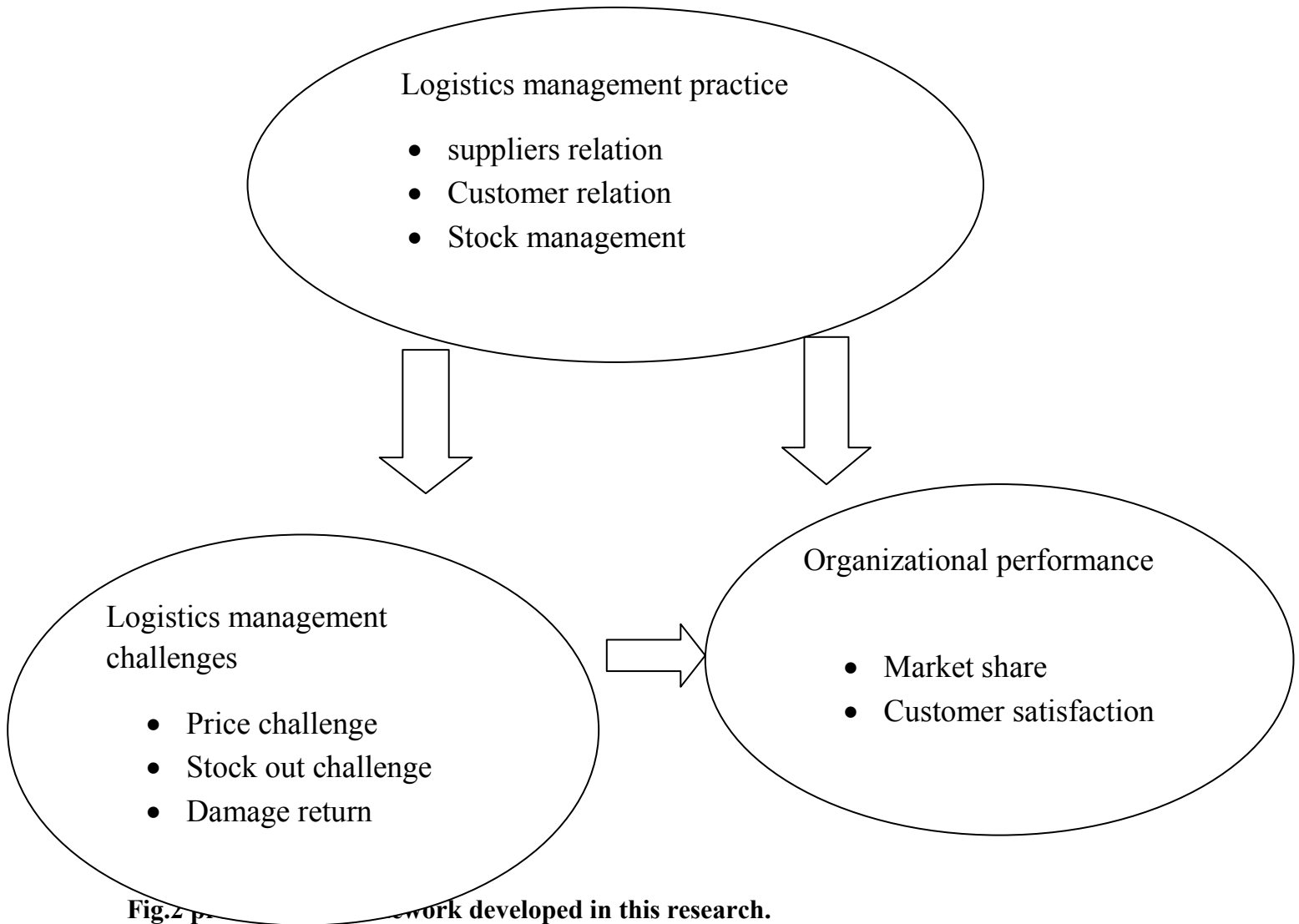


Fig.2 Conceptual framework developed in this research.

The framework proposes that logistics management practices have an impact on organizational performance and it can be a cause for logistics management challenges if it cannot be controlled effectively.

Logistics management practice in this framework is constructed in three dimensions. This is supplier relation, customer relation and store management (stock out).

Supplier partnership: is concerned on the long-term relationship between the organization and its suppliers. It is designed to leverage the strategic and operational capabilities of individual

participating organizations to help them achieve significant ongoing benefits. (Suhong Lia, Bhanu Ragu-Nathanb, T.S. Ragu-Nathanb, S. Subba Raob, 2004)

Customer relationship: Comprises the entire array of practices that are employed for the purpose of managing customer complaints, building long-term relationships with customers, and improving customer satisfaction. Customer relationship management is an important component of SCM practices. The growth of mass customization and personalized service is leading to an era in which relationship management with customers is becoming crucial for corporate survival. Good relationships with supply chain members, including customers, are needed for successful implementation of SCM programs. Close customer relationship allows an organization to differentiate its product from competitors, sustain customer loyalty, and dramatically extend the value it provides to its customers. (Suhong Lia, Bhanu Ragu-Nathanb, T.S. Ragu-Nathanb, S. Subba Raob, 2004)

Stock outs: stock-outs have been reported as the most frequently mentioned cause of frustration for dissatisfied customers (Taylor and Fawcett, 2001). With a growing assortment in many retail stores, guaranteeing availability is also increasingly difficult. (Taylor and Fawcett, 2001).

Five primary responses of customers are:

- (1) Buy item at another store,
- (2) delay purchase,
- (3) Substitute – same brand,
- (4) Substitute – different brand, and
- (5) Do not purchase the item. (Corsten and Gruen, 2003)

Price challenge: occurs from the imbalance of bargaining power between the suppliers and retailers (Catherine Nicholson, 2012)

Damage return: Retailers have to cope with all kinds of returns—from apparel that just did not suit the customer, to expired products that are no longer saleable, to recalls endangering public safety. Here is how retailers handle this range of returned goods to recover maximum value.

Market share: is said to be a key indicator of market competitiveness that is, how well a firm is doing against its competitors. "This metric, supplemented by changes in sales revenue, helps

managers evaluate both primary and selective demand in their market. That enables them to judge not only total market growth or decline but also trends in customers' selections among competitors. Generally, sales growth resulting from primary demand (total market growth) is less costly and more profitable than that achieved by capturing share from competitors. Conversely, losses in market share can signal serious long-term problems that require strategic adjustments. Firms with market shares below a certain level may not be viable. Similarly, within a firm's product line, market share trends for individual products are considered early indicators of future opportunities or problems. (Farris, Paul W.; Neil T. Bendle; Phillip E. Pfeifer; David J. Reibstein, 2010).

Customer satisfaction: Within organizations, customer satisfaction ratings can have powerful effects. They focus employees on the importance of fulfilling customers' expectations. Furthermore, when these ratings dip, they warn of problems that can affect sales and profitability. These metrics quantify an important dynamic. When a brand has loyal customers, it gains positive word-of-mouth marketing, which is both free and highly effective. Therefore, it is essential for businesses to effectively manage customer satisfaction. To be able do this, firms need reliable and representative measures of satisfaction. (Farris, Paul W.; Neil T. Bendle; Phillip E. Pfeifer; David J. Reibstein, 2010).

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Research design

This research uses a descriptive type of research design, this design is selected because it helps to discover and describe the characteristics of the variables or issue conducted through questionnaires. Descriptive studies observe, describe and document aspects of a situation as it naturally occur (Polit and Hungler, 1999). This design involves the collection of data that will provide an account or description of individual groups or situations. Instruments, which are used to obtain this design, include questionnaires, interviews and observations (Polit and Hungler 1999).

3.2 Data types and sources and method of data collection

Data may be classified as primary and secondary based on who collected it.

Data collected by the researchers themselves through various data-gathering methods are defined as primary data. There are both advantages and disadvantages with primary data. The main advantage is that the data are collected particularly for the study at hand (Ghauri & Gronhaug, 2005; Patel & Davidsson, 2003). The main disadvantage is that the gathering of primary data can be both time consuming and costly (Ghauri & Gronhaug, 2005).

The primary data in this study is collected through; questioners and interviews.

- **Questioner:** is a self report instrument designed to gather valid and reliable information. The questioner will be arranged in both Amharic and English languages and it will consist open and closed ended questions. It will have three major parts the first will focus on the demography of the respondent (age, education level, working area...), the second will consist questions related to the study and are answered by ranking and the final part will consist open-ended question. The questioners will be distributed randomly to participants.

Secondary data rely on previous data collection and are thus not a first-hand source. Many researchers recommend that secondary data should be the starting point of all research. (Ghauri and Gronhaug, 2005)

In this thesis, secondary data is collected from newspapers, books, research papers, articles and WebPages.

In addition, the qualitative data collected through open ended questioners, interview and document is interpreted and analyzed in a triangulated way that can support the quantitative data collected through questioners.

3.3 Sample and sampling design

The target population consist food staff retailers (store owners) found in merkato area specifically around Gesho tera and Areb tera. From preliminary observation, there are about 50

stores found in this particular area. For this study, the sample size will hold 30 foodstuff retail stores and for selecting this sample a convenience sampling technique is used.

3.4 Method of data analysis and presentation

By Using a descriptive method of analysis the results obtained, through questioners is summarized (e.g., how many liked or dislike the service).

This method of analysis is selected because it makes the research more clear and it can easily transfer the idea by using frequencies, measures of dispersion and measures of central tendency results.

The result is presented by using tables, and charts as needed.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

This chapter focuses on the presentation and analysis of the data collected through questioners and customer suggestions. The respondents of the questioners are food staff store owner or representatives of the store owners found in merkato. The questioners were randomly distributed in Merkato area, specifically in Arab tera and Gesho tera, 30 questionnaires were distributed and the results are discussed below.

The data obtained from the close ended questionnaires are analyzed quantitatively and presented by tabulation, percentage.

4.1 Characteristics of the respondents

In the questionnaires presented for the respondents, the first seven questions demand to cite their gender, age, and work experience, number of workers, education level, job level and number of stores.

Table 1- characteristics of respondents

1	Gender	Male	23	76.67
		Female	7	23.33
		Total	30	100
2	age	18-29	15	50
		30-39	13	43.33
		above 40	2	6.667
		total	30	100
3	work experience	1	-	-
		2 to 5	13	43.33
		5 and above	17	56.67
		total	30	100
4	number of workers	2	-	-
		2 to 5	22	73.33
		above 5	8	26.67
		Total	30	100
5	Education level	grade 10	2	6.667
		grade 12	3	10
		certificate	-	-
		diploma	7	23.33
		1st degree	15	50
		2nd degree and above	3	10
		Total	30	100
6	job level	president		
		general manager	15	50
		manager	8	26.67
		other	7	23.33
		Total	30	100
7	number of stores	1	15	50
		2	13	43.33
		3	2	6.667
		Total	30	100

Source: Own survey, 2016.

This table shows the demographic characteristics of the respondents, 23 of the respondents are male and the rest 7 are female.

As the age of our respondent's shows that 15 of the respondents are between 18-29, 13 are between 30-39 and 2 are above 40.

The educational background of the respondents show that, 2 completed grade 10, 3 completed grade 12, 7 holds diploma, 15 holds 1st degree and 3 have a 2nd degree.

The job levels of the respondents are 15 of the respondents are general managers, 8 are managers and 7 are others.

When we see their work experience year, 13 of the respondents have 2-5 year experience and 17 have 5 year and above work experience.

When we see the Number of stores, the respondents operate, 15 of the respondents have one store, 13 operates two stores and 2 of them operate three stores. In addition, 22 of the respondents have 2-5 workers while 8 of them employ more than 5 workers.

4.2 Suppliers attribute

Table 2 suppliers attribute

	Item	alternative	Frequency	%
1	Positive reputation of supplier	not important	-	-
		important	14	46.67
		very important	16	53.33
		Total	30	100
2	strong trust between retailer and supplier	not important	-	-
		important	9	30
		very important	21	70
		Total	30	100

3	Flexibility of supplier to tailor product offerings specifically to retailer needs	not important	-	-
		important	13	43.33
		very important	17	56.67
		Total	30	100
4	innovative services	not important	-	-
		important	12	40
		very important	18	60
		Total	30	100
5	strong personal relationships with supplier	not important	-	-
		important	8	26.67
		very important	22	73.33
		Total	30	100
6	accuracy in order fulfillment	not important	-	-
		important	8	26.67
		very important	22	73.33
		Total	30	100

Source: Own survey, 2016.

Table 2 shows major suppliers attribute, item 1 evaluates the Positive reputation of supplier. As per their response, 14 of them answered important, 16 of them think it's very important. This implies positive reputation of suppliers is a very important aspect for the retail stores.

Item 2 of similar table talks about strong trust between retailer and supplier; 9 of respondents think it's important while 21 of the respondents think it's very important. This implies trust between retailers and their suppliers is very important aspect it's an issue that can easily affect the performance of the stores.

As per item 3 of the same table above which evaluates the Flexibility of supplier to tailor product offerings specifically to retailer needs and according to their response, 13 of them say it's

important while , 12 of them think it's very important. This implies Flexibility of supplier to tailor product offerings specifically to retailer needs is very important.

As per item 4 of the same table above which evaluates the innovative services and according to their response, 12 of them say it's important while, 18 of them say it's very important Based on the data, majority of the respondents, i.e. 60%, does believe innovative services is very important.

As per item 5 of the same table above which evaluates strong personal relationships with supplier and according to their response, 8 of them think it's important while 22 of them say it's very important. This implies a strong personal relationship with supplier is very important.

The last item on similar table which evaluates accuracy in order fulfillment; 8 answered important while 22 of the respondents say very important. This implies accuracy in order fulfillment is very important.

4.3 Major supplier's relation

Table 3 Major supplier's relation

	Item	alternative	frequency	%
1	shortage of product (the suppliers tell us about shortage of products before it occurs)	strongly disagree	-	-
		disagree	-	-
		neutral	8	26.67
		agree	14	46.67
		strongly agree	8	26.67
		Total	30	100
2	The supplier return damage products	strongly disagree	7	23.33
		disagree	8	26.67
		neutral	3	10
		agree	5	16.67
		strongly agree	7	23.33
		Total	30	100

3	the supplier is good on delivery time	strongly disagree	-	-
		disagree	5	16.67
		neutral	5	16.67
		agree	10	33.33
		strongly agree	10	33.33
		Total	30	100
4	The frequency of products with no invoice is high (product with no invoice)	strongly disagree	8	26.67
		disagree	5	16.67
		neutral	8	26.67
		agree	4	13.33
		strongly agree	5	16.67
		Total	30	100

Source: Own survey, 2016.

As it is shown in item 1 of table three 8, 14 and 8 of the respondents replied, neutral, agree and strongly agree respectively on considering their suppliers tell them about shortage of products before it occurs. This implies suppliers of these retailers are good on telling about shortage of product before it occurs.

On the item 2 of the same table regarding the supplier return damage products 7 of the respondents strongly agree, 5 of them agree, 3 of them neutral, 8 of them disagree and the rest 7 of them strongly disagree. This implies that the supplier does not return damaged products and this action directly affects the retailer's performance.

On the item 3 about suppliers delivery time 10 of the respondents gives their degree of agreement as strongly agree, 10 of them as agree, 5 of them as neutral and 5 them as disagree. This implies the supplier are good on delivery time.

On the item4 regarding the frequency of products with no invoice is high 8, 3, 8, 4 and 5 of the respondents replied strongly disagree, disagree, neutral, agree, and strongly agree respectively. This implies almost most of purchases made are by invoice (the suppliers give invoice).

4.4 Customer's relation

Table 4 customer's relation

No .	Item	Alternative	Frequenc y	%
1	Our company evaluate customers satisfaction	strongly disagree	-	-
		disagree	-	-
		neutral	7	23.33
		agree	13	43.33
		strongly agree	10	33.33
		Total	30	100
2	Efficiently manage information with customers	strongly disagree		
		disagree	5	16.67
		neutral	2	6.67
		agree	12	40
		strongly agree	11	36.67
		Total	30	100
3	Have a good customers complain management strategy	strongly disagree	2	6.67
		disagree	-	-
		neutral	10	33.33
		agree	8	26.67
		strongly agree	10	33.33
		Total	30	100
4	The influence of your major customers on the store is high	strongly disagree	-	-
		disagree	-	-
		neutral	6	20
		agree	8	26.67
		strongly agree	16	53.33

		Total	30	100
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Source: Own survey, 2016.

As can be seen on the table, it evaluates the company and the customer's relation. Item 1, 2 and 3 shows the companies frequency on the measurement and evaluation of customer satisfaction, manage information with customers and have well complain management strategy. The majority that is 22 respondents agreed they have a good position, 6 replied neutral while 2 of them disagree. This implies that these stores give much attention on their relation with their customers and they are successful on satisfying their customers and managing information.

On the item 4 of the same table the majority that is 16 of the respondents agree while 8 replied neutral, while 6 disagree for the influence of major customer. This implies that the power of customers is high and it highly influences the activity of the retail stores.

4.5 Stock out management

Table 5 stock out management

Item		alternative	Frequency	%
1	Have a trained store keeper	strongly disagree	5	10
		Disagree	7	16.67
		Neutral	5	23.33
		Agree	5	16.67
		strongly agree	8	33.33
		Total	30	100
2	The company has a retail data and strongly relay on the data	strongly disagree	5	10
		Disagree	5	16.67
		Neutral	5	16.67
		Agree	7	26.67
		strongly agree	8	30
		Total	30	100
3	Have manufacturer or suppliers data	strongly disagree	5	6.667
		Disagree	7	10

		Neutral	6	26.67
		Agree	8	40
		strongly agree	5	16.67
		Total	30	100
4	Efficiently manage my stock outs	strongly disagree	4	6.667
		Disagree	10	33.33
		Neutral	3	10
		Agree	6	26.67
		strongly agree	7	23.33
		Total	30	100
5	my store compared to other competitors has a good position	strongly disagree	5	10
		Disagree	7	23.33
		Neutral	5	16.67
		Agree	8	33.33
		strongly agree	5	16.67
		Total	30	100

Source: Own survey, 2016.

As can be seen the above table investigates about store management. Item 1, 2 and 3 asks about the company's stock management having a trained storekeeper, managing a good retail data and strongly relay it and about having manufacturer or suppliers data. In this questions 14 respondents agree they have good store management, 5 of them replied neutral while 11 disagree; they responded they don't have a good store management. This implies that almost half of the respondents are good while half of them are poor in store management technique. Managing store effectively is critical for stores profit but many stores are lacking good stock management and it needs improvement.

On the item 4 and 5 of the same table about effectively managing stock outs and the retail stores position compared to competitors) equally 13 respondents agree they are good and also poor while 4 respondents replied neutral position. This implies there are two kind of stores found in this market area these are stores which have good and poor stock management

4.6 Opinion about current position.

Table 6 Opinion about current position

NO	Item	Alternative	Frequency	%
1	How do you describe your relation with your suppliers	very poor	-	-
		poor	-	-
		neutral	-	-
		good	13	43.33
		very good	17	56.67
		Total	30	100
2	how do you describe your relation with your customers	very poor	-	-
		poor	-	-
		neutral	-	-
		good	10	33.33
		very good	20	66.67
		Total	30	100
3	How do you control stock outs? How often does a stock out occur on your store?	very poor	6	6.667
		poor	5	16.67
		neutral	8	26.67
		good	5	30
		very good	6	20
		Total	30	100
4	What do you think about the challenges of logistics management in the food staff retail?	very poor	-	-
		poor	6	20
		neutral	8	26.67
		good	9	30
		very good	7	23.33
		Total	30	100

Source: Own survey, 2016

This table shows the opinion of the respondents about their current position, on item 1 and 2 of the table shows the relation of the stores with their suppliers and customers all of the respondents agreed that they have a good and very good relation.

On the item 3 (controlling stock out effectively) equally 11 respondents gives their degree of agreement as good and poor on having a good stock out management strategy while 8 respondents have a neutral position.

On item 4 the opinion of the respondent about the degree of challenges of logistics management in the food staff retail 16 replied that there is high challenges while 6 replied there is low challenge.

In general, this table implies that the relation of retailers with their suppliers and customers is good, the quality of stock management is neutral and the challenge of logistics management in the retail stores is high.

CHAPTER 5

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary

This study is intended to assess the logistics management practice in the foodstuff retail stores with the aim of identifying gaps, potentials and constraints for development of effective and efficient logistics management.

The literature has suggested Retailers are the active designers and controllers of product supply in reaction to known customer demand. They control, organize and manage the supply chain from production to consumption. John fernie & leigh sparks ,(1998) This study makes contributions by exploring the relationship between logistics management practices, organizational performance and logistics management challenge.

The results of the study are discussed as follows:

This study revealed that the power of the supplier is high and their actions directly affect the performance of the retail stores and the level of information integration among the suppliers and the stores is good. As (Li *et.al*, 2006), effective partnerships with suppliers can be critical factor to guide effective operational performance of organizations in the supply chain.

- When the supplier Raise price they do not tell, this directly affects the stores and its customers.
- Almost all suppliers' damaged return policy directly affects the retail stores (most of them are poor)
- Almost all suppliers have a good quality assurance and good product storage and handling facility.
- The suppliers lead time management from receipt of order to delivery is good.

The second finding shows customer relation, which is also another construct of logistics management practices. It indicates that customer relation plays vital role to enhance performance of the organization, which enables them to be more competitive in the market share. The power of the customers in these stores is high.

- More than half of the respondents are good on customer management technique
- Their information integration is good and
- They accept complain

The next finding shows the influence of store management on the competition of the stores. And final finding is about the current position of the stores on the supply chain.

- Half of the respondents are good on store management; they have trained store keepers and they manage their retail data while half of them are neutral and very poor in this aspect.

5.2 Conclusion

The purpose of this study is to investigate more about how efficiently the food staff retailers are managing the retail supply chain (how much are they influenced by the suppliers, how they manage stock outs, which customers are more power full in this stores) and give suggestions on the findings.

To do so, primary data were gathered by using questionnaire, and written documents. In general, 30 questionnaires were distributed to stores found in merkato area.

The evidence from this study shows the current relation of the retail stores with their suppliers and customers, the quality of the stores stock management, the level of managing retail data and also their current position on the market.

5.3 Recommendation

Based on the conclusions above, some recommendations are proposed

- The retail stores should provide continuous training to their employees regarding how to serve customers in appropriate way and empower its front line employees to give punctual service without any delay(to be more preferred than their competitors)
- The companies which have a poor store management should hire a trained store keeper and try to be more competitive (the stores which have a good store management are the most power full stores in the observed area)
- Managing a good retail data and having a trained store keeper will help the retail stores to be more competitive almost half of the respondents have a good store management while half of them doesn't this made a huge gap between the power of stores on the market, as I observed huge customers (like big hotels, cafeterias) prefer to buy stuffs at one spot, if you don't have the inventory they are looking for, they'll find another who does have what they want. This requires an extremely organized Supply Chain system that allows for more reliable and faster delivery. It also requires a business to have accurate information on their available inventory. In general, the stores which have good stock always are their number one choice because in these stores there is no delay to get the services they need.
- The stores has to hold variety and also unique products for instance hold goods that are used in café (materials used for pastry, hot drinks and also for cleaning), for restaurants (stuffs used for preparing foods), supermarket and also for the purpose of house hold.
- The supplier companies have to revise their damage return policy which is making the stores not happy
- The stores have to decrease their dependency on their supplier to decrease the power of the suppliers and become powerful than their suppliers, to do so I recommend them to widen the line of their work activity and become an import and retail store which can

make their store more power full on the market (In my observation around 6 stores I have seen they also import some goods which they can sell in there store and this make them powerful for attracting big customers and also on getting a special discount from some suppliers and also on easily returning damaged products)

- In general the stores has to Keep customers satisfied by providing high quality service (by providing variety products at the needed amount at the right time) and also built well designate complaint handling procedure.

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APPENDIX: QUESTIONNAIRE

ADDIS ABABA UNIVERSITY

SCHOOL OF COMMERCE

Questioner to be filled by.....

Dear respondent, this questioner is developed by Addis Ababa University, School of Commerce graduate student to conduct a Master thesis on a topic “*Assessment of logistics management practices and challenges in the retailing industry*”. I kindly ask your opinion about the logistics management practices and challenges in the retailing industry. The aim of this study is to investigate the practices and challenges of logistics and to suggest a workable strategy for the

food staff retailing industry. Your participation is voluntarily and you are not required to disclose you name.

I hope you will give me a good response and **thank you in advance for your cooperation.**

PART ONE: DEMOGRAPHIC INFORMATION

1. Gender male female

2. Age in years 18- 29 30 -39 above 40

3. Indicate (in years) how many years have you been in this job

1 or less 2-5 5 and above

4. How many workers do you have?

2 2-5 5 and above

5. Educational qualification

Grade 10 completed grade 12 completed certificate

College diploma 1st degree 2nd degree and above

6. JOB TITLE?

President General Manager Manager Other

PART TWO: QUESTIONS DIRECTLY RELATED WITH THE STUDY

7. How many stores does your company operate? _____

8. How important are the following supplier attributes to you? *(Please choose ONE response per attribute by making “X” mark from the three choices)*

Suppliers attribute	Not important	Important	Very important
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positive reputation of supplier			
strong trust between retailer and supplier			
flexibility of supplier to tailor product offerings specifically to retailer needs			
innovative services			
strong personal relationships with supplier			
accuracy in order fulfillment			

9. What types of information, in what form do you SUPPLY to your suppliers and customers?

TYPE OF INFORMATION	<i>(Written, document, e-mail, phone, personal contact)- choose how you communicate among these media.</i>

10. Identify that best describes your position. (Here you are kindly requested to choose your agreement about your company's position from the box and indicate your response by putting "X" mark , 1 = strongly disagree, 2= disagree, 3= neutral, 4= agree and 5= strongly agree.

Statements	disagree	Disagree	Neutral	Agree	Agree
Major Suppliers relation :					

A. shortage of products (do the supplier tell you about shortage of products before it occurs)					
b. damaged products (will the supplier return damage products)					
c. late delivery (the supplier is good on delivery time)					
d. products with no invoice(the frequency of products with no invoice is high)					
e. product pricing inaccuracy (the supplier don't give a price advantage)					
Major customers relation					
a. the company evaluate customers satisfaction					
b. efficiently manage information with customers (interact with the customer to set new prices and also to show new products available)					
c. have a good customers complain management strategy					
d. the influence of your major customers on the store is high					
Stock out management					
a. Have a trained store keeper					
b. The company has a retail data and strongly relay on the data					
c. Have manufacturer or suppliers data					
d. efficiently manage my stock outs					
e. My store compared to other competitors has a good position.					

Part Three: Your opinion about your current position

11. How do you describe your relation with your suppliers?

Very poor poor neutral good very good

12. How do you describe your relation with your customers?

Very poor poor neutral good very good

13. How do you control stock outs? How often does a stock out occur on your store?

Very poor poor neutral good very good

14. What do you think about the challenges of logistics management in the food staff retail?

Very poor poor neutral good very good