ADDIS ABABA UNIVERSITY SCHOOL OF COMMERCE

Department of Marketing Management

The Effect of Physical Distribution Management on Availability of Dairy Products: The Case of Addis Ababa Dairy Processors

By: HAILE ZIGALE

Adviser: MULUGETA G/MEDHIN (PHD)

Thesis Submitted to the School of Graduate Studies of Addis Ababa University School of Commerce in Partial Fulfillment of the Requirement for the Award of Master of Arts Degree in Marketing Management

June, 2020

Addis Ababa, Ethiopia

The Effect of Physical Distribution Management on Availability of Dairy Products: The Case of Addis Ababa Dairy Processors

By: HAILE ZIGALE

Adviser: MULUGETA G/MEDHIN (PHD)

Thesis Submitted to the School of Graduate Studies of Addis Ababa University School of Commerce in Partial Fulfillment of the Requirements for the Award of Master of Arts Degree in Marketing Management

June, 2020

Addis Ababa, Ethiopia

ADDIS ABABA UNIVERSITY

SCHOOL OF COMMERCE GRADUATE STUDIES

This is to Certify that the thesis prepared by **Haile Zigale Bitew**, entitled: The Effect of Physical Distribution Management on Availability of Dairy Products: The Case of Addis Ababa Dairy Processors submitted in partial fulfillment of the requirements for the degree of Master of Arts in Marketing Management complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

Signed by the Examining Committee:

Signed by the Examining Committee:

Mulugeta G/medhin (PhD)	_____	_____
(Adviser)	***Signature***	***Date***
Mesfin Workineh (PhD)	_____	_____
(Internal Examiner)	***Signature***	***Date***
Lakew Alemu (PhD)	_____	_____
(External Examiner)	***Signature***	***Date***

STATEMENT OF DECLARATION

I, **Haile Zigale Bitew**, hereby declare that **The Effect of Physical Distribution Management on Availability of Dairy Products: The Case of Addis Ababa Dairy Processors** project is wholly my work. I have carried out the present study independently with the guidance and support of the research adviser, **Dr. Mulugeta G/medhin**. Also, any other contributors or sources have either been referred in the prescribed manner or are listed in the acknowledgements together with the nature and the scope of their contribution. And the study has not been submitted for award of any Degree or Diploma Program in this or any other Institution. It is in partial fulfillment to the requirement of Masters of Arts Degree in Marketing Management.

_____

HAILE ZIGALE

Date: _____

STATEMENT OF CERTIFICATION

This is to certify that **Haile Zigale Bitew** has carried out his research work on the topic entitled **The Effect of Physical Distribution Management on Availability of Dairy Products: The Case of Addis Ababa Dairy Processors.** The work is original in nature and is suitable for submission for the award of Master of Arts Degree in Marketing Management.

_____

Adviser: MULUGETA G/MEDHIN (PHD)

Date: _____

ACKNOWLEDGMENT

Almighty God, You give me the strength, ability, ambition and the determination to carry out this project.

My Adviser and Instructor Dr. Mulugeta G/medhin, I would like to express my gratitude thanks for your humble, invaluable and genuine guidance, support and advice.

My beloved, beautiful, hardworking, helping and loving Yideneku; you have been with me starting from day one. Thank you for your care, love and support. You always exist in my heart.

The flowers Efrata and Abel, your love and emotion; wish you bright future. I love you so much.

My special gratitude goes to my mild brother Amare Liyew, Respondents and Informants who helped me so much to bring this project into reality. May Almighty God Bless you and your family!

TABLE OF CONTENTS

Content Page

LIST OF TABLES

LIST OF FIGURES

ABSTRACT

This research is about the Effect of Physical Distribution Management on Availability of Dairy Products: The Case of Addis Ababa Dairy processors. Both primary and secondary data have been used to investigate the result. Questionnaires and structured interview have been used as a primary data collection tool. 391 questionnaires have been distributed to dairy processing companies, retail shops, supermarkets, transportation agencies and individual consumers. 368 have been found valid and complete. Among dairy processing companies Lame Dairy (Shola Milk) and Family Milk has been considered. Convenient sampling technique has been utilized.

Interview has been conducted with six respondents; with one dairy transporter, two retail shops, one marketing manager of dairy processors and two retail shops. Statistical analysis has been conducted using statistical process for social science (SPSS version 24). Descriptive analysis such as frequency, mean and standard deviation has been used to interpret the result. While performing the research, the reliability and validity of the instrument has been verified. The result shows that all the independent variable costs associated with physical distribution management, distribution route, mode of transportation, efficiency, time of delivery, and stock & storage affect availability of dairy products in Addis Ababa. Based on the finding, conclusions drawn, recommendations forwarded and future study implications indicated.

CHAPTER ONE
INTRODUCTION

In this chapter, background of the study, problem statement, research questions, objectives of the study, significance and limitation of the study are described.

1.1 BACKGROUND OF THE STUDY

Various researches related with product, promotion, price and distribution have been conducted by scholars, academicians and researchers.

Academicians wrote about marketing elements and stated that physical distribution strategy is the significant element of marketing which enhances strengthening the competitive advantage of business organizations Goffin K. (1999). In this regard, product characteristics, parameters and designs can be diffused from one to another, the promotion mechanisms can be imitated, the price and pricing techniques can be copied but distribution is the most essential marketing element that firms build as their strategic intent which cannot be easily copied (Obaji, 2011).

Physical distribution management requires proper administration of communication, transportation, payment, physical movement of goods, preservation of goods, storage and handling, packing, leveling, loading and unloading, warehousing, inventory control (Mughal, 2012). To establish proper distribution mechanism, creating credible and loyal channel outlet and contacts of distribution; wholesalers, retailers, distribution routes, modes of transportation mechanisms, distribution efficiency all require significance investment. In addition, distribution plays paramount role in creating customer satisfaction, enhancing economic growth through availing goods and services to the ultimate end user. As stated by Amara (2012), reaching consumers of a product requires commitment, knowledge, hardworking and experience. For developing countries where there is no adequate information communication technology, transportation facility; mode of transportation, distribution route and advanced media network; physical distribution is found challenging and costly. Due to these thematic issues, different scholars conducted

researches related with physical distribution management on companies, industries, systems and facilities. Furthermore, dairy products marketing, distribution, production, quality control, transportation and delivery have been studied by many scholars.

Yeboah et al. (2013) in their research entitled "Effective Distribution Management; a Pre Requisite for Retail Operations: A Case of Poku Trading" concluded that effective physical distribution requires a high degree of management skill, synchronization and integration with the overall organizational; and it will be one of the major components in achieving a sustainable competitive advantage.

Similarly, the effect of channels of distribution on Nigeria Product Sales have been studied and found that involvement of channel of distribution affect sales of products; and consumers prefers to buy from intermediaries than from producers channels (Obaji 2011). Adimo and Osodo (2017), on assessment of the impact of distribution channel differentiation on organizational performance: The case of Sammer Africa Limited in Nairobi, Kenya conclude that the company under study could achieve competitive advantage through proper channel differentiation, logistics management and facility development. They added that an increase in channel differentiation strategy such as use of market trends to determine most appropriate channel strategy, companies use different channels with the aim of minimizing cost of distribution, increasing efficiency, shortening delivery time, selling some of the products and survives through intermediary and complementary firms and applying different distribution channels so as to satisfy unique customer needs. These results, added the writers, will result in an increased in performance through market share, sales revenue and customer satisfaction. Holloway G. et al (2000), in the study "How to Make a Milk Market: A Case Study from the Ethiopian Highland" and Ghosh and Mondal (2012) in their investigation "An Integrated Production- Distribution Planning of Dairy Industry – a Case Study: In India Conclude that dairy products have too shorter life, two to three days, and proper management of transportation, the storage facility and handling plays a paramount role for success. Dabija et al, (2018); Gudonaviciene, R., & Alijosiene, S. (2008), in the study concerning

“Milk Quality - Raw Material for Dairy Industry” stated that preservation and storage plays essential role to deliver the fresh milk before expiry. In a similar fashion multiples of researches on dairy products have been conducted in Ethiopia. “Household Dairy Production System, Marketing and Constraints in Ethiopia, a research conducted by Gobena (2012), concluded that low market outlet, inadequate veterinary service, labor shortage for marketing of dairy are the main constraints to deliver dairy. In similar way, Dinkale (2019), concluded that even though the demand of dairy products is high in urban areas, more than seventy percent of the demand is not fulfilled due to less technological intervention, poor marketing policy, and wrong perception and attitude towards fresh milk marketing by farmers. In similar way Addis (2019), in his research “Review on the Challenges and Opportunities of Dairy Value Chain Development in Ethiopia” underscored that the seasonality of dairy production, poor transportation facility, lack of integrated distribution mechanism, poor suppliers relationship and supply chain integration, inefficient distribution mechanisms are the main constraints in the dairy value chain. By the study conducted in Sidama Zone, Southern Ethiopia by Lijalm, Asefa and Sharo (2015), market accessibility, veterinary, distribution mechanisms and production facility are the existing challenges of dairy production and increasing dairy demand are the future opportunities of the dairy product. In the same way Mitku and Guadu (2017); Kassa (2019); Getabalew, Almeneh & Akeberegn (2016); Bahita & Hailay (2012); Bekuma & Ulfina (2018) conducted various research on dairy production, marketing, distribution, transportation and consumption. All agreed and recommended that among other factors dairy products transportation, preservation, storage, increased price of labor and wage, all are affecting the availability of dairy products to end consumers. Guya M, Adugna M, and Mumed Y. (2012); “ Milk Production and Marketing in Meta District of Eastern Hararghe Zone, Ethiopia; Tarkegn K. & Fiseha D. (2018); "Dairy Production and Marketing Systems in Kaffa & Sheka Zone, Southern Ethiopia"; “Dairy Farming and its Economic Importance in Ethiopia: A Review by Mitku & Guadu (2017); “Analysis of Marketing Chain: In the Case of Gonder City, Amhara Regional State, Ethiopia by Tsegaw B. (2012) were other research conducted in Ethiopia.

To the best of all last searches; similar research topic(s), the effect of physical distribution management on availability of dairy products was not found. The research conducted here was different from those stated earlier that it tried to identify, trigger and indicate problem associated with the physical distribution management on fast moving consumer good; dairy, which has a paramount significance in assessing and evaluating the relationship and effect of variables; cost of physical distribution, modes of transportation, routes followed, stock and storage, time of delivery and efficiency on availability of dairy products in Addis Ababa and forwarded solution directions and recommendations.

1.2 PROBLEM STATEMENT

Addis Ababa City is the economic, cultural and political center of Ethiopia. It is also a city where different diplomatic offices are located. As a result, high consumption of goods and services exists. Fast moving goods like milk, brewery, and soft drink are highly consumed in Addis Ababa more than other cities in the country. The population size is also increasing from time to time which indicates high demand of these goods.

Ethiopia is a nation with the highest number of livestock in Africa. Apart it is also the tenth rank in the world but the abundance and availability of milk and milk products to the individual consumers is not sufficient enough to feed and fulfill the demand of consumers (Guadu & Abebaw, 2016). Even though there are multiples of factors that affect availability; distribution mechanism, the distribution strategy and selection of channel elements; the use of information as a tool of distribution mechanism, the channel selection and decision, physical distribution management and selection and motivation of channel members play significance role. Dairy products are one of the highly consumable items in Addis Ababa, but its availability is quite insignificant to individual consumers. Due to this even the farmers are not beneficiaries. In some parts of Addis Ababa it is hardly possible to get dairy products in retail shops which are attributed by poor physical distribution management & mechanism.

Scholars clearly stated that availability of Consumer goods usually depends on multiple factors. One may be the absence of infrastructure that facilitates distribution. The other is the unavailability or scarcity of goods. Or it may be poor management of the distribution channel and physical distribution networks. Others also stressed that poor utilization of information communication technology, inadequate planning and controlling of inventory at each distribution network, lack of coordination and integration between and among channel partners, incompetent distribution mechanism and implementation of unstructured distribution strategy. In this research, physical distribution elements which are costs associated with physical distribution, distribution route, mode of transportation, efficiency, time of delivery and stock and storage found among limiting factors to dairy products availability to consumers in Addis Ababa.

1.3 RESEARCH QUESTION

1.3.1 Main Research Question

In this research, the effect of physical distribution channel management on availability of dairy products has been analyzed by assessing various dimensions such as costs associated with physical distribution, modes of transportation, distribution routes, stock and storage, time of delivery and efficiency. Thus, what is the effect of the physical distribution management on availability of dairy products in Addis Ababa was the main research question.

1.3.2 Sub Research Questions

More specifically, the following research questions have been the focuses of the research.

1. To what extent do costs related with physical distribution affect availability of dairy products?
2. How does distribution route affect availability of dairy products?
3. How does mode of transportation affect availability of dairy products?
4. To what level efficiency of physical distribution affect availability of dairy products?

5. To what extent time of delivery affect availability of dairy products?
6. How does stock and storage affect availability of dairy products?

1.4 OBJECTIVES OF THE STUDY

1.4.1 General Objective

The general objective of this study was to assess the effect of physical distribution management on availability of dairy products in Addis Ababa.

1.4.2 Specific Objectives

Explicitly, the result of this study was expected to achieve the following specific objectives.

1. To examine the effects of cost associated with physical distribution on availability of dairy products.
2. To analyze the effect of distribution route on dairy products availability.
3. To identify the level of influence of mode of transportation on availability of dairy products.
4. To evaluate the efficiency of physical distribution management and analyze its effect on availability of dairy products.
5. To investigate the effect of time of delivery on availability of dairy products and
6. To examine effect of stock and storage on availability dairy products.

1.5 SIGNIFICANCE OF THE STUDY

It is believed that this study will have a paramount significance. Primary this study has identified major problems that are faced with physical distribution management of dairy products in Addis Ababa and forwarded alternate solution directions.

This will help all participants in the physical distribution process to improve the current system and relationship between individuals, organizations, firms and key players.

Second, it has provided feedback on the physical distribution management practice and its effect on availability of dairy products to consumers. As a result of this, organizations,

businesses, institutions and government bodies may use the findings and forwarded recommendations as an input for their decision.

Lastly, the result may encourage other researchers, academicians and organizations to carry out further rigorous study in a wider scope and depth. It is also assumed that the document may also use as a source of another related study.

1.6 SCOPE OF THE STUDY

Physical Distribution Management is a broad marketing concept that incorporates several topics. It also relates with various disciplines that undergo with logistics, management, information technology and purchasing and procurement.

In spite of that, the study was designed to access the effect of physical distribution management on availability of dairy products with special reference to Addis Ababa dairy processors.

Availability of dairy products can be affected by various factors, but this study analyzed the effect of costs associated with physical distribution, mode of transportation, distribution route, stock and storage, time of delivery and efficiency on availability. Due to time and budget constraint, the data necessary to carry out this study has been collected from Addis Ababa only. The whole task has been accomplished from January to June 2020.

1.7 LIMITATION OF THE STUDY

The data necessary for this study has been collected from Addis Ababa. Due to time and budget constraints only questionnaire and interview made with dairy processing companies, dairy transporters, retailers and individual dairy consumers has been the data collection tools. Non probability sampling technique has been used. The samples were selected conveniently. Based on experience and knowledge of the industry, two dairy processing companies were selected. Due to Covid-19 pandemic, it was impossible to visit dairy processing companies' workshops, production floor, warehouse and layout. It

was difficult to interview managers of the two dairy processing companies who may provide significant input. Due to these reasons, the research may have its own limitation.

1.8 ORGANIZATION OF THE STUDY

This research has been organized into five chapters. The first chapter included the introduction, statement of the problem, research questions, objectives of the study, scope of the study, significance and limitation of the study. The second chapter dealt with review of related literature. The third chapter discussed the research design and methodology of the study. The fourth chapter which is the heart of the study came up with data analysis and presentation. The data collected using questionnaires & structured interview has been discussed and interpreted under this part. The last chapter included the summary, conclusion and recommendations which are based on major findings of the study.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

In this chapter, both theoretical and empirical studies relevant and related with this research have been explored. Furthermore, the conceptual framework built based on the theoretical guidelines. In addition, the relationship between dependent and independent variables has been indicated.

2.2 THEORETICAL LITERATURE REVIEW

2.2.1 Distribution

Brent M. (2007), described distribution as all activities that enable transfer of goods, products and/ or services from one economic subject to another. The author added distribution plays a vital role in the whole economic operation and is one of the main functions of the retail trade. Distribution includes the components of the activities that are related with transfer of goods from the manufacturer to final consumers (Coughlin et al, 2001). In this process the coordinated, organized and systematic preparation of the products according to their type, volume, characteristics, specification and other parameters is part of the distribution process (Fayaz & Azizinia, 2016).

On the other hand, distribution is the process of making a product or service available for use, consumption or input for final individual commercial or industrial consumers, directly or indirectly through agents, wholesalers or retailers (Coughlin et al, 2001).

The author also addressed that distribution is the movement of goods and/services from the source to the consumer, the transfer of payment in the opposite direction and back and forward movement of information and document exchange.

Galin (2015); Raisinghani M. and Meade L. (2005) defined distribution as the movement of materials from the point of production, manufacturing site or vendor to point of

consumption/consumer. It was also explained that distribution is identified as the sub function of the supply chain management which deals with handling and processing of materials from acquisition to delivery to ultimate customer. These sub-functions include the capabilities to identify, classify, receive, document, store, secure, maintain in the storage, care and preserve, select, pack, label, mark, ship, control in transit, issue payment, release document and dispose of the material to the user (Andelkovic, Barac & Radosaviljevic, 2017).

Among the marketing mix elements, price, product, promotion and distribution, the distribution mechanism and strategy play a prominent role to sustain competitive advantage (Djoni, Okaviani R. & Kilbrandoko, 2016).

Yeboah & Qiang (2019), in their journal article also described distribution as all logistics involved in delivering a company's products or services to reach consumer, at the right time with the lowest possible cost.

2.2.2 Channel

Channel as per the explanation given by Karaxha and Karaxha (2015) is a system designed to carry out the necessary tasks in the delivery of goods from manufacturers to consumer. Channel is a structure in terms of the function performed by channel members which may include wholesalers, agents and retailers (Karanja, Mauthe and Thuo, 2014). Channel functions are activities, processes, services and duties performed to add value on the goods and services as they move from manufacturers to consumers (Totato and Mark, 2010). Channel bridges the gap that exists between producers and consumers so that it adds value for the product or service. Channel is a function which incorporates activates that are essential in the transfer of goods (Guan, 2010). Channel is a path traced in the direct or indirect transfer of ownership of a product as it moves from a producer to the ultimate consumer. Manufactures use a combination of channels depending on the nature of the products, geographical location, availability of required infrastructure and technology (Djoni, Okaviani R. & Kilbrandoko, 2016).

Fayaz & Azizinia (2016) listed and explained channel functions as: product information, product specification, usage, ingredients and related product characteristics more importantly for those new and technically complex.

Product customization adjust product technical configuration to fit with the customer's requirement. Product quality assurance insure its reliability for customers. Lot size provide jointed purchase effort if the product has a high value. Assortment as discussed by the author, some customers may demand a broader range of products under one roof. In other cases assortments may be related with the breadth of the product line.

Availability, customer demand might be difficult to predict, if so the channel must support a high degree of product availability (Dwyer, R. F., & Welsh, M. A., 1985); (Kotler P., 2001).

After sales service, provide service such as installation, repair and maintenance, warranty, guarantee, disposition and training. Logistics provide transportation, sorting and supply products to end users.

2.2.3 Distribution Channel

Distribution channel is a set of independent organizations involved in the process of a product or service availability for final use or consumption.

Manufacturers and intermediaries such as distributors, wholesalers, retailers and agents and end users are perceived as the major players and actors of the distribution channel. Distribution channel connects the producers and consumers (Obaji R.N., 2011); (Stern, L., & Neskett, J., 1969).

Distribution channel are the paths goods and title of the products follow from producers to consumers or the structure through which the goods and services, move from the producers to the consumer (Amara, 2012).

Distribution is one of the key elements in the marketing mix elements. As a result distribution channel management thus involves making sure that the distribution system supports the other variables of the marketing mix (Ntale, 2016).

Kataelpour (2015) argued that many business organizations invested for promotion, product research and development and manufacturing; can be a waste if the products are not delivered widely and properly in the local stores.

Distribution Channel is the combination of channel management and physical distribution management. As a result distribution channel concerns with the entire process of setting, building and operating the distribution network. Physical distribution focuses more narrowly on providing products and services where and when they are needed. The role of distribution channel management has gained wide spread attention in both manufacturing and service organizations over the past twenty years following globalization and advancement of information communication technology (Singh, 2016). Distribution channel is associated with transfer of goods from manufactures to end users, rout of a company's product for distributing the goods, the process of moving goods from the manufacturer to the consumer and the supply chain consisting of all parties between production to the end user (Frazelee, 2012). Distribution channel includes participants in the physical flow, parities involved in ownership and other played in the value addition process passing the goods to the consumer. They are systems of mutually dependent organizations included in the process of making goods or services available for the consumption. The routes alone which goods and services travel from producers/manufacturers through marketing intermediaries. It provides downstream value by bringing finished products to end users. The flow may involve the physical movement of the products and service provider or simply title transfer (Karanja, Muathe & Thuo, 2014). The participant may be single individual, group of individuals, firms or big corporations. The number and type of involved organizations vary depending on the nature and type of product and service. In a similar fashion as goods move the financial transaction, information communication and documentation process and exchange are the

parts and components of the distribution channel. Distribution channel is a rout, path or conduit through which products or things of value flow which aims on meeting the strategic objectives. Integration and communication usually exists between and among agents, wholesalers, retailers, manufacturers and consumers so that company profitability will be enhanced (Sahader & Jayachandran, 2012).

The term distribution channel was first used to describe the existence of a trade channel bridging producers and users. For exchange to occur the goods and services to have to move between two social actors. Since marketing is an exchange process, it focuses on activities, processes and behaviors necessary for them to occur whereas distribution channel is exchange facilitator (Pelton, Strvatton & Lumpkin, 2016). Any connections between individuals and/or organizations that allows and contributes for the occurrence of exchange is a distribution channel. So that distribution channel is an array of exchange relationship that create customer value in the acquisition, consumption and disposing of products and services (Tatar, 2016).

Most producers use intermediaries to bring their product to the market. They use a set of interdependent organizations in the process of making the goods and services available for use. Distribution channel is a means of facilitation in delivering the required product within the agree place and time that play an important role in creating competitive advantage. A poorly structured and conceived channel can doom a supplier product or service to failure in the market (Yeboah et al, 2013).

2.2.4 Level of Distribution Channels

Designing and managing the relationship among partners represents on the factors of their competitiveness. Designing distribution channel depend on the level of development of countries, the type and financial strength of organizations, the nature and type of product and availability of intermediaries. Whatever situation exists, distribution channel could be described with the following characteristics which are directness, levels, density,

variety and novelty. Directness involved the direct contact between and among producers and consumers without any intermediary (Wilkinson, 1996); (Sherer S., 2005).

Distribution Channel could be short and direct, long and direct, short and indirect or long and direct or a combination of others. Distribution channel also depends on the number of the buying and selling patters that exist between buyers and sellers. In the journal article, Adimo (2017) put an example that in the air industry there in no intermediary between producers and consumers where as in automobile industry the existence of dealer is essential. Fast moving goods require a high number of levels and distribution outlets which include wholesalers, agent and retailer. The density depends on the number of sales facilities. There exists many variations with respect to distribution channel structure and level. Whichever structure exists intermediaries can be deemed as appropriate in the business environment. The following channel level would be available:

Passing of goods and series directly from manufacturing to consumers.

Passing of goods and services directly from manufacturing to consumers.

Passing of goods and services via a retailer and then on to a consumer.

Passing of goods and series from the manufacture via a wholesaler and then directly on the consumer. Passing of goods and series from the manufacturer via a wholesale, then on the retailer and consequently to the consumer. The manufacture can distribute the product or service via an agent to a wholesaler and then will follow either the wholesaler to consumer or wholesaler and then retailer. In addition to other factors mentioned earlier, the structures of the market, the size of market, the complexity of the market and the geographical dispersion of the market are considerable reasons to select the paths of distribution (Lambert, 1978); .

Products whether they are consumable or industrial require channels of distribution, though industrial channels require shorter path than consumer products because of fewer number of ultimate customer, the greater geographical concentration of industrial customer, and greater complexity of the product which require more technical and conceptual support and advice (Obaji, 2011).

Kotler and Keller (2009) presented three levels in consumer channels strategy which are zero level, one level and two level strategy. Zero level strategy contains no intermediary, one level strategy has retailer. The growth in retail size has meant that it becomes economic for producers to supply retailers directly rather than through wholesalers, hence the authors state consumers now have the convenience of viewing and testing the product at the retail outlet. The two level channel contains intermediaries, the wholesalers and retailer which tend to occur where there are influxes of a small retailers with limited order quantities, and wholesalers can buy in bulk from producers and sell smaller quantities to numerous retailers. Lastly, three level channel contains three intermediaries that usually used by companies entering foreign markets and delegate the task of selling the product to an agent who does not take title to goods; the agent contacts the wholesaler that supplies the retailers till it gets to ultimate agents (Kotler P., 2001).

CONSUMER MARKERING CHANNELS

Producer ⟶ Customer (Zero - Level Channel)

Producer ⟶ Retailer ⟶ (One - level Channel)

Produce ⟶ Wholesaler ⟶ Retailer⟶Customer (Two- level Channel)

Producer ⟶ Agent/Broker ⟶ Wholesaler or Retailer⟶ (Three – level Channel)

Source:- *Kotler and Keller (2009)*

INDUSTRIAL MARKETING CHANNELS

Manufacturer ⟶ Industrial Customer (Zero – Level Channel)

Manufacturer⟶ Industrial Distributor⟶ Industrial Customer (One – level Channel)

Manufacturer ⟶ Manufacturer's Representative ⟶ Industrial Distributor ⟶ Industrial customer (Tow – level Channel)

Manufacturer ⟶ Manufacturers Sales Branch ⟶ Industrial⟶ Distributor Industrial Customer (Three – level Channel)

Source:- Kotler and Keller (2009)

Different kinds of distribution channel levels can be structured depending on the factors linked to the macro-environment i.e. political, economic, technological, social and cultural, the market encompassing competitors, suppliers, clients, staffs and finance (Mughal, 2012).

2.2.5 Distribution Channel Design and Selection

For a manufacture to design and select the best channel of distribution it must consider the product characteristics and how it affects the method of distribution, customers and their requirements, location of the customers, conditions when and where customer want to buy the products, the cost of distribution and the legal regulatory constraints of distribution (Yeboah et al, 2013); (La Londe et al, 1993). According to the scholars these issues are critical which require intensive analysis and understanding. To select a channel the prospective channel member's credentials like creditor history, reputation, number of product lines, market coverage and number of sales people need to be examined for congruency with the manufacturer's marketing objective. Furthermore distribution channel selection and design should also consider costs, sales volume and expected profits (Andelkivic, Barac and Radosavijevic, 2017). The authors extend their discussion that the characteristics of the market, consumer or industrial, number and location of buyers, size of order, consumers buying habit, characteristics of products (unit value, perishability, bulk and weight, standardization, technical complexity, product line and age of products) (Fawcettet E.S, et al, 2007).

In addition characteristics of intermediaries that include availability, attitude, services sales potential and cost, characteristics of the company, nature and size, aims and politics of the company need to be considered.

Distribution channel design and selection depends on the level of economic development. Distribution channels in developed countries have greater number of partners or distributors but fewer level compared to channels in developing countries. Channels in

developing countries are characterized by unorganized distributes, smaller and independent retailers and wholesalers, in sufficient level of in information technology implementation, low level of internet penetration and poor implementation of laws and regulations a result all those factors should be undertaken while designing and selecting distribution channel (Ntale, 2016).

2.2.6 Distribution Channel Strategy

To meet strategic objective, firms can design any number of channels they require. Channels are classified by the number of intermediaries between producers and consumers. Analyzing customer needs, establishing channel objectives, identifying and evaluating major channel alternatives enhance to select the distribution strategy. The output level required by target customers is also essential (Galin, 2015); (Szopa P. & Pekala W., 2012). As stated in the distribution channel design, channel objective and strategy of distribution vary with product characteristics, influence of the nature of products, company characteristics, and characteristic of intermediaries, competitor's channel and environmental factors. Perishable products, for example, require more distribution strategy to avoid delays and too much storage and handling. In the same scenario, company characteristics such as the size, financial strength, the human capital, experience and years of service in the industry affect which function it can handle, how many channels it can use, which transportation facility to choose (Frazier, 1999; Kataelpour, 2015).

To select the best distribution strategy, characteristics of intermediaries need to be considered. They vary in the ability to handle promotion, customer contact, storage and credit facility. The other input is competitor's channel selection and distribution strategy. Environmental factors, economic conditions, and legal constraints also determine which strategy to follow (Mallen, B., 1973). Based on the given criteria and factors of selection, the distribution strategy of a firm could be intensive, selective or exclusive. Intensive distribution strategy is a strategy that outlines to use as many outlets as possible and hold the product in each outlet. Intensive distribution is more convenience to consumers and

enhance individual customer satisfaction. The characteristics of intensive distribution strategy are maximum, number of outlets covered to maximize availability, targets outlets in as many geographical regions as possible, preferable for consumer convenience products, high number of purchasers, suitable if purchase frequency is high, preferred if impulsive purchase and low price (Mehta A., Dubinsky A. and Anderson R., 2002).

The second distribution strategy is selective distribution strategy. Selective distribution strategy according to (Ntale, 2016) are different in that the products will be available in only from some outlets. Examples of such products are electrical appliances, certain brands of clothes and fashion products. Key characteristics of selective distribution strategy are medium levels of customers, less intensive distribution of outlets, requirements of retailer's specialist knowledge, shopping based products, medium number of shoppers, purchase is occasional; purchase is more likely to be planned and medium price.

The third distribution strategy is exclusive distribution strategy. Exclusive distribution is a strategy where there exists a possibility of one outlet in a certain geographical area, who supplies the product. This method of distribution usually relates to specialty products like cars, special clothes which are often relevant to niche products. The existence of relative few customers, limited retail outlets, close retail/customer relationship, special products, infrequent purchase, high involvement and planned purchase, high technical knowhow, high price (Ntale, 2016).

2.2.7 Distributing Channel Decisions

Manufacturers set different criteria which distribution channel to choose. According to Goffin (1999) there are six basic criteria and considerations which criteria to choose and use. There are:-

1. Whether to distribute direct to the customer or indirectly through middlemen. According to researcher, the advantages of going direct are that it enables firms to exercise more control over marketing activities and it reduces the amount of time

spent in the channel. The disadvantages are that it is difficult to obtain widespread distribution more resources are required to maintain distribution. Going direct is the method widely used by industrial goods producers.

2. The second distribution channel decision is to adopt single or multiple channels of distribution. Single channels of distribution, for example, has an advantage of guarantees a minimum level of sales and the exclusivity of using a single channel guarantees attention to the product. The use of multiple channels should lead to increased sales and a potential for wider distribution. More establishments put the product on view the more likely it is that sales will be sustainable. Whereas restricting the number of channels through which the product is sold restricts the number of people who can come into contact with the product. On the other hand, there are also disadvantages with using multiple channels. Primarily, it demands greater investment; more sales people in the field, more marketing effort and administrative task are required. Similarly using single channels of distribution has a disadvantage of liming the sales volume (Adimo & Osodo, 2017); (Lee L., Padmanabhan V. and Whang S., 1997).

3. How long the channel of distribution should be? In determining the best channel length to adopt, the following factors needs to be considered argues authors.

   A. The financial strength of the producer; those in a strong position can carry out the functions provided by intermediaries.

   B. The size and completeness of the product line: the cost of carrying the distribution function can be spread across the various items in the product line. The more items, the more economical it might be to consider a shorter distribution channel.

   C. The average order size: large orders may be distributed directly to the customers.

D. The geographical consideration of the customer: geographically dispersed customers merit a longer distribution channel since serving them requires substantial investment of resources.

4. The types of intermediaries to use:- this means choosing between different types of retailers in the case of consumer goods, for example supermarkets as opposed to cash and carry and different types of distributors in the case of industrial goods, example whether to use franchised dealership or not.

5. The number of distributors to use at each level. In principle; states (Ntale, 2016), more distributors are required if:

   A. the unit value of the product is low and/or the physical quantity of stock hold is likely to be highly

   B. The product is purchased frequently.

   C. There is a high degree of technological complexity in the product

   D. The service requirement is high

   E. The inventory investment is high.

   F. The geographical concentration is low

   G. Total market potential is high

   H. The market share of the product is high

   I. The competition is intense

6. Which intermediaries to use : this is a qualitative decision and reflects whether the image of particular outlet, the way in which it performs and deals which can be stuck with the distributor are satisfactory (Saremi H. & Zadeh S., 2014; Wilkinson, 1973).

2.2.8 Distribution Mechanisms

2.2.8.1 Direct Distribution

Direct distribution is a mechanism by which the manufactures deliver the products and services to consumers. Due to lack of fast communication, direct distribution was not popular in earlier years but the advancement of internet and other communication technology increased the use of direct distribution (Prahinski C. & Fan Y., 2007). Additionally, companies which have the financial strength and human resource usually avoid intermediary to reduce or avoid the costs associated with hiring, training and follow up investment on intermediaries (Rosenbloom, 1987). Wilkinson (1996) pointed out that selling agents and internet sales are the two most use direct distribution mechanisms. Selling agent works for the company and market their products directly to consumers through mail order, store fronts or other means. The internet becomes the most used direct distribution mechanism because of the easily global availability of consumers (Frazier G. L., 1999).

2.2.8.2 Indirect Distribution

Indirect distribution occurs when companies fail to deliver directly to the consumers. Suppliers and manufacturers of consumable goods typically use indirect distribution channel because they exist early in the supply chain. The distributors, wholesalers and retailers are the primary indirect channels a manufacturing company may use. These companies use the indirect channel best suited for their product to obtain the best market share which allows them to focus on production of the goods (Lambert, 1978).

2.2.8.2.1 Wholesaling

Wholesaling includes all processes, activities and duties and responsibilities of a business organization on selling of the goods and/or series to those who buy the product or resale or business use. Manufacturers of consumable goods usually use wholesalers as their outlet since wholesalers can perform the distribution activities and functions more efficiently and cost effectively than the manufactures (Rosenbloom, B., & Larsen, T.,

2008). These functions are not only limited to distributions only. They incorporate promoting building and storing bulk quantity, warehousing, transporting, risk bearing, information dissemination, provision of management services, consulting and informing and many more. The most successful wholesaler are those who adopt their service to meet and target customer needs, recognizing that existing add value to the channel (Kotler & Keller, 2009).

2.2.8.2.2 Retailing

As per Kotler & Keller (2009) explanation include selling delivering of goods and/ or service to individual consumers for their personal use or consumption. The final consumer uses for non-business purpose. A retail shop or retail store generated their income through retailing. All marketer retailers most prepare marketing plans that includes decisions to target markets. As a result the distribution channels can be considered as a set or group of interdependent organizations with a high potential for conflict.

2.2.9 Coverage

Distribution channel selection depends on the coverage or the target market size. This depends and governed by the intensity of distribution required by the manufacturers. This also affected by its production capacity. The number and types of intermediaries in a specific region or location required influence the market coverage or market exposure strategy. A manufacturer may choose to implement intensive, selective or exclusive distribution mechanism for its products (Talukder K. & Jan M., 2017).

Intensive coverage is adopted when many intermediaries are used at each level of the channel. This is typically applied for consumer convenience goods that can be availed in many outlets as possible.

Exclusive coverage refers to highly selective patterns of distribution where only a single selected intermediary is involved in distributing the goods or/ and service in a specific region or geographical location.

In this scenario, the customers are willing and search for the products and/ or services extensively. Specialty goods are usually distributed with these techniques. Moenco is one of the best examples of exclusive distributor of Toyota products and parts in Ethiopia.

Selective coverage lays between intensive and exclusive distribution. Here, fewer selected intermediaries are used in specific geographical location (Tatar, 2016; Singh, 2016).

2.2.10 Consumer

A consumer is an individual, group of people who are the final users of a product or service generated from the economic operators. A Consumer may be a group such as a household. Farese L., Kimbrell & Woloszyk C. (1997) states that the concept of a consumer my vary significantly by context, in spite of that the agreed definition of a consumer is an individual or groups of individuals who buys (buy) products and/ or services for personal use not for manufacturing or resale.

2.2.11 Distribution Channel Management

According to Perreault W. & McCarthy J. (2005); Victoria I., Ebere O. & Henery K. (2016) the actions and decision put forward by management of an organization usually determine the success or failure of the firm. Like any other business, distribution channel requires cautious management and proper administration. Superior channel management policies and procedures help an organization to attain a competitive advantage through obtaining and building strategy of distribution difficult to duplicate. Distribution channel management refers to the processes of planning, organizing, controlling, communicating and analyzing a firm's marketing channels. As stated by (Coughlin et al, 2001), Perreault W. & McCarthy J. (2005) it comprises seven major decision areas.

1. Formulating channel strategy
2. Designing marketing channels
3. Selecting channel members

4. Motivating channel members
5. Coordinating channel strategy with channel members.
6. Assessing and evaluating channel members performance and
7. Managing Channel Conflict.

Disregarding other elements, some academicians highly concentrate on that distribution channel management should focus on selection and motivation of channel members.

The process of selecting channel members is an ongoing process due to the fact that they tend to leave the channel from time to time based on different reasons like market changes and problems on their business. So the process of selecting intermediaries should be very well managed not to incur the cost of searching other intermediary. The most essential task is securing intermediaries. And the best intermediary can be obtained by accessing data base, from sales people and clients, professional associations and government office. Past history and reputation can also provide the better intermediary (Frazier G., 1999).

The second essential component of distribution channel management is motivating the members. After being selected, channel members need to be motivated through training, recognition, consultation and participating on planning strategic issues, creating mutual beneficiary relationship, coordinating and communicating the objectives. Motivation of channel members can also be enhanced through setting proper communication policies, sharing benefits and creating proper supplier relationship management. The other core element is creating trust and relationship between manufacturers and intermediaries (Pelton, Strutton & Lumkin, 2001).

2.2.12 Physical Distribution Management

Physical Distribution management consists of the administration of every part of the distribution process. Physical distribution can be outsourced to a specialist or can be assigned to structured specialist in the organization. It ensures the delivery of goods on timely basis with minimum possible cost (Favilla J. and Fearne A., 2005). The basic

elements of physical distribution management are costs involved, methods of transport utilized, routs selected, stock and storage, protection and preservation, time of delivery and efficiency. The performance of all these elements enhances customer satisfaction and loyalty (Farese L., Kimbrell & Woloszyk C., 1997).

The objective of physical distribution management is to find the most cost effective way of meeting customer needs in relation to purchasing their products whoever and whenever they are. Physical distribution management includes, customer service, order processing, materials handling, warehousing, inventory management and transportation (Coughlin et al, 2001).

2.2.12.1 Cost Associated with Physical Distribution

Physical distribution involves the movement of goods and services from point of production to point of consumption (Voorijk, 2010), (Mei Z. and John J., 2005). In this process there are different costs incurred. The first cost is the cost of loading and unloading (Chirasirimongkol S. and Chutimaskul W., 2005). In developing countries since the utilization of forklift or advanced machineries is limited the costs of loading and unloading is very high. In addition costs of transportation are also significantly increasing. The other cost incurred, in physical distribution is the storage, warehousing and inventory carrying cost. The next one is the cost associated with communication (Nwaogbe & Omoke, 2013). Producers usually conduct intensive communication with phone, text message and email to suppliers or suppliers of suppliers. They also communicate with retail shops, supermarkets, wholesalers or consumers. Similarly retailers, wholesalers, and consumers as well as transporters also make communication with each other. This affects the selling price to be much higher. The dairy products usually have shorter life time. Fresh milk expires within half a day if not processed further (Nwaogbe & Omoke, 2013). As a result, the costs of expiry are also high.

2.2.12.2 Distribution Route

Distribution route is about the roads and ways people and vehicle use (Appiah & Qiang 2012). One of the most essential components of marketing, sales and supply chain management is distribution route administration (Gundlach, G. T. et al, 2006). The efficiency of the modern distribution channel management is affected by the availability of the roads and ways. Developed countries usually adopt fast and quick delivery of goods as soon demanded but in developing countries it is quite opposite. Delivery time not meet, orders cancelled, markets lost. In this regard, the safety and availability of distribution route plays paramount role for distribution.

2.2.12.3 Mode of Transportation

The mode of transportation refers the type, kind and methods of transportation used to carry and transfer goods and services from one location to another (Cerna, Danis, & Zitricky 2005); (Lo V. and Yeung A., 2006). Academicians of logistics management strongly stress the availability and utilization of proper mode of transportation increase productivity and sales performance. The nature and type of product or service, the characteristics, use, volume of products all determine which transportation mode to use. The physical state of products is usually the most prominent determinant. As per the general category given by Meixell & Norbis (2008), liquid and gaseous states demand special device and holding capacity. Perishable products like meat, milk, fish, and others require a vehicle with special equipped refrigerator. With this, productivity, distribution, sales performance and availability of goods to consumers is affected by modes of transportation (Cerna, Danis, & Zitricky 2005); (Gundlach, G. T. et al, 2006).

2.2.12.4 Efficiency

Efficiency in physical distribution refers to the time taken, the resources utilized, the energy consumed and the techniques used to perform an activity or deliver service (Villarreal & Garza, 2012). The utilization of time, money, human capital, information, and infrastructure per output determine the level of efficiency. Efficiency, delivering

output with minimum cost or shorter time is proportional with availability and sales volume. As goods are delivered in shorter time, enhance availability (Moen, 2016). As goods are performed with lesser cost, reduce price and increase consumption. As the goods are delivered faster, the chance of getting expiry, loosing basic properties is minimal which designates efficiency strongly affect availability in distribution (Yuan & Kim, 2012); (M. Laswai E., 2013).

2.2.12.5 Time of Delivery

Time of delivery refers the agreed date or period at which goods and services reach to consumers. The world is becoming virtual (Karim A. et al, 2010); (Li G et al, 2006). The goods produced in the Easter hemisphere are demanded in the Western hemisphere and vice versa. Raw materials, semi-processed goods and finished materials from Africa are exported to European market. High tech products are usually imported to Africa. In this process, countries, organizations, firms, businesses conduct various businesses and set the time frame on which the project gets finalized. According to (Kamali, 2018) to survive and cope with the competition, meeting delivery time is crucial element. It is the usual problems of Africa business, stated (Kamali, 2018), failure to deliver goods within agreed time. This affects the business transaction, credibility, break firms image, decrease market share and return. This also affects the availability of goods to consumers.

2.2.12.6 Stock and Storage

Stock refers the amount of inventory hold whereas storage is all about warehousing and preservation (Susan, 2012). Determining the level of inventory, recording the volume, providing sufficient information for decision makers, determining the minimum stock level, knowing the lead time, knowing the maximum stock level, forecasting demand and market share are the prominent activities expected by stock and warehousing management (Binu, 2017). Storage demands the discipline that which items transported, shelved, and stored together. Which products are sensitive to heat, light, bacterial attach and temperature fluctuation should be the concern of store keeper and marketers. The

level of alkalinity, acidity, physical state and biological and chemical characteristics also determine how to store goods. Exposure to dirt and sunlight may affect characteristics of products. This indicates dairy products stock and storage influence availability and market share (Keller S. & Keller C., 2014).

2.2.12.7 Availability

Availability is about accessibility of products to consumers. Availability usually affects the purchasing decision of consumers. Having a shelf space of retailers strongly affect the diffusion of goods to consumers (Lambert, 1978) & (Jobber D. & Lancaster G., 2009). As goods are availed near to consumers, the chance of being perceived and recognized by consumers is higher. As goods/ services are availed to retail outlets, the volume of sales increase, the market share expands and return grows (Yeboah et al, 2013); (Suhardiyah M., Subakir & Sulistyowati., 2016). Availability of goods to consumers is affected by channel decision, market strategy, distribution mechanism, distribution strategy, mode of communication, transportation facility, resource availability, financial strength and technological advancement. More specifically availability is affected by the availability of distribution route, presence of warehousing and storage facility, efficient resource utilization, cost of distribution and routes of distribution (Andelkivic, Barac and Radosavijevic, 2017); (Kim T., Kim J. & Choi H., 2014).

2.3 EMPERICAL LITERATURE REVIEW

In the empirical literature review part, research findings related with distribution channel management, availability, information flow, physical distribution, distribution strategy and mechanisms and the relationship and difference between one element to another has been discussed. In addition, the similarities and differences as well as the novelty of this research from and with past findings assessed.

Yeboal et al (2013) were among other scholars who conducted a research named “Effective Distribution Management, A Pre-requisite for Retail Operations: A Case of Poku Trading” whose findings show the existence of a strong positive relationship

between intensive distribution strategy and customers recognition of the availability of the goods/ products in their territory and affect their purchase decision. They stressed, based on the outcome that any deviation or change in distribution strategy has also significance influence on the sales and availability on shelf space of retailers. In addition, the researchers found out that there is also a positive, strong and significance correlation between customers understanding and intensive distribution strategy.

As per assessments on distribution strategy and practices, majority of consumers of a product recognize where the product exists and analyze how they can gain or collect.

The researchers undertake regress analysis on selective distribution mechanisms and came up with conclusion that depending on the nature of the product, selective distribution strategy plays vital role in product availability and associated recognition of it. The importance of distribution mechanism and its role for easy flow of goods has been identified most essential. As per the analysis, as organizations try to use only single distribution mechanism, it has a negative effect on products availability, consumers' choice and associated purchase decision. As a result distribution strategy, mechanisms and design have a paramount role in availing goods and/or services and associated transaction. The researchers also intensified that as organizations change their distribution strategy, the effect on sales, availability, turn over and perception on customers will be soon recognized. The other element of this study was the role of management on consumers served. In this case they realized that stastically positive correlation exists between management of physical flow of goods and the purchasing habit and preference of consumers. The key activities performed on planning, organizing and monitoring of transportation, logistics and inventory processing and warehousing are fundamental elements of distribution channel management which directly influences sales. Associating availability and consumers understanding the researchers analyzed consumers perception about a product is related with availability.

"Distribution Channels Successfulness in terms of Return on Investment and Return on Sales" was the research conducted by Andjelkovic and Barac (2017) where they came up

with the conclusion that networks of sales objects influence return on investment on retailers' sales capacity and their distribution ability. In this research, it has been concluded that distribution channels success is affected by the efforts exerted on the outlets and pipelines of distribution. They also identified growth of networks and electronic commerce play significance role on availability and distribution of goods. Information communication technology, electronic commerce and channel networks found as positively correlate with sales volume, profitability and strengthening the company's capital. In a similar way, they reached at a conclusion that information communication technology has strong positive impact on developing market share, increasing credibility and market growth rate.

Karaxha and Karaxha (2015) in the title "The Strategies of Distribution Channels Kosovo's Case" identified and concluded the following key issues. Primarly, channel management has positive impact on growth and market penetration. As per the research outcome, most respondents emphasized prioritized direct distribution play the most essential role to enhance sales volume. Their conclusion provided that strategists require to fulfill the demands of consumers through provision of products at each retail outlet. Revenues obtained through proper and efficient distribution mechanism implementation are key competitive advantages that organizations require to meet their objective, whereas others with specialty goods prefer selective distribution strategy.

As per the conclusion, most companies prefer distribution information exchange, transportation system and efficient document exchange as their competitive advantage. In other words, to generate better revenue, they prefer implementing efficient distribution mechanism. Highly consumable goods usually demand huge coverage area which intern require investment to reach at every corner of distribution outlet. On the hand, some products require control of the distribution outlets. The researchers found that distribution channel enterprises should consider analyzing customer needs, setting objectives of distribution channels, analyzing options of marketing channels and evaluating them.

As per Djafar, Amer and Lee (2016) finding, variability, bottleneck, bullwhip effect, high transportation and logistics costs in long distribution channel are complex problems and affect each other. These problems occur, according to their conclusion, because distribution costs and delivery times usually determine the competitive advantage of firms.

In the other way Obaji (2011) pointed out that distribution channels have positive effect on sales of a product which means the producers efficiency and effectiveness on management of physical flow of goods, proper planning and control of demand and supply and forecasting challenges are basic tasks in distribution management. The other part of the research pointed out that majority of consumers prefer to buy from intermediaries than buying from producers directly. This is because, states the researcher, producers are not usually in proximity to final consumers. Companies prefer to involve in multiple channels of distribution depending on the nature and product characteristics. Finally he concluded that the conducive interaction among and between firms in the distribution network affect sales volume.

Karanja, Muathe & Thuo (2014) studies "The Effect of Marketing Capabilities and Distribution Strategy on Performance of Mobile Service Providers Intermediary Organization in Nairobi Country, Kenya" and found superior marketing capabilities and the choice of distribution strategy contributed significantly on the performance of intermediary organizations of mobile service providers. The composite effect of marketing capabilities and distribution strategy further enhances sales and availability of products to consumers. They addressed that involvement and close suspension of the distribution channel and investment on information management and utilization of technology will enable tracings, tracking and trending of performance of each salesperson and the route to ensure adequate coverage of sales territory. Congruent to this, they explained that the managers should focus on training on channel relationship management and enhancing sales team capacitating. Compensation plan, bonus or

incentive scheme shall be in action on distribution channel parties and components so that common objectives met.

As per Adimo and Osodo (2017) distribution channel differentiation has positive and significance effect on company performance. Distribution differentiation strategies adopted by organizations result in increased sales, market share and profits. Efficiency in distribution nodes also support overall performance. Related with this multiple channel distribution management practices have an effect on performance of firms.

Mughal (2012) on his research entitle "Assessing the Impact of Marketing Channels on the Sales of Auto Mobile Parts: A Case Study of Recco Auto Parts" discussed the findings that strategic partnership between manufacturing and distribution channels is a key problem in decreasing the sales of auto-mobile parts. In this research it is clearly concluded that supply chain management and distribution strategy are backbones of any organization production system. Firms should always focus on keeping strategic partnership between all parties in the whole supply and distribution system. Distribution channel members form information sharing alliances with upstream and downstream channel partners.

M. Laswai (2013) on his research on "Assessment of Channels of Distribution Models in the Performance of and Organization: The Case of Coca-Cola Morogoro Region" found and concluded that information flow in the distribution channel play key role for companies' success. Similarly, the researcher reached at a conclusion that coverage of distribution channel highly influence availability of products. Apart from these points he also argued channel of distribution has influence on customer requirements on their purchasing decision. He analyzed that distribution channel adopted also controls the retail outlets. He identified the importance of information system, distribution strategy and mechanisms also assessed the impact of long distribution channel and effect of distribution channel on management of sales.

2.4 **Conceptual Frame Work**

Theories from scholars used to build relationship between problem statement, objectives of the study and conceptual frame work though determining the dependent and independent variables. The conceptual frame work is assumed to give general insight on the dependent and independent variable and their relationship.

Conceptual Frame Work

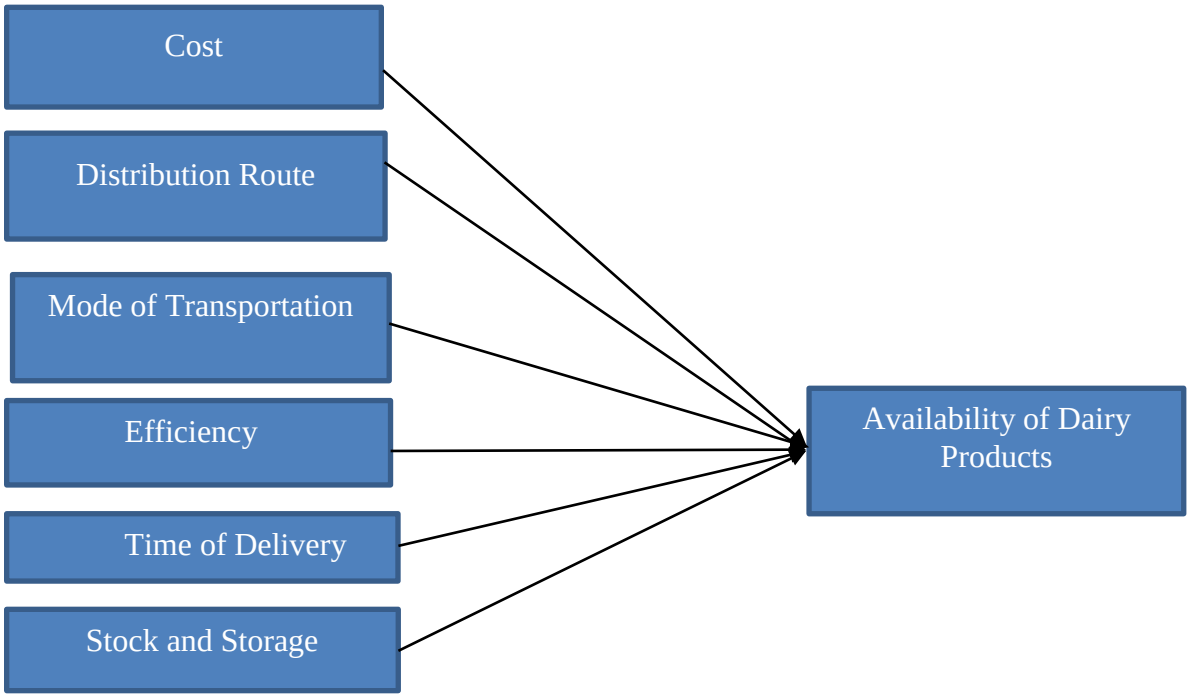

Figure1:- Research Model

Sources: - Fan Z. & Ma M. (2017); Biernacki M. (2016); Yeboah A. & Qiang X. (2019); Madhuwanthi et al (2015); Ramachandran G.M. & Neelakrishnan S. (2017) and Odhiambo O. & Janet J. (2016)

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter presents the methodology of the study which includes the overall description of the study area, research approach, research design, population of the study, sample and sampling technique, data collection method, methods of data analysis and ethical consideration.

3.2 DESCRIPTION OF THE STUDY AREA

This research analyzed the effect of physical distribution management on availability of dairy products in Addis Ababa with special reference to Addis Ababa Dairy Processors. In this regard, how and to what extent time of delivery, stock and storage, efficiency, mode of transportation, costs associated with physical distribution management and distribution route affect availability of dairy products has been analyzed. In addition, the effects and association of the independent variables on the dependent variable has been analyzed and discussed. Data has been collected from dairy processing companies, transportation agencies, retail shops, supermarkets and individual consumers using questionnaires and structured interview.

3.3 RESEARCH APPROACH

In this research, both qualitative and quantitative research approach has been used. The qualitative research approach has been used since insights and understanding of problems at hand and how respondents feel and think on the problem under investigation is determined by the qualitative research approach. Through quantitative research approach the association between the independent and dependent variables has been determined with the help of statistical methods. In this case, quantqual approach has been implemented because this technique is preferable to support quantitative data collected

from large respondents by supportive evidence given by experts and experienced personals.

3.4 RESEARCH DESIGN

Descriptive type of research has been conducted. It describes the costs associated with physical distribution of dairy products, distribution route, modes of transportation, time of delivery, efficiency, stock and storage and availability of dairy products to consumers.

3.5 POPULATION OF THE STUDY AREA

Dairy product consumers, dairy product processing companies, transportation agencies, retail shop owners and supermarkets in Addis Ababa were the target population. Based on population and house census of 2007, the population of the metropolitan was estimated 3.3 million (Woldu T. et al, 2013). According to the report the number of retail shops and supermarkets in Addis Ababa extends to 20,809 in numbers.

3.6 Sample Size and Sampling Technique

3.6.1 Sample Size

Among all diary processing companies, questionnaires has been distributed to Lame Dairy PLC (Shola Milk) and Family Milk. In addition, the questionnaires have been distributed to individual dairy consumers, transportation agencies, retail shops and supermarkets. Totally 391 questionnaires have been distributed and 373 returned. Interview has been conducted with one dairy transporter, two retail shop owners, two individual dairy consumers and one dairy processing company marketing manager.

3.6.2 Sampling Technique

Non probability sampling technique has been utilized to collect the required data. Among dairy processing companies, Lame Dairy PLC (Shola Milk) and Family Milk have been considered. They are considered because they are big, structured and organized dairy manufacturing companies in Addis Ababa which have rich experience and long years of service in the industry. As a result, it was judgmental to select these dairy processing

companies. In addition, one marketing manager of dairy processing company, one transporter of dairy products, two individual dairy consumers and two retail shop owners have been interviewed.

The total population size of respondents from dairy processing companies, retail shops, supermarkets, transportation agencies and individual consumers is immensely large. According to Ajay & Micah (2014), when the population size is enormously large or greater than 10,000, the sample size, with confidence level 95% is determined by the formula:-

$$S = [z^2 * p(1-p)]/e^2$$

Source: - Cochran (1977)

Where:-

S = Stands for sample size

z = Z score, which is 1.96 for 95% confidence interval

p = Population proportion which is 50%

e = Margin of error which is 0.05

Substitution the values, S=[1.96*1.96*(0.5*0.5)]/(0.05*0.05); the result equals 384.16.

Based on the result, the sample size was determined to be 385, (Ajay and Micah, 2014). In this research, convenient sampling technique has been used because it can save time, reduce cost and enhance to deliver the result in a given schedule. Convenient sampling can also be used when respondents are either homogeneous, have more or less similar attitude towards issue of discussion (Ajay and Micah, 2014).

In this case, the questionnaire have been prepared both in English and Amharic and distributed to respondents. To distribute and collect the questionnaires, six Trained Informants have assisted. Two Informants for dairy processing companies, one for

supermarkets and retail shops, one for transportation agencies and two for individual dairy consumers involved in addition to the researcher.

3.7 DATA COLLECTION METHOD

3.7.1 Primary Data Collection Method

Two data collection instruments have been used. Questionnaire distributed to dairy processing companies, retail shops, supermarkets, transportation agencies and individual dairy consumers. The second data collection tool was structured interview made with one marketing manager of dairy processing company, one dairy products transportation staff, two retail shops and two individual consumers.

3.8 METHOD OF DATA ANALYSIS

In this study descriptive statistics like frequency, percentage, mean and standard deviation have been used to analyze the demographic profile of respondents and items of physical distribution management; costs associated with physical distribution, distribution route, mode of transportation, efficiency, time of delivery and stock and storage on effect of availability of dairy products to consumers in Addis Ababa.

3.9 RELIABILITY AND VALIDITY TEST

3.9.1 Reliability Test

Reliability, according to Sekaran U. & Bougie R. (2009) refers whether the data collection techniques and analytical procedures would reproduce consistent findings if they were repeated on another occasion or if they were replicated by another researcher. In other words, reliability of measurements is referred as the extent to which the instrument yields consistent result when the characteristics being measured has not changed. Scholars usually underscore to consider and to be conscious on participant error, participant bias, researcher error and researcher bias to insure reliability. To reduce or avoid participant error, the questionnaires were prepared both in English and Amharic and supported to read carefully and provide their feeling and attitude. The other one is participants' bias, to avoid response bias, respondents have been informed to fill and

respond on their own will only. To avoid researchers error and researchers' bias, essential procedures, techniques and formalities have been followed. To ensure the reliability of the instrument, the questionnaire has been distributed to samples of respondents. Negatively worded questions have been reversed and reliability tested with Cronbach's alpha test conducted. In this case, the values of Cronbach's alpha were accepted if it were more than 0.70 (Leary, 2012; Hair, Anderson, & Tatham, 1998; James, 2019).

Having a close look at the values, three questions have been deleted from the questionnaires to assure the reliability of the research. Finally the Cronbach's alpha of all the results has been calculated; after reversing the negatively worded questions and the result presented below table.

Table-1:- Reliability Statistics for the General Instrument

Variable	Number of Items	Valid Number	Cronbach's Alpha	Internal Consistency
Cost	10	368	0.801	Acceptable
Distribution Route	5	368	0.711	Acceptable
Mode of Transportation	4	368	0.734	Acceptable
Efficiency	6	368	0.701	Acceptable
Time of Delivery	5	368	0.782	Acceptable
Stock and Storage	9	368	0.805	Acceptable
Availability	5	368	0.745	Acceptable
Over all α	44	368	0.914	Acceptable

Source: - Own survey, 2020

The computed Cronbach's Alpha value all are above the minimum standard value 0.700; which indicates reliability requirement fulfilled (Leary, 2012); (Hair, Anderson, & Tatham, 1998).

3.9.2 Validity

According to Leary, (2012); Hair, Anderson, & Tatham, (1998); James, L. (2019) validity of a measurement is about the extent to which it measures what it is actually intended to measure. Primarily the validity of the research instrument has been tested, checked and reviewed by the research adviser to judge the items on their appropriateness and clarity of the contents. James, L. (2019) categorized validity test into contract validity, internal validity and external validity. Construct validity is all about whether representative samples are taken, correct research procedures are followed and appropriate research design formulated. In this case, the construct validity is fulfilled since all techniques have been followed. The next one is internal validity. In this case, the interaction and cause & effect relationships have been checked. The causal relationship between all the independent and dependent variables verified. The last one is external validity. Sekaran U. & Bougie R. (2009) & James, L. (2019) stated, external validity is fulfilled if all stakeholders are involved in the research process. In this case, all stakeholders, dairy processing companies, retail shops, transport agencies, supermarkets and individual consumers have been involved that fulfills the requirement of the external validity.

3.10 ETHICAL CONSIDERATION

According to Sekaran U. & Bougie R. (2009) there are a number of key ethical issues that protect the rights of research participants. These are protection from harm, informed consent, the right to privacy and honesty with professional colleagues (Nachmias, C., & Nachmias, D., 1996).

The principle of informed consent requires that respondents not be forced to participate in research. This means that prospective research participants must be fully informed about the procedures and risks involved in research and must give their consent to participate. In this study, the participants have been well informed about the nature of the study and participation was on voluntary basis (Nachmias, C., & Nachmias, D., 1996).

Ethical standards also require that researchers not to put participants in a situation where they might be at risk or harm both physical and psychological as a result of their participation. The researcher assured that the participant's responses would be treated confidentially and with anonymity of the respondents Leary, (2012); Hair, Anderson, & Tatham, (1998); James, L. (2019).

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND DISCUSSION

4.1 INTRODUCTION

In this chapter, data collected through questionnaire and interview are presented, analyzed and discussed. Primarily, the demographic information about respondents is presented. Then the descriptive part of the research is presented and discussed.

4.2 Response Rate

While conducting this research, 391 questionnaires have been distributed to employees of dairy processing companies, retail shop owners, supermarkets, transportation agencies and individual dairy consumers. In addition, interview have been conducted with the marketing manager of one dairy processing company, two retail shop owners and one transport agency worker and two individual dairy consumers. Among the distributed questionnaires 373 have been returned but five found erroneously filled and incomplete.

Table-2:- Response Rate

	Number of Distributed Questionnaires	**Number of Returned Questionnaires**	**Valid Questionnaires**
Dairy Processing Companies	85	81	78
Retail Shops	61	58	56
Supermarkets	46	41	41
Transportation Agency	9	7	7
Individual Consumer	190	186	186
Total	**391**	**373**	**368**

Source: - Own Survey, 2020

As can be seen from the above table, major players in dairy products production, marketing, distribution, consumption and sales have been considered.

4.3 DEMOGRAPHIC PROFILE OF RESPONDENTS

The questionnaire has two major categories of questions. The first is about demographic profile of respondents while the second category is about key issues related with costs associated physical distribution, efficiency, time of delivery, mode of transportation, stock and storage, distribution route and availability.

Table-3: - Demographic Profile of Respondents

Category	Level	Frequency	percent	Valid Percent
Educational Level	Certificate/ below	31	8.42	8.42
	TVET/Diploma	75	20.38	20.38
	First Degree	196	53.26	53.26
	Second Degree/ Above	66	17.94	17.94
	Total	**368**	**100**	
Duration in Addis Ababa (Years)	=< 5	53	14.40	14.40
	6 – 11	50	13.59	13.59
	12 – 17	108	29.35	29.35
	>=18	157	42.66	42.66
	Total	**368**	**100**	
Age (Years)	18 – 26	50	13.59	13.59
	27 – 35	155	42.12	42.12
	36 – 44	120	32.61	32.61
	>=45	43	11.68	11.68
	Total	**368**	**100**	
Gender	Female	187	50.82	50.82
	Male	181	49.18	49.18
	Total	**368**	**100**	

Source: - Own Survey, 2020

Considering the values from table 3, 71.20 percent of respondents have first degree or above that implies the probability of understanding and providing reliable answer is higher. On the other hand, 315 respondents (85.6 %) lived in Addis Ababa more than six years which support to signify they probably understand the real problem of dairy products physical distribution and availability. Congruent to this 86.40 percent of respondents are above 26 years old, which shows the chance of having better experience and knowledge of dairy products distribution and availability is higher.

4.4 DESCRIPTIVE ANALYSIS

While conducting this research, questionnaires and interviews have been used as primary data collection tool. In the main category of the questionnaire, there are seven parts pinning around cost of physical distribution, distribution route, mode of transport, efficiency, time of delivery, stock and storage and availability.

4.4.1 Cost

In this part nine questions related with costs associated with physical distribution management are included and the result presented below.

Table-4:- Cost Descriptive Statistics

	Mean	Standard Deviation
Cost of loading of dairy products is low	1.7690	.74073
Cost of unloading of dairy products is low	2.1522	.93301
Cost of transportation of dairy products is low	1.6984	.89430
Price of dairy products is low	1.4402	.75045
Cost of phone calls to distribute dairy products is low	2.1957	.81857
The costs of mailing to distribute dairy products is low	2.2935	.62706
The cost of storage of dairy products is low	1.4701	.77014
The cost of expiry of dairy products is low	1.5598	.78592
The cost of invoicing of dairy products is low	2.4864	.71939
The selling cost of dairy products is low	1.8804	.90222
Mean	1.8946	0.38019

Source: - Own Survey, 2020

The result indicates that the cost of dairy products physical distribution is high. The mean value of the response price of dairy products (mean = 1.4402), cost of expiry of dairy products is low (mean = 1.5598) and the overall mean values (mean = 1.8946) enable costs related with physical distribution negatively affect availability of dairy products. Respondents, during interview, explained hundreds of liters of fresh milk from Sebeta,

Legedade, and Sululta spill out or returned back due to expiry basically associated with problem of transportation. Respondents also explained fresh milk has to be delivered to factories or consumers within an hour or two but due to traffic congestion and lack of proper transportation it gets expired which directly affects availability. Usually added, farmers regret to deliver fresh milk because they are supposed to pay much higher money for transportation; these all affect dairy products availability to individual consumers. The result evidence that costs associated with physical distribution significantly and negatively affect dairy products availability to consumers. This implies as the cost increase availability decrease and vice versa.

4.4.2 Distribution Route

This part of the questionnaire is composed of five questions related with distribution route and the results are presented below.

Table-5:- Distribution Route Descriptive Statistics

	Mean	Standard Deviation
Dairy products are distributed through multiple routes	1.5679	.77125
Distribution routes are safe to delivery dairy products	1.6902	.79282
Transportation routes are free to deliver dairy products	1.4864	.69237
Vehicles carrying dairy products choose routes	1.8125	.88287
Traffic Congestion delays dairy products delivery (Reversed)	1.2065	.47928
Mean	1.5527	0.50138

Source: - Own Survey, 2020

The result shows, traffic congestion is prominently affecting dairy products distribution and availability. The mean result (mean = 1.5527) provide an evidence to conclude distribution route is affecting dairy products distribution and availability to consumers in Addis Ababa. Respondents of transportation agency explained the traffic congestion and unavailability of proper transportation facility hinder arrival of fresh milk to factories.

The finding enables to validate as there are alternate routes of distribution the availability of dairy products is facilitated otherwise the smooth flow of the products hindered.

4.4.3 Mode of Transportation

Mode of transportation component of the questionnaire consists of basic elements related with alternate mode of transport, contribution of transportation mode to availability of dairy products, and other essential issues.

Table- 6:- Mode of Transportation Descriptive Statistics

	Mean	Standard Deviation
There are alternate modes of transport to deliver dairy products	1.5625	.70915
The transportation mode enhanced dairy products availability	1.7337	.82188
The transportation mode is suitable to avail dairy products	1.7799	.84035
Dairy products are availed regularly	1.5734	.66032
Mean	1.6624	0.56820

Source: - Own Survey, 2020

The result of the response indicates that the unavailability of alternate modes of transportation, and related facilities is affecting dairy products delivery. The response signifies, the unavailability of right and suitable mode of transportation is exposing dairy products to heat and contamination. The mean value (mean = 1.6624) shows mode of transportation has positive and significant effect on dairy products availability. This implies, as transportation mode is suitable and appropriate for delivery of dairy products, the availability and consumption will be higher. Since the barrels containing fresh milk are loaded with the public transportation, it is usually exposed to expiry argues a respondent during interview; but he added it should have been with special vehicle enabling refrigeration the fresh milk.

4.4.4 Time of Delivery

In this part five questions related with time of delivery have been included and the results presented below.

Table -7:- Time of Delivery Descriptive Statistics

	Mean	Standard Deviation
Dairy products are delivered within agreed time	1.5054	.70031
Dairy products buyers call reminder to suppliers (Reversed)	1.8261	.69421
Dairy product buyers send reminder messages to suppliers	2.2371	.66196
Dairy products are disposed due to expiry	2.0951	.93912
Dairy products meet standard quality level	1.6495	.89470
Mean	1.862	0.62716

Source: - Own survey, 2020

The mean result, (mean = 1.8632) indicates dairy products are not delivered timely. Dairy products are sensitive to sunlight, heat and contamination. Fresh milk is a kind of fast moving consumer good that demands fast and quick delivery to consumers. The finding indicates that long distribution time and process of delivery is negatively affecting dairy products availability to consumers in Addis Ababa. Respondents of retail shops also explained their shops run out of stock on weekends because there is high shortage of dairy products supply from suppliers.

4.4.5 Stock and Storage

Stock and Storage sub-part is about safety, storage facility, preservation and handling of dairy products.

Table-8:- Stock and Storage Descriptive Statistics

	Mean	Standard Deviation
Dairy products are kept safely	1.5734	.84495
Dairy products are kept separate	1.7446	.84168
Dairy products are kept in dry place	1.6766	.79939
Dairy products are kept in cold place	1.7038	.94640
Dairy products are exposed to Sunlight (Reversed)	1.6630	1.36142
Dairy products are exposed to dirt (Reversed)	1.8723	1.41517
Dairy products stored neat	1.4565	.76237
Dairy products are preserved	1.6821	.93348
Dairy products are kept clean	1.4674	.83455
Mean	1.6489	0.73083

Source: - Own survey, 2020

Considering the mean result (mean = 1.6489) and explanation given by respondents of interview, dairy products are very sensitive to light, dirty, heat and contamination. But it was addressed that dairy products are stored with other many goods and usually not handled in safer way. The result also designates the poor stock and storage facility and management in retail shops, dairy transporters, suppliers and processors is affecting the whole supply chain and dairy products availability to consumers in Addis Ababa. In this regard the finding enables to conclude as stock and storage facility improves, availability of dairy products to consumers enhances and consumption increases.

4.4.6 Efficiency

Six questions are included in this sub parts and presented in following table.

Table - 9: - Efficiency Descriptive Statistics

	Mean	Standard Deviation
Dairy products are delivered timely	1.3234	.58714
Dairy products reach to consumers before expiry	1.5217	.79135
Dairy products run out of stock in retail shops (Reversed)	1.2745	.51485
Dairy products are easy to deliver to consumers	1.3261	.54963
Demand of dairy products is fulfilled	1.4321	.57728
Dairy products delivered with right pack	1.3125	.55993
Mean	1.3650	0.38168

Source: - Own survey, 2020

The obtained result provide dairy products are not delivery timely and in cost effect way. In other way it was explained that dairy products packing material is the prominent cost contributors of dairy products selling price. In this regard, the research outcome indicates had it been efficient marketing and distribution mechanism, the fresh milk produced around the city might have diffused to individual consumers in the form of packed and pasteurized or simply fresh and for immediate use.

4.4.7 Availability

Availability is the dependent variable in the research model. Five different questions have been prepared and responses given by the respondents are presented in the following table.

Table - 10:- Availability Descriptive Statistics

	Mean	Standard Deviation
Dairy products are availed nearby	1.1033	.44927
Dairy products are availed all days of the week	1.1685	.49398
Dairy products are availed as demanded	1.2717	.49197
Dairy products are availed all times of the day	1.3370	.60923
Dairy products are availed in the right pack	1.2745	.63349
Mean	1.2310	0.38019

Source: - Own Survey, 2020

The mean value of the responses (mean = 1.2310) and standard deviation (Standard Deviation = 0.387019) signify it is challenging to get dairy products as demanded in the city. The results and explanations forwarded signify; dairy products are not usually available in off hours. Considering the questions from table 10 above, dairy products are availed nearby (mean = 1.1033); dairy products are availed all days of the week (mean = 1.1685); dairy products are availed as demanded (mean = 1.2717) and dairy products are availed all times of the day (mean = 1.3370) all indicate even though Ethiopia is first in Africa in its livestock population the dairy products are not distributed, availed and consumed by individuals. Other factors may influence dairy products availability; in this case costs associated with physical distribution, unavailability of distribution route and proper mode of transportation, efficiency in distribution and stock and storage are found the prominent problems. The mean result; dairy products are availed in the right pack (mean = 1.2745) also show the packing and handling of dairy; which is perishable is not proper and suitable to deliver dairy. The outcome enables to conclude dairy products availability to consumers in Addis Ababa is low, insufficient and with poor distribution mechanism.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

This chapter provides the summary of major findings, conclusion, forwarded recommendations and future study implications.

5.1 SUMMARY OF FINDINGS

This study sought to determine the effect of physical distribution management on availability of dairy products in Addis Ababa dairy processors. The population of the study included all stakeholders in the dairy processing and consumption which were dairy processing companies, transportation agencies, retail shops, supermarkets and individual consumers since it is assumed they were the source of the relevant information. The primary data has been collected through questionnaire and interview.

Descriptive analysis revealed that 71.20% of respondents have acquired first degree and above. 85.6% respondents lived in Addis Ababa more than six years. 86.40 percent of respondents were 26 years and above. The data for this study were proven to be reliable and valid. The Cronbach's alpha value all are above the minimum acceptable value 0.70. All the statements under the variables confirmed showing internal consistency. As per the descriptive statistics costs associated with physical distribution (mean 1.8946), distribution route (mean 1.5527); mode of transportation (mean 1.6624); efficiency (mean 1.3650); time of delivery (mean 1.8632); stock and storage (mean 1.6489) are all prominent factors affecting availability dairy products to consumers in Addis Ababa.

5.2 CONCLUSION

Literatures indicate costs associated with warehousing, storage, transportation, communication, damage and expiry, storage and inventory and expenses related with wage and salary affect physical distribution of goods and services. Similarly the costs of loading and unloading that is labor costs, the costs associated with promotion, adverting and selling affect products availability to consumers, users and reprocesses. The obtained

finding from this research also supports past theoretical briefings. It has been found that the costs associated with physical distribution such as transportation cost, loading and unloading cost, storage and warehousing and expiry costs are negatively affecting dairy products availability in Addis Ababa.

Scholars and academicians stated availability of structured, organized, materially equipped and well administered distribution route enhance product distribution and consumption. Studies also indicated the distribution of dairy products to urban areas is low due to absence of either proper road or other transportation facility. This finding also supports literatures that traffic congestion which occurs in Addis Ababa main and sub roads and the absence of alternate routes is negatively affecting dairy products availability to consumers.

Literatures stated that unavailability of appropriate and right transportation mode hindered merchants, producers, and farmers to deliver goods to consumers. Previous researches in Ethiopia also indicate farmers usually carry fresh milk on their shoulder to supply to processors; and are prominently affecting dairy products marketing and distribution. The finding obtained from this research also support the previous research findings and literatures, the unreachability of right, equipped and fast moving mode of transportation is affecting dairy products availability, consumption and marketing in Addis Ababa.

Scholars state production, distribution, administration and marketing efficiency advance distribution of goods and services to consumers and their availability. Others also argue, cost effective production, production system, time efficient delivery and cost saving distribution mechanism enhance the marketing and availability of goods to each and every retail shops. This research finding also indicate the delivery, stock management, marketing and distribution mechanisms of dairy products in Addis Ababa is not efficiently performed by all stakeholders. Even the packing of dairy products is not appropriate and convenient that all the dairy products production and distribution system is not efficient.

Most business transactions, as per literatures, fail because companies, businesses and firms do not deliver goods and services within the agreed time. This finding also support that dairy products distribution and retailing is not performed within the agreed or expected time. It confirmed that dairy products get expired because of delivery time. The expiry is creating scarcity and reduces availability to consumers. This signifies the time of delivery is negatively affecting dairy products availability.

Managing and administrating the amount of stock availability, checking and balancing the reordering limit, physical layout, arrangement of goods, preserving and inventory control are key activity for marketing and distribution. Scholars also stated that product safety, preservation, cleanliness and display affect sales volume. If not managed, these elements affect distribution and availability. This finding also prominently signifies the retail shops do not store and preserve dairy products. Contamination and exposure to sunlight and heat are also the problems that affect dairy product consumption in Addis Ababa.

Dairy product is a natural, nutritious, highly consumable and demanded food item. It is a product that can be consumed by people of any age. It develops in building healthy and productive society. This research finding indicates, due to cost associated with physical distribution, unavailability of appropriate mode of transportation, the traffic congestion, inaccessibility of proper stock and storage mechanism by retailers negatively affect dairy products availability and consumption by individual users in Addis Ababa.

5.3RECOMMENDATION

It has been found out that costs associated with dairy products physical distribution affect dairy products availability to consumers in Addis Ababa. The world is becoming virtual, the means of communication and marketing are also shifting from analog/ manual to digital. As a result, dairy processing companies, transportation agencies, wholesalers and retailers shall use the digital marketing tool such as telemarketing, social media networking and electronics business to reduce costs.

The distribution route is the second prominent problem that affect dairy products distribution and availability. Factories, manufacturers, transporters, shipping agencies in developed and some developing countries are running their activities and business processes twenty four hours a day. The traffic congestion and fuel consumption is much lower in night time. So that, dairy product transporters, distributors and processing companies shall perform their activity including off hours, night and three shift.

It has been found that dairy products are usually delivered from farmers to dairy processors through traditional transportation and collection system. Dairy is a perishable but highly valuable food item. Accordingly, dairy product processors shall have a special vehicle equipped with refrigerator and collect dairy products from each and every supply chain/ farmer so that there will be integrated farmer processor relationship and high market growth.

The research finding designated that dairy products are exposed to dirt, sunlight, not well preserved, and kept with other products and items. Beverage companies make huge investment on training, promotion, advertisement, and distribution. They also invest on facilities such as provision of refrigerators and other devices to keep their products separate, preserved and promoted. Dairy processing companies, owning the most nutrient product, shall invest on training related with product handling, preservation, storage and display. They should also aware their clients, employees, customers and stakeholders how dairy processors handle, use and preserve.

Dairy products are not available to consumer in Addis Ababa as per demand. Government policy makers, business organizations, financial institutions, agricultural and food science experts shall give special attention on dairy products marketing, distribution, processing, farming, consumption and promotion. Dairy marketing and selling is considered culturally unacceptable by farmers which show government and nongovernment organizations shall work to change the attitude of the society so that every participant in the supply chain will be beneficiary.

5.4 FUTURE STUDY IMPLICATION

Ethiopia is first in Africa in its livestock population. There is also huge market for dairy products in cities. But due to poor distribution mechanism, distribution strategy and physical flow gap exists between demand and supply. This research tried to assess the effect of physical distribution management on dairy products availability. The elements of physical distribution management are few components of the vast problem; unavailability of dairy to consumers in Addis Ababa. Further and regress study on factors that limit availability of dairy products such as communication, perception of dairy marketing, dairy products promotion, dairy market value analysis, dairy branding and dairy supply chain may provide supportive input for policy makers and stakeholders.

REFERENCES

Addis Y. (2019) ***Review on the Challenges and Opportunities of Dairy Value Chain Development in Ethiopia***. International Journal of Business and Technology. Volume 3. Issue 2. PP 20-28.

Adimo A. & Osodo O. (2017) ***The Impact of Distributor Channel Differentiation on Organization Performance:*** The Case of Sameer Africa Limited in Nairobi, Kenya: An International Journal of Business and Management Review. Volume 5. Number 2. PP 1-11.

Ajay S. & Micah B. (2014) ***Sampling Techniques & Determination of Sample Size in Applied Statistics Research: An Overview***: International Journal of Economics, Commerce and Management. Volume -2. Number 11. Pp1-22

Amara S. (2012) ***The Effect of Marketing Distribution Strategies on a Firm's Performance Among Commercial Banks in Kenya:*** A research Project submitted in Partial fulfillment of the requirement for the award of the degree of master of Business Administration (MBA), School of Business, University of Nairobi, accessed on October 25, 2019 via https://efectofditribtion.com

Andelkovic A., Barac N., & Radosavljevic M. (2017) ***Analysis of Distribution Channels' Successfulness- The Case of the Retail Chains in the Republic Of Serbia:*** Economic Themes. Volume 55. Number 4. Pp 501-519.

Appiah M. & Qiang X. (2012). ***Route Optimization in Logistics Distribution Based on Particle Swarm Optimization.*** International Journal of Computer Application. Volume 2. Issue 3. Pp 1-22

Bahita H. & Hailay A. (2018). ***Assessment on Dairy Production Potential and Challenges in Eastern Zone of Tigray, Northern Ethiopia***. Volume 6. Issue 2. PP 420-429

Bekuma A. & Ulfina G. (2018) ***Dairy Products Marketing Systems and its Constraints in Gimbi District, West Wollega Zone, Oromia Ethiopia***. Journal of Veterinary Science and Technology. Volume 9. Issue 5. Pp2-5

Biernacki M. (2016) ***Cost of Physical Distribution as a Component of Customer Service Cost of Companies in the Lower Silesia Region***. Wroclaw University of Economics. Wroclaw. Poland

Binu S. (2017) ***Warehousing & Inventory Management:*** Course Material. Available via https https://:www.cilogistics.com

Brent, M. (2007) ***Channel Structure and Strategic Choice in Distribution Channels***. Journal of Management Research. Volume., Number 2.

Cerna A., Danis J. & Zitricky V. (2005) ***The Methodology of Selecting the Transport Mode for Companies on the Slovak Transport Market***. International Journal of Logistics Management. Volume 12. Number 6. Pp23-34.

Chirasirimongkol S. and Chutimaskul W. (2005) ***Information Technology for Thai Leather SME Development.*** Special Issue of the International Journal of the Computer, the Internet and Management. Volume. 13. Number. SP-3.

Cochran W. (1977) ***Sampling Techniques***. 3rd Ed. New York. John Wiley & Sons Inc.

Coughlin, A., Anderson, E., Stern, L., & El-Ansary, A. (2001). ***Marketing Channels.*** Upper Sadlle River, NJ: Prentice-Hall.

Dabija A., Mironeasa S., Oroian M. & Sion L. (2018) ***Study Concerning Milk Quality – Raw Material for Dairy Industry***. International Journal of Food Engineering. Volume 4. Number 1. PP13-22

Dinkale T. (2019) ***Review on Milk Production: Recent Trends and Future Prospects in Relation to Past Trends in Ethiopia***. Volume 85. Issue 1. Pp 14-24

Djafar W., Amer Y. and Lee S. (2013) ***A Review on Long Distribution Channel's Problems:*** An International Journal of Material, Mechanics and Manufacturing. Volume 1. Number 1. Pp 60- 64.

Djoni, Okaviani R. & Kilbrandoko (2016) ***Managing Multi-and Omni- Channel Distribution: Metrics and Research Directions:*** Journal of Retailing. Volume 1. Number 1. Pp 1-26.

Dore J. (2007) ***Characteristics of Cattle Milk and Meat Production, Processing and Marketing in Meta District, Ethiopia***, Hawassa University, Ethiopia.

Dwyer, R. F., & Welsh, M. A. (1985) ***Environmental Relationships of the Internal Political Economy of Marketing Channels***. Journal of Marketin Research , 397-414.

Ehui S. (2004). ***Dairy Development in Ethiopia.*** International Food Policy Institute. World Bank.

Fan Z. & Ma M. (2015) ***Research on Optimization of Vehicle Distribution Routes in Logistics Enterprises.*** International Journal of Logistics Management. Volume 22. Number 2. Pp 23-72

Fan Z. & Ma M. (2017) ***Research on the Optimization of Vehicle Distribution Route in Logistics Enterprises.*** Earth and Environmental Science. IOP Publishing. Jianjin.

Farese L., Kimbrell & Woloszyk C. (1997***) Marketing Essentials.*** 2nd Ed. New York.

Favilla J. and Fearne A. (2005) ***Supply Chain Software Implementations: Getting it Right. Supply Chain Management:*** An International Journal. Volume 10 · Number 4 · pp · 241–243.

Fawcettet E.S., Osterhaus P., Magnan G., Brau F., and McCarter M. (2007) ***Information Sharing and Supply Chain Performance: The Role of Connectivity and Willingness. Supply Chain Management:*** An International Journal. Volume 12 · Number 5 · pp· 358 – 368.

Fayaz R. & Azizinia M. (2016) ***Current Challenges in Distribution Channels of cultural Goods and Services: Marketing & Branding Research.*** Volume 3. Number 1. Pp 75- 85.

Frazelle E. (2002) ***Supply Chain Strategy.*** New York: McGraw-Hill Companies.

Frazier, G. L. (1999) ***Organizing and Managing Channels of Distribution.*** Journal of the Academy of Marketing Science. Volume 27. Number.2. pp 226-240.

Galin A. (2015) ***Distribution Channels Management in Different Regions:*** American Journal of Economics, Finance and Management. Volume 1. Number 2. Pp 92-96.

Getabalew M. & Almeneh T. (2019) ***Dairy Production in Ethiopia-Existing Scenario and Constraints.*** Journal of Scientific & Technical Research. Volume 16. Issue 5. Pp 1-6

Ghosh D. & Mondal S. (2018) ***An Integrated Production- Distribution Planning of Dairy Industry: A Case Study.*** International Journal of Logistics Systems & Management. Volume 30. Number 2. PP 224-246

Gobena M. (2016) ***Household Dairy Production System, Marketing and Constraints in Ethiopia.*** Journal of Marketing and Consumer Research. Volume 29. Number 1. Pp 46-52

Goffin K. (1999) ***Customer Support: A cross – Industry Study of Distribution Channels and Strategies:*** International Journal of Physical Distribution and Logistic Mangement. Volume 29. Number 6. Pp 374-398.

Guadu T. & Abebaw M. (2016) ***Challenges, Opportunities and Pprospects of Dairy Farming in Ethiopia: A Review:*** World Journal of Diary & Food Sciences. Volume 11. Number 1. Pp 1-9.

Guan W. (2010) ***Developments in Distributions Channels : A case Study of a Timber Product distribution Channel:*** Linkoping University accessed on October 22, 2019 via https://pdfs.semanticschlar.org

Gudonaviciene, R., & Alijosiene, S. (2008) ***The Specific Features of Marketing Channel Design. Engineering Economics.*** Volume 56. Number 1. Pp 74-82.

Gundlach, G. T., Bolumole, Y. A., Eltantawy, R. A., & Frankel, R. (2006) ***The Changing Landscape of Supply Chain Management, Marketing Channels of Distribution, Logistics and Purchasing.*** Journal of Business & Industrial Marketing. Volume 1. Number 1. pp 428-438.

Guya M., Adugna M., Mumed Y. (2019) ***Milk Production, Marketing and Quality in Meta District of Easertn Hararghe Zone, Ethiopia***. Journal of Agricultural Science. Volume 11. Number -5.

Hair, J. F., Anderson, R. E., & Tatham, R. L. (1998) ***Multivariate Data Analysis*** (5th ed.). Upper Saddle River,NJ: Prentice-Hall.

Holloway G., Nicholson C., Delgado C., Staal S. & Ehui S. (2000) ***How to Make a Milk Market: A Case Study from the Ethiopian Highlands.*** International Livestock Research Institute, Nairobi: Kenya

James, L. (2019) **Complete Dissertation by Statistics Solutions Expect Guidance Every Step of the Way.** Retrieved April 20, 2019, from https://www.statisticssolutions.com/assumtions-of-linear-regresopm

Jobber D. & Lancaster G. (2009) ***Selling and Sales Management.*** 8th edition. London. Pearson Education.

Kamali A. (2018) ***The Way to Optimize on-time Telivery (OTD) in Logistics – Firms in Bahrain availabile*** via https://www.acadamic.edu/37966122/The .way.go

Karanja S., Muath SMA and Thuo J. (2014) ***The Effect of Marketing Capabilities and Distribution Strategy on Performance of MSP Intermediary Organizations' in Nairobi Country, Kenya***: Business management Strategy Volum5. Number 1. Pp 197-211.

Karim A., Samaranayake P., Smith A. & Halgamuges S. (2010) ***An on-time Delivery Improvement Model for Manufacturing Organization.*** International Journal of Production Research. Volume 48. Number 8. Pp 2373-2394

Kassa A. (2019***) Review of Performance Marketing and Milk Processing of Dairy Cattle Production System in Ethiopia.*** Volume 8. Issue 1. PP 1-9

Kataelpour A. (2015) ***Evaluation of Distribution Strategy on Sales Promoting of Samsung Company in Iran:*** Mediterranean Journal of Social Science. Volume 6. Number 6. Pp 733-736.

Keller B. S. & Keller B. C. (2014) ***The Definitive Guide to Warehousing: Managing the Storage and Handling Materials and Products in the Supply Chain:*** Pearson Education. New Jersey

Kim T., Kim J. & Choi H. (2014) ***Critical External Factors Affecting Sales: A case of Korea Electronics Companies***: International conference on Intelligent Systems,

Data Mining & Information Technology accessed on October 25 via https://factoraffectingsale.com

Kotler P. (2001) ***Marketing Management Millennium Edition.*** New Jersey. Prentice – Hall Inc.

Kotler, P., & Keller, K. (2009) ***A Framework for Marketing Management*** . 4th edition. Prentice Hall.

Kraxha H. & karxha H. (2015) ***The Strategies of Distribution Channels: Kosovo's Case***; Academic Journal of Interdisciplinary studies. Volume 4. Number 2. Pp 555-560.

La Londe, B., Grabner, J. R., & Robeson, J. F. (1993) ***Integrated Distribution Systems: A Management Perspective.*** International Journal of Physical Distribution & Logistics Management. Volume 23. Number 5. Pp 235-243

Lambert, D. M. (1978) ***The Distribution Channels Decision - A Problem of Performance Measurement.*** Management Accounting. Volume 59. Number 12. pp 62 - 76.

Landau S. & Everitt B. (2004) ***A Handbook of Statistical Analysis Using SPSS.*** A CRC Press. London

Leary, M. R. (2012) ***Introduction to Behavioral Research Methods*** (6th ed.). (S. Madelyn , Ed.) Boston: Pearson Education Inc.

Lee L., Padmanabhan V. and Whang S. (1997) ***Information Distortion in a Supply Chain: Frontier Research in Manufacturing and Logistics, the Bullwhip Effect.*** Management Science. Volume. 43. Number. 4. pp. 546-558.

Li G., Lin Y., Wang S., and Yan H. (2006) ***Enhancing Agility by Timely Sharing of Supply Information. Supply Chain Management:*** An International Journal. Volume 11 · Number 5 · pp · 425–435.

Lijalem T., Asefa A. & Sharo A. (2015) ***Challenges and Opportunities of Dairy Cattle Production in Selected districts of Sidama Zone, Southern Ethiopia.*** Food Science and Quality Management. Volume 44. Number 1. Pp5-12.

Lo V. and Yeung A. (2006) ***Managing Quality Effectively in Supply Chain: A Preliminary Study. Supply Chain Management:*** An International Journal. Volume 11 · Number 3 · pp · 208–215.

M. Laswai E. (2013) ***Assessment of the Effectiveness of Channels of Distribution Models in the Sales Performance of an Organization:*** The Case of Coca-Cola Morogoro Region: accessed on November 25, 2019 via http:scholar.mzumbe.ac.tz › bitstream › handle › MBA CM.- Dissertation- Em.

Maduwanthi M., Rajapakse J., Marasinghe A. and Dharmawansa A. (2015) ***Factors Influencing to Travel Behaviour on Transport Mode Choice.*** International Journal of Affective Engineering. J-STAGE Advance Puplisher.

Mallen, B. (1973) ***Functional Spin-off: A Key to Anticipating Change in Distribution Structure.*** Journal of Marketin. Vulume 37. Number 1. Pp 18-25.

Mehta A., Dubinsky A. and Anderson R. (2002) ***Marketing Cannel Management and the Sales Manager: Industrial Marketing Management.*** Volume 1. Number 1. Pp 429-439.

Mei Z. and John J. (2005***) Electronic Shipping Documentation in China's International Supply Chains. Supply Chain Management:*** An International Journal. Volume 10 · Number 3 · pp · 198–205.

Meixell M. & Norbis M. (2008) ***A Review on the Transportation Mode Choice and Carrier Selection Literature.*** International Journal of Logistics Management. Volume 19.Number 1. Pp 1-14

Mitku D. & Guadu T. (2017) ***Dairy Farming and its Economic Importance in Ethiopia: A Review.*** World Journal of Dairy & Food Sciences. Volume 12. Issue 1. PP 42-51

Moen O. (2016) ***The Five-Step Model-Procurement to Increase Transport Efficiency for an Urban Distribution of Goods.*** Transportation procedia

Mughal J. (2012) ***Assessing the Impact of Channels on the sales of Auto Mobile Parts: A Study of Recco Auto Parts:*** Kuwait Chapter of Arabian Journal of Business and Management Review. Volume. 1. Number 12. Pp 86-125.

Nachmias, C., & Nachmias, D. (1996) ***Research Methods in the Social Sciences*** (5th ed.). St. Martin's press Inc.

Negash F., Tadesse E., Aseffa E., Yimamu C. & Hundessa F. (2012) ***Production, Handling, Processing, Utilization and Marketing of Milk in the Mid Rift Valley of Ethiopia.*** Livestock Research for Rural Development. Adami Tulue Agricultural Research Center. Ziway, Ethiopia.

Ntale T. (2016) ***Effect of Marketing Channels on the Sales Performance on Monitor Publication Limited, Uganda***: Uganda Technology and Management University accessed on November 15, 2019 via https://www.researchgate.net

Nwaogbe O. & Omoke V. (2013) ***Cost Minimization of Production Transshipment for Physical distribution.*** South Africa Journal on Cost Minimization. Volume 11. Issue 2. pp11-23

Obaji R.N. (2011) ***The Effects of Channels of Distribution on Nigerian Product Sales:*** International Business & Economics Research Journal. Volume 10. Number 2. Pp 85-92.

Odhiambo O. & Janet J. (2016) ***Effect of Storage Systems on the Organizational Performance: Study of Holding within Kisumu City.*** European Journal of Logistics, Purchasing and Supply Chain Management. Volume 4. Number 5. Pp 1-24

PALLANT J. (2005) ***SPSS Survival Manual:*** A step by step guide to data analysis using SPSS for Windows. Sydney: Ligare.

Pelton L., Strutton D. & Lumpkin J. (2001) ***Marketing Channels.*** Edinburgh: Heriot-Watt University.

Perreault W. & McCarthy J. (2005) ***Application in Basic Marketing.*** New York. McGraw-Hill.

Perreault W. & McCarthy J. (2005) ***Basic Marketing: A global- Managerial Approach***. New York. McGraw-Hill.

Perreault W. McCarthy J. (2005) ***Essentials of Marketing.*** 10th Ed. New York. McGraw-Hill.

Prahinski C. and Fan Y. (2007) ***Supplier Evaluations: The Role of Communication Quality.*** The Journal of Supply Chain Management: A Global Review of Purchasing and Supply.

Raisinghani M. and Meade L. (2005) ***Strategic Decisions in Supply-Chain Intelligence Using Knowledge Management:*** an analytic-network-process framework. Supply Chain Management: An International Journal. Volume 10 · Number 2 · pp · 114 – 121.

Ramachandran G.M. & Neelakrishnan S. (2017) ***An Approach to Improving Customer on-time Delivery against the Original Promise:*** South African Journal of Industrial Engineering. Volume 28. Number 4. PP 109-119

Rosenbloom, B. (1987) ***Marketing Channels: A Management View.*** 3rd Edition.. New York: The Dryden Press.

Rosenbloom, B., & Larsen, T. (2008) ***Wholesalers as Global Marketers.*** Journal of Marketing Channels , Volume 15. Number 1. pp 235-252.

Sahadev S. & Jayachandran S. (2002) ***Managing the Distribution Channel for High-Technology Products: A Behavioral Approach:*** European Journal of Marketing. Volume 38. Number 1. Page 121-149.

Saremi H. & Zadeh S. (2014) ***Management of Distribution Channels.*** Indian J.Sci.Res. Volume 5. Number 3. Pp 452-456.

Sekaran U. & Bougie R. (2009) ***Research Methods for Business***. John Wiley & Sons Ltd.

Sherer S. (2005) ***From Supply-Chain Management to Value Network Advocacy: Implications for E-Supply Chains. Supply Chain Management:*** An International Journal. Volume 10 · Number 2 · pp · 77–83.

Singh A. (2016) ***Effectiveness of Distribution Channels (Internet in Service Delivery with Reference to India):*** International Journal of Research in Commerce & Management. Volume 7. Number 6. Pp 25-38.

Stern, L., & Neskett, J. (1969) ***Distribution Channels: Behavioural Dimensions.*** (L. Stern, Ed.) Boston, MA: Houghton Mifflin.

Suhardiyah M., Subakir & Sulistyowati. (2016) ***Analysis of Factors Affecting Sales Volume of Small and Medium Enterprises (SMEs) in Surabaya:*** International Journal of Economics and Finance. Volume 8. Number 5. Pp 63- 74.

Susan Z. (2012) ***Warehouse Management:*** A Complete Guide for retailers.

Szopa P. & Pekala W. (2012***) Distribution Channel and their Roles in the Enterprise:*** Polish Journal of Management Studies. Volume 6. Pp 143-150.

Talukder K. & Jan M. (2017) ***Factor Influencing Sales peoples' Performance: A Study of Moble Service Providers in Bangladesh:*** Academy of marketing Studies Journal. Volume 21. Number 2. Pp 1-21.

Tarekegn K. & Fiseha D. (2018) ***Dairy Production and Marketing Systems in Kaffa and Sheka Zones, Sourthern Ethiopia.*** Journal of Marketing and Consumer Research. Volume 27. Number 1.

Tatar P. (2016) ***Impact of Price, Distribution Channel and Promotion on Loyalty:*** International Academic Journal of Psychology and Educational studies. Volume 1. Number 2. Pp 83-93.

Totato U. & Marx R. (2010) ***Study on The Configuration of Distribution Channels for New Automobiles:*** Journal of Operations and Supply Chain management. Volume 3. Number 1. Pp 67- 78.

Tsegaw B. (2017) ***Analysis of Dairy Marketing Chain:*** In the Case of Gonder City, Amhara Regional State, Ethiopia, Gonder University.

Victoria I., Ebere O. & Henery K. (2016) ***Distribution Channel Management as and Engineering Drive to SMEs Competitiveness:*** A study of selected SMEs in

Southern Nigeria: Advanced Research Journal of Multi-Disciplinary Discoveries. Volume 1. Number 1. Pp 48-61.

Villarreal B. & Garza F. (2012) ***An Introduction to Distribution Operations Efficiency.*** International Journal of Industrial Engineering. Volume 3. Number 6. Pp 1-12

Voorijk H. (2010***) Physical Distribution Costs in Construction Supply Chain: A Systems Approach.*** International Logistics Systems & management. Volume 7. Number 4. Pp23-35

Wilkinson I. (1973) ***Power and Influence Structures in Distribution Channels: Normative and Descriptive Aspects.*** European Journal of Marketing. Volume 1. Number 1. Pp 119-129.

Wilkinson, I. F. (1996) ***Distribution and Supply Chain Management Influence on Company Sucess.*** International Journal of Physical Distribution & Logistics Management. Volume 26. Number 5. Pp 31-41.

Woldu T., Abebe G., Lamoot I. and Minten B. (2013) ***Urban Food Retail in Africa: The Case of Addis Ababa, Ethiopia.*** International Food Policy Research Institute.

Yeboah A. & Qiang X. (2019) ***Route Optimization in Logistics Distribution Based on Particle Swarm Optimization.*** International Journal of Computer Applications. Volume 178. Number 30. Pp 1-27

Yeboah A., Owusu A., Boakye S. and Mensah S. (2013) ***Effective Distribution Management, a Pre-Requisite for Retail Operations: A Case of Poku Trading:*** European Journal of Business and Innovation Research. Volume 1. Number 3. Pp 28-44.

Yuan Z. & Kim H. (2012) ***Transport Efficiency through Logistics Development: Policy and Study.*** Asian Development Bank.

APPENDIX I: - RESEARCH QUESTIONNAIRES

Dear Respondent,

Among many others, costs related with physical distribution, stock and storage, time of delivery, efficiency, distribution route and mode of transport affect availability of dairy products. Dairy products include milk, butter, yogurt and others produced from milk of mammals.

My name is Haile Zigale an MA candidate in Addis Ababa University School of Commerce and conducting a research on '***The Effect of Physical Distribution Management on Availability of Dairy Products:*** The Case of Addis Ababa Dairy Processors.' The purpose of the study is to examine the effect of physical distribution management on the availability of dairy products.

Dear Respondent, I kindly request you to spare 20 minutes and share your opinion, knowledge and experience by filling the questionnaires enclosed with so that the project will be completed.

All responses will be kept confidential, secrete and will not be traceable to individual respondents and will be used for academic purpose only.

Your participation is completely voluntary. Some demographic information will be asked to interpret the results more accurately and precisely. No one other than the researcher will see competed questionnaires.

The study consists of eight various parts and statements which will measure to which the physical distribution management of dairy products affect availability.

The scale below each element utilized a five point Likert Scale with alternate responses ranging from ***Strongly disagree (1)***, ***disagree (2)***, ***neutral (3)***, ***agree (4)*** and ***strongly agree (5)***. For each section please indicate the degree to which you agree or disagree with the associated statements by ticking (√) on one of the alternates.

Gratitude thanks for sharing your knowledge and Experience

Haile Zigale

SECTION ONE: - DEMOGRAPHIC INFORMATION

1. Educational Background

   Certificate or Below ☐ TVET/Diploma ☐ First Degree ☐

   Second Degree or Above ☐

2. Duration in Addis Ababa (years)

   =< 5 ☐ 6-11 ☐ 12-17 ☐ >=18 ☐

3. Age (years)

   18-26 ☐ 27-35 ☐ 36-44 ☐ >=45 ☐

4. Gender

   Male ☐ Female ☐

SECTION TWO: - MAIN RESEARCH QUESTIONS

Part I: Cost

The costs associated with physical distribution of dairy products include costs of communication, transportation, storage, loading & unloading, costs of expiry etc. Would you please indicate the extent to which you agree or disagree with each statement based on your knowledge, experience and opinion in the table below by ticking (√) on one of the alternates.

Code	*Questions*	*Strongly Disagree (1)*	*Disagree (2)*	*Neutral (3)*	*Agree (4)*	*Strongly Agree (5)*
CT01	***Cost of loading of dairy products is low***					
CT02	***Cost of unloading of dairy products is low***					
CT03	***Cost of transportation of dairy products is low***					
CT04	***Price of dairy products is low***					
CT05	***Cost of phone calls to distribute dairy products is low***					
CT06	***The costs of mailing to distribute dairy products is low***					
CT07	***The cost of storage of dairy products is low***					
CT08	***The cost of expiry of dairy products is low***					
CT09	***The cost of invoicing of dairy products is low***					
CT10	***The selling cost of dairy products is low***					

Part II: Distribution Route

Distribution route signifies the roads and ways people and vehicle use. The questionnaires in the following are related with distribution route of dairy products. Would you please indicate your level of agreement or disagreement by ticking (√) on one of the alternates.

Code	***Questions***	***Strongly Disagree (1)***	***Disagree (2)***	***Neutral (3)***	***Agree (4)***	***Strongly Agree (5)***
DR01	***Dairy products are distributed through multiple routes***					
DR02	***Distribution routes are safe to deliver dairy products***					
DR03	***Transportation routes are free to delivery dairy products***					
DR04	***Vehicles carrying dairy products choose routes***					
CR05	***Traffic Congestion delays dairy products delivery***					

Part III: Modes of Transport

The mode of transport refers the type, kind and methods of transportation used to carry and transfer goods and services from one site to another. Would you please tick (√) your level of agreement or disagreement on either ***Strongly Disagree, Disagree, Neutral, Agree or Strongly Agree*** on the following questionnaires related with modes of transportation.

Code	***Questions***	***Strongly Disagree (1)***	***Disagree (2)***	***Neutral (3)***	***Agree (4)***	***Strongly Agree (5)***
MT01	***There are alternate modes of transport to deliver dairy products***					
MT02	***The transportation mode enhanced dairy products availability***					
MT03	***The transportation mode is suitable to avail dairy products***					
MT04	***Dairy products are availed regularly***					

Part IV: Efficiency

Efficiency in physical distribution refers to the time taken, the resources utilized, the energy consumed and the techniques used when distributing dairy products. Would you please tick (√) your level of agreement or disagreement on either ***Strongly Disagree, Disagree, Neutral, Agree or Strongly Agree.***

Code	***Questions***	***Strongly Disagree (1)***	***Disagree (2)***	***Neutral (3)***	***Agree (4)***	***Strongly Agree (5)***
EF01	***Dairy products are delivered timely***					
EF02	***Dairy products reach to consumers before expiry***					
EF03	***Dairy products run out of stock in retail shops***					
EF04	***Dairy products are easy to deliver to consumers***					
EF05	***Demand of dairy products is fulfilled***					
EF06	***Dairy products delivered with right pack***					

Part V: Time of Delivery

Time of delivery refers the agreed date or period at which goods and services reach to consumers. Would you please tick (√) your level of agreement or disagreement on either ***Strongly Disagree, Disagree, Neutral, Agree or Strongly Agree.***

Code	*Questions*	*Strongly Disagree (1)*	*Disagree (2)*	*Neutral (3)*	*Agree (4)*	*Strongly Agree (5)*
TD01	***Dairy products are delivered within agreed time***					
TD02	***Dairy product buyers call reminder to suppliers***					
TD03	***Dairy product buyers send reminder message to suppliers.***					
TD04	***Dairy products are disposed due to expiry***					
TD05	***Dairy products meet standard quality level***					

Part VI: Stock and Storage

Stock refers the amount of inventory hold whereas storage is all about warehousing and preservation. Would you please tick (√) your level of agreement or disagreement on either ***Strongly Disagree, Disagree, Neutral, Agree or Strongly Agree.***

Code	***Questions***	***Strongly Disagree (1)***	***Disagree (2)***	***Neutral (3)***	***Agree (4)***	***Strongly Agree (5)***
ST01	***Dairy products are kept safely***					
ST02	***Dairy products are kept separate***					
ST03	***Dairy products are kept in dry place***					
ST04	***Dairy products are kept in cold place***					
ST05	***Dairy products are exposed to sunlight***					
ST06	***Dairy products are exposed to dirt***					
ST07	***Dairy products stored neat***					
ST08	***Dairy products are preserved***					
ST09	***Dairy products are kept clean***					

Part VII: Availability

Availability refers to the accessibility of dairy products to consumers. The following are questionnaires related with availability of dairy products. Would you please tick (√) your level of agreement or disagreement on either ***Strongly Disagree, Disagree, Neutral, Agree or Strongly Agree.***

Code	***Questions***	***Strongly Disagree (1)***	***Disagree (2)***	***Neutral (3)***	***Agree (4)***	***Strongly Agree (5)***
AV01	***Dairy products are availed nearby***					
AV02	***Dairy products are availed all days of the week***					
AV03	***Dairy products are availed as demanded***					
AV04	***Dairy products are availed all times of the day***					
AV05	***Dairy products are availed in the right pack***					

Interview Questions,

I express my gratitude in advance for your time & being volunteer. My name is Haile Zigale. I am conducting a research on the 'Effect of Physical Distribution Management on Availability of Dairy products: The case of Addis Ababa Dairy Processers.' The result will be used for only academic purpose.

1. How often do you deliver dairy products? (**በምን ያህል ጊዜ የወተት ምርቶችን ያደርሳሉ**?)

2. How do you monitor the costs of dairy products physical distribution? (**የወተት ምርት ለማሠራጭት የሚወጣን ወጭ እንዴት ይከታተሉታል**?)

3. How do stock and storage facility enhanced your physical distribution? (**የክምችትና ማጠራቀሚያ ቦታዎች ምን ያህል የወተት ሥርጭትን አሳልጧል**?)

4. How storage facility of retailers do enhanced your distribution? (**የችርቻሮ ሱቆች የማከማች ቦታ ምን ያህል የወተት ምርት ስርጭትን አግልሏል**?)

5. How the distribution route does facilitated your physical distribution? (**የማሠራጫ መንገድ ምን ያህል የወተት ሥርጭትን አሳልጧል**?)

6. How the modes of transportation does facilitated your physical distribution? (**ያለው የማንጓጓዣ ተሽከርካሪ ዓይነት ምን ያህል የወተት ሥርጭትን አሳልጧል**?)

7. What should the company do to improve the availability of dairy products? (**የወተት ምርት ተደራሽነትን ለማሻሻል የወተት ማቀነባበሪያ ድርጅቶች ምን ቢያደርጉ ይመረጣል**)

8. What should the company do to make physical distribution more convenient? (**የምተት ምርቶችን ለማሠራጨት የወተት ማቀነባበሪያ ድርጅቱ ምን ቢያደርግ ይመረጣል**?)

I express my Gratitude thanks for your time

የተከበራሁ መላሾች

የወተት ምርቶችን የማከፋፈል፣የማንጓዝ፣የማከማቸትና የግምጃቤት፣ የአቅርቦት ጊዜ፣ ውጤታማት የማከፋፈያ መንገዶችና የማንጓጥ አይነቶች በሙሉ የወተት ምርት አቅርቦት ላይ ተጽዕኖ አላቸው። የወተት ምርቶች የምንላቸው ወተት፣ ቅቤ፣እርጎ እና ሎች ከወተት የሚገኙ የወተት ተዋፅዖችን ያካትታል።

ኃይሌ ዝጋለ እባላለሁ። የአዲስ አበባ ዩኒቨርሲቲ የንግድ ሥራ ትምህርት ቤት የሁለተኛ ዲግሪ እጩ ተመራቂ ስሆን የወተት ምርትን የማከፋፈል አመራር በአቅርቦት ላይ ያለው ተጽዕኖ ላይ ጥናት እየሰራሁኝ እገኛለሁ። ጥናቱ የሚያካትተው የአዲስ አበባ የወተት ምርት አቀነባባሪዎችን ሲሆን የጥናቱ አላማ የስርጭት አመራር በአቅርቦት ላይ ያለውን ተጥዕኖ መገምገም ነው።

የተከበሩ የጥናቱ ተሳታፊ ከ20 ደቂቃ የማይበልጥ ጊዜ በመውሰድ ያለዎትን አስተያት፣ እውቀትና ልምድ በመጠይቁ ሲገልጹልን ጥናቱ ሙሉ ይሆናል። ሁሉም ምላሾች ሚስጥራዊነታቸው የተጠበቀ ነው፣የሚያገለግሉትም ለትምህርታዊ አላማ ብቻ ይሆናል። ተሳትፎአችሁ በፈቃደኝነት ላይ የተመሰረት ነው።

ጥናቱ ስምንት ክፍሎች አሉተ። ለመመዘን ምቹ እንዲሆን የተቀመጡት መለኪያዎች ከ1 እስከ 5 የመስማማት ደረጃን የሚያሳዩ ሲሆን ለእያንዳንዱ ጥያቄ የ(√) ምልክት በማስቀመጥ ይግለጹልን።

ያለዎትን ልምድና እውቀት ስላካፈሉን ከልብ እናመሰግናለን

ሀይሌ ዝጋለ

ክፍል እንድ፡- የግል መረጃዎች

1. የትምህርት ዝግጅት

   ሰርተፊኬት ወይም ከዛ በታች ☐ ዲፕሎማ ☐ የመጀሪያ ድግሪ ☐

   ሁለተኛ ድግሪ ወይም ከዛ በላይ ☐

2. አዲስ አበባ ውሥጥ የቆዩባቸው አመታት

   5 ወይም ከዛ በታች ☐ ከ6-11 ☐ ከ12-17 ☐ 18 ወይም ከዛ በላይ ☐

3. እድሜ

   18-26 ☐ 27-35 ☐ 36-44 ☐ 45 ወይም ከዛ በላይ ☐

4. ፆታ

   ወንድ ☐ ሴት ☐

ክፍል ሁለት፡- ዋና የጥናት መጠይቆች

ንዑስ ክፍለ I: - ወጭ

የወተት ምርቶችን ከማከፋፈል ጋር የተያያዙ ወጪዎች የመረጃ ልውውጥ፣ የትራንስፖርት፣ የግምጃቤት፣ መጫንና ማውረድ፣እንዲሁም የአገልግሎት ጊዜ ማለፍ ወጪን ያጠቃልላል። ባለዎት ልምድ፣ እውቀትና ሐሳብ የመስማማት ደረጃዎን በእያንዳንዱ አረፍተ ነገር ጎን (√) ምልክት እንዲያስቀምጡ እንጠይቃለን

መለያ	ጥያቄ	በፍጹም አልስማማም	አልስማማም	አላውቅም	እስማማለሁ	በጣም እስማማለሁ
01	የወተት ምርት የመጫን ወጪ ዝቅተኛ ነው					
02	የወተት ምርት ጭነትን የማውረድ ወጪ ዝቅተኛ ነው					
03	የወተት ምርትን የማንገዝ ወጪ ዝቅተኛ ነው።					
04	የወተት ምርቶች መሸጫ ዋጋ ዝቅተኛ ነው					
05	የወተት ምርትን ለማከፋፈል የስልክ ወጪ ዝቅተኛ ነው					
06	የወተት ምርት የግምጃ ቤት ወጪ ዝቅተኛ ነው					
07	የወተት ምርቶች የአገልግሎት ጊዜ ማለፍ/መበላሸት ወጪ ዝቅተኛ ነው					
08	የወተት ምርቶች ማከፋፈያ መልክት መላኪያ ወጪ ዝቅተኛ ነው።					
09	የወትት ምርቶች ደረሰን ዝግጅት ወጪ ዝቅተኛ ነው					
10	የወተት ምርቶች ሽያጭ ሥራ ወጪ ዝቅተኛ ነው					

ንዑስ ክፍል ፤፤:- የማሠራጫ ዘዴዎች /መንገዶች/አይነቶች

የማከፋፈያ መንገዶች ሰዎችና ተሽከርካሪዎች የሚጠቀሙትን አማራጭ መንገድ ያሳያል፡፡ ይህ መጠይቅ ከዚህ ጋር ተያያዥ ጉዳዮችን ያነሳል፡፡ እባክዎ የስምምነት ሁኔታን የ(√) ምልክት በአማራጮች ላይ በማስቀመጥ ይግለጹ፡፡

መለያ	ጥያቄ	በፍጹም አልስማማም	አልስማማም	አላውቅም	እስማማለሁ	በጣም እስማማለሁ
01	የወተት ምርቶች በበርካታ አማራጭ መንገዶች ይሠራጫሉ					
02	የወተት ምርት ማከፋፈያ መንገዶች ደህንነታቸው የተጠበቀ ነው					
03	የትራንስፖርት መንገዶች ለማጓጓዝ ነጻ ናቸው፡፡					
04	የወተት ምርት የጫኑ መኪኖች መንገድ መርጠው ይጓዛሉ					
05	የወተት ምርት የጫኑ ተሽከርካሪዎች አማራጭ መነገዶች አሏቸው፡፡					

ንዑስ ክፍል ///፦ የትራንስፖርት አይነቶች

የትራንስፖር ት አይነቶች ማለት የወተት ምርትን ከአንድ ቦታ ወደ ሌላ ቦታ ለማጓጓዝ የምንጠቀመው አማራጭ የትራንስፖር ት ዘዴዎች ነው። እባክዎ በቀመጡት አማራጮች ላይ የ(√) ምልክት በማስቀመጥ የስምምነትዎን ደረጃ ይግለጹልን።

መለያ	ጥያቄ	በፍጹም አልስማማም	አልስማማም	አላውቅም	እስማማለሁ	በጣም እስማማለሁ
01	የወተት ምርትን ለማቅረብ አማራጭ የትራንስፖር ት አይነቶች አሉ፤፡					
02	የትራንስፖር ት አይነቶች የወተት ምርት አቅርቦት ሁኔታን ያሳድጋል።					
03	የትራንስፖር ት አይነቶች የወተት ምርትን ለማቅረብ አመቺ ናቸው።					
04	የወተት ምርቶች ሁልጊዜ ይገኛሉ					

ንዑስ ክፍል IV፡- ውጤታማት

ምርትን በማከፋፈል ሂደት ላይ የሚወስደው ጊዜ የሚፈጁት ሀብትና የሚጠቀሙት ቴክኖሎጂን ያጠቃልላል፡፡ እርስዎም ከታች በተገለጹት መጠይቆች ላይ የስምምነቶን ሁኔታ የ(√) ምልክት በማስቀመጥ ቢገልጹልን

መለያ	ጥያቄ	በፍጹም አልስማማም	አልስማማም	አላውቅም	እስማማለሁ	በጣም እስማማለሁ
01	የወተት ምርቶች አቅርቦት ወቅቱን ጠብቆ ይደርሳል					
02	የወተት ምርቶች የአገልግሎት ጊዜያቸው ሳይልፍ ይደርሳሉ፡፡					
03	የወተት ምርቶች እጥረት በችርቻሮ ሱቆች ይስተዋላል፡፡					
04	የወተት ምርቶች ለተጠቃሚዎች ለማድረስ ምቹ ናቸው፡፡					
05	የወተት ምርቶች ፍላጎት ተሟልቶ ይቀርባል					
06	የወተት ምርቶች በትክክለኛው ማሸጊያ ታሽገው ይቀርባሉ					

ንዑስ ክፍል V፦ የአቅርቦት ጊዜ

የአቅርቦት ጊዜ ማለት፣ የንግድ ስምምነት የተደረሰበት ቀን ወይንም ለተጠቃሚዎች እቃ ወንም አገልግሎት ለማድረስ ስምምነት የተደረሰበት እለት፣ የጊዜ ገደብ ማለት ነው።። እርስዎም ከታች በገለጹት መጠየቆች ላይ የስምምነቶን ሁኔታ የ(√) ምልክት በማስቀመጥ ቢገልጹልን

መለያ	ጥያቄ	በፍጹም አልስማማም	አልስማማም	አላውቅም	እስማማለሁ	በጣም እስማማለሁ
01	የወተት ምርቶች ስምምነት የተደረሰበትን ወቅት ጠብቀው ይቀርባሉ					
02	የወተት ምርት ገዥዎች አቅራቢወችን ለማስታወስ የስልክ ጥሪ ያደርጋሉ					
03	የወተት ምርት ገዥዎች ለአቅራቢወችን ለማስታወስ መልክት ይልካሉ					
04	የወተት ምርቶች በብልሽት ምክንያት ይወገዳሉ					
05	የወተት ምርቶች የጥራት ደረጃን ያሟላሉ					

ንዑስ ክፍል VI፡- መጠንና ክምችት

መጠን (ስቶክ) በማከማቻ መጋዘን ውስጥ ያለውን የምርት ብዛት ሲያመላክት፣ ክምችት ማለት የእቃ ግምጃቤትና ሳይበላሹ የማቆያ ዘዴን ያሳያል፡፡ እርስዎም ከታች በገለጹት መጠየቆች ላይ የስምምነቶን ሁኔታ የ(√) ምልክት በማስቀመጥ ቢገልጹልን

መለያ	ጥያቄ	በፍጹም አልስማማም	አልስማማም	አላውቅም	እስማማለሁ	በጣም እስማማለሁ
01	የወተት ምርቶች ደህንነታቸው ተጠብቆ ይቀመጣሉ					
02	የወተት ምርቶች ከሌላ ምርት ጋር ሳይቀላቀሉ ይመጣሉ					
03	የወተት ምርቶች በቀዝቃዛ ቦታ ይቀመጣሉ					
04	የወተት ምርቶች ለፀሐይ ብርሀን ይጋለጣሉ					
05	የወተት ምርቶች ለቆሻሻ ይጋለጣሉ					
06	የወተት ምርቶች በንፁህ ቦታ ይቀመጣሉ					
07	የወተት ምርቶች ሳይበላሹ እንዲቆይ ይደረጋል					
08	የወተት ምርቶች በንፅጎና ይያዛሉ					
09	የወተት ምርቶች ንጽህናቸው የተጠበቀ ነው					

ንዑስ ክፍል VII፦ የአቅርቦት ሁኔታ

የአቅርቦት ሁኔታ የወተት ምርት ለተጠቃሚዎች ያለውን ተደራሽነት ያሳያል፡፡

ከታች የተጠቀሱትን ተያያዥ ጥያቄዎች የ(√) ምልክት በማድረግ ከአማራጮች የሚስማሙበትን ያስቀምጡልን፡፡

መለያ	ጥያቄ	በፍጹም አልስማማም	አልስማማም	አላውቅም	እስማማለሁ	በጣም እስማማለሁ
01	የወተት ምርቶች በአቅራቢያ ይገኛሉ					
02	የወተት ምርቶች በሳምንት ሁሉም ቀናት ይገኛሉ					
03	የወተት ምርቶች በሚፈልጉበት ጊዜ ማግኘት ይቻላል፡፡					
04	የወተት ምርቶችን በቀን ውስጥ በማንኛውም ሰዓት ማግኘት ይቻላል፡፡					
05	የወተት ምርቶች በትክክለኛ ማሸጊያ ይቀርባሉ					

ያለምትን እውቀትና ልምድ ስላካፈሉን ከልብ አመሰግናለሁ