ADDIS ABABA UNIVERSITY

SCHOOL OF COMMERCE

DEPARTMENT OF LOGISTICS AND SUPPLY CHAIN MANAGEMENT

FACTORS AFFECTING TIMELY DELIVERY OF PACKAGES IN COURIER AND LOGISTICS BUSINESS: THE CASE OF EXPRESS MAIL SERVICE (EMS) IN ETHIOPIAN POSTAL SERVICE: Employees Perspectives

BY

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May, 2019

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

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Approved by: Board of Examiners and Advisor

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Declaration

I, **Belesty Esubalew**, declare that this thesis is a result of my independent research work on the topic entitled "**Factors affecting timely delivery of packages in courier and logistics business: the case of express mail service (EMS) in Ethiopian postal service**" in partial fulfillment of the requirements for the Degree of Masters of Art in Logistics and Supply Chain Management at Addis Ababa University, School of commerce. This work is original in nature and has not been presented for a degree in any other University and all the references used are also properly recognized.

Belesty Esubalew	_____	_____
Name	**Signature**	**Date**

Endorsement

This is to certify that **Belesty Esubalew** has carried out this thesis on the topic entitled "**Factors affecting timely delivery of packages in courier and logistics business: the case of express mail service (EMS) in Ethiopian postal service**" under my supervision. Accordingly, I here assure that his work is appropriate and standard enough to be submitted for the partial fulfillment of the requirements for the award of the degree of Masters of Art in Logistics and Supply Chain Management.

BUSHA TEMESGEN (Ph.D.) _____

Advisor **Signature & Date**

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Key to Acronyms

OTD = On time delivery

EMS = Express Mail Service

EPSE = Ethiopian Postal Service Enterprise

UPU = Universal Postal Union

ORI = operational related issues

HFRI = Human Factor related issues

LCI = Logistical Capability Issues

ASRC = Addressing System and Road congestion/closure

CC = Customs' and Carriers / Transporters problem

CRI = Delays due to Customer Related Issue

Abstract

The purpose of the study was to examine factors affecting Timely Delivery of Packages in Courier and Logistics Business in Ethiopian postal service enterprise. The study was guided by the following specific objectives; to determine the effect of operational related issues on timely delivery of courier service, to assess the relationship between human related issues & timely delivery of courier service, to determine the effect of logistical capability issues on timely delivery of courier service, to examine the relationship between Addressing System & Road Congestion & timely delivery of courier service, to determine if there is a relationship between Customs & Carriers Performance and on time delivery of courier service and to assess the relationship between Customer Related Issues and timely delivery of courier service in EMS Ethiopia. Quantitative research approaches and Explanatory research design was used to identify and examine factors that affect the performance of timely delivery the case company. The total population numbers of purposively selected respondents were taken as the sample size of the study. The data was collected using a questionnaire comprised of 54 close-ended questions with Likert scale. Based on the findings, all of the independent factors were found to have positive and significant correlation with the dependent variable which is timely delivery of courier packages. The ANOVA test result showed that, the value of R and R^2 obtained under the model summary was statistically significant. The multiple linear regression analysis revealed that, 5 of the 6 independent variables (operational related issue, human factor related issue, logistical capability issue, addressing system & road congestion and customs & carriers) have a statistically significant relationship to predict on time delivery performance. Based on these findings, a recommendation that will improve on time delivery of courier package has been forwarded.

Key Words: *On time delivery, operational related issue, human factor related issue, logistical capability, customs and carriers, addressing system and road congestion*

CHAPTER ONE
INTRODUCTION

1.1.Background of the Study

In response to increasing demand for fast and reliable document delivery services, it was in the United States that the Express Delivery Service (EDS) industry was originated in the late 1960s. Expansion into other market segments, such as parcels and investment in new technologies, like tracking and tracing, have enabled EDS firms to meet manufacturers' and retailers' the increasing demand for just-in-time delivery and logistic-related services. The advent of the Internet, and related growth in electronic commerce, has contributed to the industry's rapid expansion as well. With the rise of large retail and department stores in the early twentieth century, package delivery services became even more popular (Campbell, 2007).

This potentially lucrative business sector call for the establishment of globally leading companies in the sector like DHL Worldwide Express (DHL), United Parcel Service (UPS), Federal Express (FEDEX), etc and these couriers have established affiliates in foreign countries to capitalize on rapidly expanding global demand for express courier services.

Since private courier companies often provide services that are more dependable, faster and cheaper than those offered by the national postal service suppliers, the postal suppliers have been increasingly concerned about losing market share in the growing international mail market to the private companies. (Universal Postal Union, Website http://www.ib.upu.org) That is why UPU initiate similar Business Model Called Express Mail Service (EMS).

The case is true in Ethiopia also. That means, after the government liberalizes the courier business, some international courier business like DHL, FEDEX, UPS etc enter in Ethiopia market and established affiliates in Ethiopia to capitalize on rapidly expanding demand for express courier services. Having realized the market opportunities and the new developments in the postal market, The Ethiopian postal service enterprise also set up a new business unit called EMS (express mail service) in 1989. This is a courier business which provides multi-modal courier services consisting of pick-up, transport and delivery services for domestic or foreign destinations of letters, parcels and packages using one or more modes of transport.

EMS Ethiopia which is part and parcel of the business unit for the national postal operator in the form of courier business, have by far much presence in the country which is very important and prerequisite element for such kind of business. For example, DHL presence is limited to major cities in the country that accounted for a maximum of not more than 50 branches which is very insignificant while we are comparing with EMS Ethiopia has more than 1200 branches throughout Ethiopia. (http://www.ethiopostal.com).

Given that there are other factors like timely delivery at the right place with the right quantity (Coyle et al., 2010), this may be a competitive advantage for the post office to win the customers. But the focus must be on quality of service. Because, now a day's this issue becomes a very important part of the proper functioning of many transport, forwarding and logistics companies. In relation to this, the most important quality parameters that are being given value by customers for the courier industry are: Timeliness of delivery (on time delivery), Effectiveness of delivery (the number of returns from sender and refusals to receipt goods), and Loss ratio (the number of damaged shipments and complains) (Miskiewicz, 2009).

To deal with these issues and to gain the necessary market share in the industry, these courier companies need to develop and implement a strategy on increasing delivery performance and meet customer requirements. Without proper strategy, the company can have problems with timely deliveries and finally it may cause customers disappointment. To develop strategy in this area, those factors which affect timely delivery of goods needs to be researched and analyzed. Therefore, this study sought to investigate factors affecting timely delivery of courier packages with special focus on Ethiopian Postal Service Enterprise.

1.2.Statement of the Problem

Now a day's competition between companies become basically on their logistical excellence which is directly related with meeting the needs and wants of customers. That means, logistics companies are different from other businesses as the services they provide require high levels of specialized ability to achieve the desired outcome (delivery performance) and meet the customer's needs (Gulc, Aleksandra, 2017). Due to this fact, the need to improve quality of service in courier and logistics industry has grown. For this, focusing at operational accuracy, improving logistical capability and give proper attention to human related issues (Gulc,

Aleksandra , 2017), make every effort to make the customer feel the value of using their products / services, trying to keep the promise to customer especially on delivery time, delivering full list of received item without lost and damage etc. is very crucial. This is all about quality of service.

For the courier industry, the most important quality parameters are: timeliness of delivery, effectiveness of delivery (the number of returns from sender and refusals to receipt goods), loss ratio (the number of damaged shipments and complaints (Miskiewicz, 2009). In this regard customers are complaining for the poor and low level of quality of service which is being witnessed by the customer satisfaction survey conducted by hiring external consultant. The survey was conducted in 2018 two-times and the result shows that only 51 % are happy with delivery performance of EMS packages, which means, 49 % are not satisfied with delivery performance of the company (Customer satisfaction survey conducted by MAE consulting plc page 43, 46 and 71). This result is also backed by the report prepared by Universal Postal Union (UPU) which an international united nation specialized agency incorporated to manage, lead and control the postal parcel industry throughout the world. From the report of July 2017 to September 2018 a total of 1255 dispatches were registered as late delivery and missing delivery. (http://storm.ipc.be).

This problem is again reflected by the 6th month report of EMS (from July, 2018 to December,2018), it is also registered that on time delivery is 7.6 % below the target, on time transmission of packages to next processing unit is about 64.92 % and international courier package on time delivery performance is 76.54**%.** These reality triggers the researcher to look at these factors affecting the delivery performance of dispatches in EMS business and in response to increasing customer expectation and continued push for delivery excellence, the company should reassess their capabilities of delivery performance.

From competition perspective, there are various courier business companies, which have been registered in Ethiopia since the country started to liberalize this sector. Due to this, competition in the courier and logistics business has gone tougher and tougher. This call for the Courier companies to give attention for quality factors so as to retain their existing customers and also to attract new ones. The high competition has also created the need for companies to be creative and innovative so as to deal with the different factors which affect quality of service delivery.

The other point is to the best of my knowledge; no other studies were carried out in this subject matter in Ethiopia. There is one study conducted in Kenya which focuses on training, motivation and customer service as factors for delivery performance. But in this study, the researcher tried to show more internal factors and external factors within and outside the company and specially, external factors which were not touched by Jacinta WahuNyaga(2017), are, addressing system and road conjunction, customs and carriers performance and customers related issues are additional variables ton be discussed as factors. In addition to this operational accuracy and logistical capability are also additional factors to be seen in this research. Therefore, there is massive difference in previous study and this one and this is what the researcher was trying to fill by addressing the untouched factors, which was outside the quoted researcher scope of study. Therefore, this study sought to fill the existing knowledge gap for the company as well as for any interested body.

These all stated scenario points out that, there must be factors as well as intervening strategies that are impacting on the successful performance of timely delivery of courier firms and it is very important to study the factors affecting the performance of courier services in the country.

1.3.Research Questions

1.3.1. Main Research Question

The primarily research question is what are the factors that affect on time delivery of packages so as to improve delivery performance in the Ethiopian Post Office courier industry?

1.3.2. Specific Research Questions

- Does operational related issues (in terms of delivery information, operational accuracy, delivery model & operational hour) affect on time delivery of courier service industry in EMS Ethiopia or not?
- Does human related issues (in terms of availability of experienced driver & motorist and quality of leadership) affect on time delivery of courier service industry in EMS Ethiopia or not?
- Does logistical capability issues (in terms of availability of wide spread delivery centers, delivery route & network and application of information technology) affect on time delivery of courier service industry in EMS Ethiopia or not?

- What is the relationship between addressing system & road congestion and on time delivery of courier service industry in EMS Ethiopia?
- What does the relationship between Customs & carriers performance and on time delivery of courier service industry in EMS Ethiopia look like?
- What is the relationship between Customer Related Issues and on time delivery of courier service industry in EMS Ethiopia or not?

1.4.Objective of the Study

1.4.1. General Objective

The general objective of the study is to explain factors that affect on time delivery performance of Express Mail Service at the Ethiopian Postal Service Enterprise was the general objective of the study.

1.4.2. Specific Objectives

In order to address the research problem, the study was guided by the following specific objectives.

- To explain the effect of operational related issues on timely delivery of courier service industry in EMS Ethiopia.
- To explain the relationship between human related issues and on time delivery of courier service industry in EMS Ethiopia.
- To explain the effect of logistical capability issues on timely delivery of courier service industry in EMS Ethiopia.
- To explain the relationship between Addressing System & Road Congestion and on time delivery of courier service industry in EMS Ethiopia.
- To explain if there is a relationship between Customs & Carriers Performance and on time delivery of courier service industry in EMS Ethiopia.
- To explain the relationship between Customer Related Issues and timely delivery of courier service industry in EMS Ethiopia.

1.5.Significance of the Study

This study helps the management of Ethiopian Postal Service Enterprise in identifying areas which they need to improve on quality of service to its customers in the area of courier packages on time delivery. It helps them to be aware of where, when and how to increase their resources so as to make their services better. The study also assists the customer care department to be aware of weakness areas and how to improve on these areas so as to improve the quality of service offered to the customers. Such research would focus not only on academic areas, but also on concerns relevant to industrial practice. In this regard, as far as my knowledge is concerned, none has been conducted into the EPSE courier industry. But as a national leading courier company, these on time delivery issue hampers companies' operational excellence. So, this research enlightens EPSE to rethink way to insure on time delivery of packages and improve performance.

The study will be of great importance to future researchers in providing literatures on areas of factors affecting customer service delivery in the postal industry. The study will also important as it gives researchers exposure to a wider scope of knowledge that they can use in case they need to carry future research on similar topics.

The study finding assists policy makers if they really need to improve the service delivery in designing policies aimed at enhancing customer service delivery, this study also contribute in making clear to them on various factors affecting on time delivery of courier packages in the national Postal operator of EPSE.

1.6.Scope and Delimitation of the Study

The study was confined on the timely delivery performance of packages and dispatch in the courier and logistics business of the EPSE. So, those internal and external factors to the company which affects on time delivery performance was the conceptual scope of the study.Meaning, internal to the company, different factors like operational related issues (delivery on time, operational accuracy and delivery model), human factor related issues (availability of experienced driver & motorist and quality of leadership), logistical capability issues (availability of wide spread delivery centers and application of information technology) were assessed if they have relationship with on time delivery of packages. External factors to the company, addressing

system & road conjunction, customer related problems and customs & carriers performance was assessed if they have a relationship with on time delivery of packages. The study targeted employee of EPSE, especially those who are directly and indirectly involved in express package delivery at their head office from where the sample size was selected.

The student researcher believed that it was appropriate to conduct the study in the large scale however; EPSE is the largest courier service provider in Ethiopia having more than 1200 branches stretched across the country which is very difficult to manage the size. And also the student researcher believed that the target populations are similar in nature with other employees who are not in the target population. Therefore; the study delimits itself to EPSE Head quarter, Addis Ababa post offices, which means, it does not focus on branches out of the selected branch. These means, the study focuses on employees of EMS located in the Head quarter.

In order to keep the scope of the study within a manageable range, it will be necessary to constrain the problem. One limitation imposed on the study is that the scope of the study was confined to Addis Ababa city which may limit the comprehensive view of findings. The study was a cross-sectional in nature (data was collected in January to February 2019 and, as such, the results were representative of that point in time).

Furthermore, since the research was restricted on the available time and budget, the study was limited to focus only on single organization and specific areas. Biases are prevalent in research and respondents were also respond inaccurately or falsely to questions and this issue had impact the findings in a negative manner. These all have impact on the outcome of this research.

1.7.Definition of Terms and Concepts

Delivery time;The time from the creation of an order to the fulfillment and delivery of that order encompasses both orderprocessing time and delivery or transportation time.

Delivery; Is defined by the World Book Dictionary (1996:551) as an act of carrying and giving out something to be, or a giving up. In this study, delivery is understood to be the manner in which service can be taken to the people.

Customer Services; Customer service is responding to customer needs and expectations in a way that will make them have a memorable experience and motivate them to come back and to tell others.

Door to door delivery; this includes the seamless transfer across multiple modes of transport. The "integrated" aspect of the service offered frees the customer from the need to make complex transportation arrangements for pick-up and delivery.

Logistical Capability; Logistics and transport service providers in this case, courier companies' ability to conduct and coordinate logistics-related activities and utilize related resources and skills to satisfy customers' real needs.

On time delivery; It is about keeping the promise of delivering the dispatches on the agreed date to the customer. It refers to providing products or any dispatches to end customers who are the owners of the product at the right time and place.

1.8.Organization of the study

Chapter 1 of this study serves as the introduction to the research. It gives some back ground of the study, the research problem and it also lays out the research question, the importance and aims of the research. Limitations of the research study as well as the clarification of the terminology were discussed here.

Chapter 2 of this study provides an in-depth review of literature and the fundamental principles and factors which influence on time delivery. Empirical studies in the subject matter were also briefly assessed in this part of the research.

Chapter 3 deals with the research methodology used in the study. Different statistical methods and techniques applied during the scope of the study was identified and discussed in detailed.

Chapter 4 presents the report results of the empirical study. This chapter provides an analysis, interpretation, and evaluation of the research findings.

Chapter 5 presents the conclusion and recommendations based on the main objective and findings of the study. Limitations of the study are discussed, and suggestions for further research are presented in this chapter.

CHAPTER TWO
REVIEW OF RELATED LITERATURE

2.1.Introduction

This Chapter reviews literatures relevant to the study. The main focus of the study was timely delivery of courier packages and its determinants. Accordingly, the review looks at the concept of timely delivery of courier packages and the proposed factors that affect on time delivery; i.e., operational related issue, human factor related issue, logistical capability, addressing system & road congestion, customs & carriers and customer related issue in the courier business and logistics sector. Thus, the effect of each variables suggested by different authors are discussed in this chapter. Then, an empirical review of different researches has been made.

2.2.Theoretical Review

2.2.1. Courier Business & Express Delivery Services

Courier business is designed especially for the transport of goods and services such as documents, small samples, and important spare parts up to 31.5k.g weight. The items or the goods are carried personally during all stages of the transportation from the sender to the final destination, without been re-routed. These services are considered the fastest type of express delivery and also relatively expensive way to carry goods (McKinnon, A., 2001). This kind of express services (delivery) are mainly found in inner cities and they use cars, motorcycles or bicycles as mode of transport.

Primarily, these services convey parcel and documents in accordance with a fixed, defined transportation program, using logistical networks with fixed running times for the specific goods. Parcel services are the most standardized and automated of the express delivery services, with the fast delivery time and low price. The transported goods have to be standardized to allow automated transportation and re-routing in order to meet the requirements of the standardized transportation program of the parcel service. Parcels have to fit in to specific requirements (maximum weight and length). No guarantees are given, but the transportation process with fixed running times allows fairly reliable expected delivery times for parcel to given destination (McKinnon, A., 2001). On the other hand, integrated (courier) express delivery service operators

move consignments from door to door with time definite delivery services in order to meet customer demand. However, those integrated service operators also offer a variety of products or services depending on the weight of the consignment and the speed of delivery required by the customer.

It entails the carriage of goods from the sender to the final destination by bundling or grouping together large numbers of units and distributing them internally with a flexible transportation program. Express delivery service has a guaranteed delivery time frame such as same day delivery, next day delivery within 24 hours (Panagiotis & Piia, 2013). It is also possible in this type of services to negotiate the specific delivery time and that is why the main feature is the guaranteed delivery time. Specific forms of express delivery services are the express freight system, which specialize in the express delivery of large amount of goods for industry. Long term contracts exist and deliveries are undertaken for a few main clients. Express services are often tailored for specific industries (e.g. Pharmaceutical sector) or are the result of the outsourcing of transportation from industry to logistics service providers (McKimmom, A., 2001).

2.2.2. On Time Delivery

On-time delivery means doing delivery at the agreed time and the ordered quantity corresponds with the delivered quantity. (e.g. Kallio et al., 2000, cited in Forslund et al., 2008, p. 43; Forslund & Jonsson, 2007.) It is the main metrics to measure the efficiency of the supply chain process in an organization. It is an indicator of how capable an organization is to meet customer demand in terms of the requested delivery date.

Considering on-time delivery, (Stank et al., 2003) define delivery performance as delivering the requested order within the desired 'time window' at an acceptable cost which is about punctuality of order time. Brah and Ying Lim (2006) add that an on-time delivery should warrant delivering 'immaculate' which is about delivery of goods with faultless perfection, whereas Kayakutlu and Buyukozkan (2011) emphasize avoiding losing goods to maintain a delivery obligation. Liu and Lyons (2011) express delivery-related performance as 'a greater proportion of on-time and accurate deliveries'. However, Yeung et al. (2006) note that on-time delivery should not be confused with a short delivery time, meaning that the focus is on punctuality

instead of speed. Prater et al. (2001) stress that the agreed time frame should be based on a realistic delivery time that is challenging for the logistics service provider yet allows sufficient time to reach the point of delivery. Overall, Kumar and Singh (2012) explain that on-time delivery can be measured by considering: (i) the percentage of accuracy in delivery and (ii) the percentage of all deliveries that are on time. Combining all these theories and empirical researches, this thesis defines on-time delivery performance as the percentage of totally requested deliveries that are provided within an agreed time frame under the specified conditions.

Based on the discussion with quality and security department of the Ethiopian postal service department on time delivery is basically all about delivery on agreed time which is within 48 hours after acceptance (is about punctuality instead of speed, percentage of all deliveries on time and deliveries at the desired time windows at acceptable cost) and completeness and accuracy of orders delivered which is all about quality of delivery and it may include (received quantity corresponds with delivered quantity, avoiding loosing of goods to maintain delivery obligation, very low rate of returns due to shipment damage & shipment errors and percentage of accurate deliveries). In addition to this on time a package is considered on time if tracking information is recorded within 48 hours of entering the shipment confirmation.

Different on time delivery indicators are being considered in the organizations; like the performance of airlines, road transport operations, the technology being used and applied by the company, availability of different resources for delivery operations, the process and time taken to hand over the dispatches from one process to other process, notifications method (email and text) being in place to let the customer know about packages delivery. (EMS quality measurement document).

To summarize, on-time delivery (OTD) is the main metric to measure the efficiency of supply chain processes in any organization and specifically in courier business. It is an indicator of how capable the organization is to meet customer demand in terms of the requested delivery date (RDD). Failing to meet your customers' requests can lead to all sorts of negative outcomes and in its worst case the organizations may lose your customers to competitors. The following subsequent topic will discuss the details of different factors which may affect OTD.

2.2.3. Factors Affecting timely Delivery of Express Packages

As per R& G Global consultants, OTD is simply measured as a ratio of the number of units on time delivered divided by the number of total units shipped on a monthly base. After thorough study of these theory and detail assessment of the current end to end delivery operations of the company, the student researcher tries to see and develop his own way of relationship between different factors and on time delivery. That is, since there are many different parties involved in this delivery supply chain transaction, the factors for effective and efficient delivery can be seen from different source. One from the company's internal source and the other can be seen from different external factors. Then the researcher categorizes the internal factors as logistical capabilities, human factor related issues and operational related issues. External factors are being seen from different perspective as well (like from addressing system, road structure and congestion, from customs and carriers side and from customer perspective,). So, the researcher sees literatures based on the above simple model and perspectives.

2.2.4. Operational Related Issues (ORI)

Operational related issues can be seen from the internal operational activities of courier Business Company that is being performed in order to do the delivery business of the packages. The student researcher tried to look operational related issue in terms delivery information, operational accuracy and delivery model & operational hour. Based on these frame work literatures are discussed below from which hypothesis was developed.

Delivery Information (DI); Information aids in the smooth functioning of the supply chain in delivery business. Especially for courier companies, accurate, timely and appropriate information is required for managers, staff members, drivers and customers. As part of operational procedures of delivery business securing delivery information is vital and pre-requisite for timely delivery of packages. Many previous studies have considered that information accuracy (recipient correct name address), information availability, (delivery time, delivery location and telephone) and timely information is an important factor in overall supply chain uncertainty and risk (Murugesan, Natarajan & Lakshminarayanan, 2013; Rodrigues, Potter & Naim, 2010; Simangunsong, E., Hendry, L.C & Stevenson, M., 2012). Therefore unavailability of delivery information or accurate availability of delivery information (like delivery time, delivery

location,) and incorrect delivery information (incorrect address and receivers' name) have influence on time delivery of express packages.

Poor Communication between the company and the customer; this can be also one of the issue to be seen in the delivery information**.** Peter Ofori, 2015 noted in his research findings, available contact number given by the customer is one of the factors that can be mentioned in this regard. In his research he stated that operators are becoming increasingly reliant on contact numbers provided by clients in the delivery of packages. With the use of contact numbers, operators are reducing the number of undeliverable items due to insufficient addresses provided. This is the result of poor communication between the courier company and the customer. He also explained that courier operators do call clients for their location before setting off from their premise. They often call again when they are within the community. Because the phone calls are important for directions, the operator is spending more to be able to deliver packages. Also where there is poor telephone reception, the operator finds it difficult to communicate and deliver items.

Operational Accuracy (OA); In courier business the operation starts by accepting the customer's goods either at the counter or home to home from the customers premise. Or if it is an online business, a customer first has to make a purchase online and purchase has to be verified. While accepting the shipment, it is a must to fill out the details of the parcel like trucking number, expected date of delivery, the recipient, full address of the recipient. Then sorting of dispatches with their appropriate routing has to be performed which will help for the supervisor who is in charge of distribution and delivery to do distribution to each driver and motorist as per their assigned route. Then the parcel will sent out for delivery to the customers. This all activity and process them must be recorded with the available IT system so that every event will be in a position for tracking so as to know the whereabouts of the shipment. Here comes the issue of last mile delivery, meaning after all these process, the parcel will be delivered to the customer. In all these process operational accuracy must be given proper attention, if not it will have impact on timely delivery of packages. These issues are supported by different writers and evidenced as follows. Coyle argued that improper or insufficient packaging may cause damage and result in delay of on time delivery (Coyle et al., 2008), lost shipment is a serious issue for most logistics companies (Burges, 2013). Damaged shipment is also unwelcome. Both directly influence logistics performance especially delivery on time.

While processing delivery documents and invoices, employees must be accurate enough in writing different addresses for delivery and billing. Meaning, the delivery company may confuse the two addresses and deliver the goods to the wrong place that they call it misspent to other location or other recipient. This is one of the concerns of operational accuracy which will have impact on delivery performance like delivery on time. Previous studies have focused on coordination or collaboration between employees and exercising on the job training to mitigate or manage such kind of problems. Aven,T.(2011). As it is reported by the United States postal service, the delay in delivering items is the major reason why the postal service is not achieving its delivery standard. In relation to this, mail is miss sent because of errors of manual sorting, errors in labeling out going mails, errors in placing sorted mails in trays. Courier companies name this as processing errors.

Therefore, in all this process, the issue of operational accuracy is something that the courier company should deal with. When we talk of operational accuracy, it all about miss sent to other location, improper packaging or marking details, processing errors like miss-sorting, wrong address recording, wrong delivery, and loss or missing of goods in the hands of Courier Company. These all issues are factors which will have impact for on time delivery.

Delivery Schedule (Model) & Operational Hour (DMOH); When we talk of delivery model it consists of distribution schedule (the time of delivery), distribution model (home to home delivery, delivery using courier company office, delivery using agents, any other mode of distribution as a delivery mode). Operational hours and volume of transaction is also major issues which are related to the performance of on time delivery. Literatures in this concept are discussed below which support this factor as one element to be seen in the delivery performance.

In planning the routes and schedules of commercial fleet in urban areas, particular interest should be paid to the flexibility of on-time delivery constraints affecting changes in routes and schedules, and the potential effectiveness of various policies intended to decrease redundant delivery attempts, consequently mitigate traffic congestion in urban areas. Among various potential strategies, as a way of eliminating redundant delivery attempts, an additional new service option called ‘station-to-station service’ can be introduced to the existing door-to-door delivery systems. The idea stems from customer dissatisfaction under a circumstance in which a customer cannot take its shipment at a time period convenient to the delivering company.

The station-to-station service proposed could be a new option given to customers. In this strategy, carriers use 24-hour convenient stores or gas stations as local pick-up and delivery stations in their distribution system, which may be viable if appropriate partnerships between the trucking industry and other industries can be established.

As an alternative, offices and apartment buildings can be designed or remodeled with secure delivery boxes for the occupants to allow package delivery firms to leave personal shipments with one-stop delivery. Shipments can be delivered at the workplace or the apartment whether the recipient is on site or not. Providing alternative service option to the system will enhance customer satisfaction and also enable carriers to more flexible operate their vehicles. So rather than using one mode of delivery method like using only home to home, or counter delivery or agents, as logistical capacity a courier company should have flexible mode of delivery to deal with the issue of on time delivery. Eventually it will help in alleviating traffic congestion in urban areas by eliminating redundant delivery attempts, consequently decreasing a number of truck trips. At the end the issue of on time delivery will be managed as promised given to the customer (Park and Regan, 2014). In addition to this, applying extensive operational hours like delivery after working hour and week end are also that courier companies need to see as alternative or option of delivery so that it will increase the customer satisfaction (Fransis M., 2014). Based on these all related literature the following hypothesis is developed.

H1; operational related issue (in terms of availability of delivery information, operational accuracy and delivery model & operational hour) positively Affect on Time Delivery of courier packages.

2.2.5. Human Factor Related issues (HFI)

Since the last mile delivery is being performed by peoples, this human factor and related issues plays an important role for courier business especially for delivery activity. So many issues can be seen under this human related issue. But for the purpose of this paper only availability of experienced driver /motorist and quality of leadership is being considered and literatures are discussed under this framework

Availability of Experienced Drivers and Motorist (AEDM); One of the basic human resources requirements in express package delivery is the availability of experienced delivery

person with deep knowledge of locations in the city. Drivers who have not worked in the city for many years or reside in other places outside the city seldom land jobs with courier operators. As Peter Ofori, 2015, researched in his paper called addressing system and Delivery business, operators prefer drivers who have worked for many years in the city or have stayed in the city for longer periods. Such persons are likely to be very familiar with the city terrain.

He also noted in his research that, knowing different parts of the community seems to be an essential requisite for the position as driver. This helps the operator to reduce long periods of searching for clients and helps reduce delivery times thereby cutting down cost of calling clients for long periods asking for directions and cutting down on fuel cost. For the local operators like EMS, when they do find such drivers, they hardly stay for long. They are attracted by the foreign and much bigger operators who most of the times pay better than the local operator. The situation is not so different for the bigger and operators of the multinational companies. Their drivers do also move on to other driving positions considered to offer better conditions of services. Therefore, the availability of skilled delivery driver and motorist has a direct impact for on time delivery of express package. For the desired growth potential to be realized, the local operators need to adapt at a much more improved rate. The growth of the industry has the potential to increase the number of employees within the sector whiles ensuring the efficient movement of packages within the city.

Quality of Leadership (QL); A parcel delivery can go bad due to psychological and mental state of delivery drivers and motorists which is occasioned by the actions and policies of management. The customer gets the kind of service that management deserves. In other words, how the management treats the worker is how the worker treats the customer. If the work force is well trained and well motivated, they will do good jobs to customers. Jacinta Wahu Nyaga, 2017

A good leader can also increase engagement in a way that he interacts with his team. If leaders keep their distance and manage through a command-and-control style, they will have a negative effect on performance. Whereas a leader who is open and close to his team where the team feels they are working with the leader rather than for the leader will instill significantly more engagement in his team. The better your team understand the goals, the approach, and the reasoning, the more engaged they will be. If they are unsure of the what, why, and how, then it’s very difficult to engage. Hence, this scenario will motivate the delivery persons to do their all best to deliver the parcel on time.

Top management commitment is also another factor to consider in leadership quality. Developing collaborative relationships with clients and customer is the commitment of top mgt in the courier service provider organization. (Laarhoven, Berglund, & Peters, 2000). If there will be lack of this commitment, organization can be a source of many problems since the top management is responsible for many important decisions including approval of needed resources, monitoring of performances and providing leadership in ensuring organization goals are reached, in this case satisfying the customers by keeping the promise of on time delivery. A number of studies indicate that employee training has a positive impact on corporate performance. They generally test the hypothesis that, by improving the competency of employees, training also improves their productivity, which is reflected in an improvement in the firm's performance. Betcherman, McMullen and Davidman (1998) concluded that firms that have training programs tended to perform better in terms of productivity, revenues, profitability, viability and prospects. Saks et al. (2002) also found a positive relation between training and productivity, profit, revenue and client satisfaction, a relation that is more significant when the training is accompanied by incentives for the employees.

Our lack of adequate emphasis on motivation at work has, in all views, retarded the attempt to maximize performance. In their review of leadership studies, Hogan Curphy and Hogan (1994) found that only about 30 percent of line managers are able to adequately motivate the people who report to them. They imply that in most circumstances, motivation accounts for about half of all performance results. The late Tom Gilbert, one of the clearest thinkers in performance improvement, was fond of saying that when two people had equal abilities, the enthusiastic member of the pair would achieve about 70 percent more than the unenthusiastic person. Even more troubling is that evidence that a majority of the published studies of organizational development strategies that report measured increases in motivation are fatally flawed (Newman, Edwards & Raju, 1989; Roberts & Robertson, 1992). From the delivery business point of view this issue has a lot of meaning and the relationship with on time delivery is very strong. Meaning, if employees are trained and motivated enough, the result will be positive in achieving on time delivery performance.

Information flow, the movement of information, is one of the main flows of logistics (Karrus, 1998, p. 310). If not, the absence of these all issues can be considered as poor communication

and will have negative impact on time delivery of dispatches. If there will be poor communication between the company and the delivery person, the probability of delay in delivery or delivery to wrong person will be high and these ultimately will have a negative impact for on time delivery of express dispatches. Based on these literature reviews the following hypothesis is developed.

H2; Human factor related issues (in terms of availability of experienced driver/motorist and quality of leadership) have a positive effect for on time delivery of courier packages.

2.2.6. Logistical Capability Issues (LCI)

Different scholars define logistical capability in different ways. To see some of them, Wangmin (2002) defines logistics capability as comprising static capability, such as the logistics facility, logistics process and logistics delivery; and dynamic capability including agile capability, matching capability and integration capability. Xu Liang and Wang Keyi (2010) analyzed the influence of chain store logistics capability based on static capability and dynamic capability, on the quality of logistics service, and found that logistics capability can improve it. Other authors (Liang and Shankun, 2012); Protogerou, Yannis and Lioukas, 2011)) and Sandberg and Abrahamsson, 2011) suggest that logistics capability comprises operations, or functional capability and dynamic capability. Xu Liang, Yu Mingnan and Wang Keyi , 2010 use a different term, 'static capability', to address operational capability in chain store logistics capability system. From these, we can conclude that, in one way or another this logistical capability have strong relationship with delivery performance and the distinction of logistics capability between separate companies is based on the nature of their business, customers and services. Having said this as general understanding, in this study, the following logistical capabilities dimensions have been identified and developed based on previous studies and literatures.

Availability of wide spread delivery coverage (Service Center) (DC); the geographical location of the parcel delivery firm is an important factor in the supply chain management industry, because it has an effect on its ability to serve the customers efficiently and avoiding the risk of inconveniencing customers (Slack, Brandson,-Jones, Johnston & Betts, 2012). Weltevreden (2008) also researched that collection and delivery points as a possible solution for increasing amount of failed delivery attempt. When the delivery centers are located conveniently, the additional effort to collect the shipment is relatively small for the consumers (Weltevreden,

2008). Mentzer, and Krapfel (1989), argued that two elements exist in service delivery. . These are marketing customer service and physical distribution service (PDS). In PDS, the components availability are timeliness and quality. The principle task of physical distribution is to ensure that ordered goods or products are available at the right time, at the right place, in the right quantity to satisfy customer demand. (Gurua, Ranchhod and hackney, 2001 p34,). As it is discussed by Perreault and Russ, 1976, physical distribution is all about convenience of delivery location to give order and it is a major factor for adherence to delivery time table to customer's premises. These all shows the importance of availability of wide spread of physical distribution for on time delivery.

Delivery Route and Network (DRN); Nodes in an express network refer to receiving stations, distribution centers, warehouses and other activity points in the delivering process. They are always a logistics chain's start points as well as its end points. The transport of parcels between the origin node and destination node is called line-haul. In express services, all parcels have to arrive at their destination on time. That is, all parcels of one service, including the picking-up process, line-haul transport and final delivery to consignees, should be done before the cut-off time of the corresponding service. So, it is important to arrange and design nodes in a suitable way, and to plan the routes well (Meuffels et al., 2009). So, poor design of the companies transportation (routing) network have negatively affect on time delivery.

Application of Information Technology (AIT); The main difference between courier service and regular mail services is the reliability, speed and added value services such as tracking which is part and parcel of application of IT. That is why different writer's in different context discussed vital role that information plays in supply chain logistics (Cowles, 2012; Simchi-Levi, David, Kaminsky & Simchi-Levi, 2007). When we talk of information, it may include unavailability of information (Guo, Fang &Whinston, 2006), information delays (Cucchiella & Gastaldi, 2006), breakdowns of information infrastructure (Blackhurst, Scheibe & Johnson, 2008) and other information and communication issues (Sanchez-Rodrigues, Vasco, Potter &Naim, 2010). These all may affect logistics processes and cause problems in performance of on time delivery.

In EPSE also, it has been demonstrated that greater use of information technology can massively improve the efficiency of logistics operations through increasing capacity while reducing costs.

The building blocks of a city logistics which is information platform provides the overall IT solutions and support all processes and logistical activities, improve the operation efficiency of the city logistics system like delivery business. It adopts a holistic approach to the integration of the various systems of shippers outside a city, city logistics operators in logistics centers which are courier service providers and end customers within urban areas. Through information collection, transmitting, storage, handling and output, the platform presents an innovative means to support information sharing, storing customer requirements, arranging vehicle scheduling and routing, and generating statistical reports. All in all, IT is required as enablers of a city logistics concept to shorten the operational process from receiving packages from various customers to deliver the consolidated shipments to final recipients in urban areas Dezi/Dondi/Sangiorgi (2010). As it has been clearly stated by Christopher & lee, new technologies and services such as online tracking and tracing provide accurate and timely information, reducing risks of delay because of unavailability of information (Christopher & Lee, 2004)

As Peter Ofori, 2015 noted in his research that, even though an electronic mobile signature capture device (which is part of IT) contributed for good performance of express delivery, the local operators do not use electronic mobile signature capture devices. This device helps to quickly update the office that an item has been delivered. Dispatch officers also can use to as a signature papers which he returns to the office after his daily delivery is completed. Therefore, these all IT related issues may affect logistics processes either positively or negatively and ultimately have impact on the performance of on time delivery.

Physical Equipment Resource Related Issues (PRRI);; Based on the literature and study of the operations of logistics and transport companies conducted by Jüttner, Peck & Christopher, 2003 break down of machines and related machine failure are categorized as logistical risk which will ultimately affect the delivery performance of express dispatches. According to this literature, these kinds of risk cannot be eliminated, as they may be caused by human error, task complexity, inefficient process designs or inadequate knowledge or skill.

This break down of equipment can be related with, delivery motor and car break down, malfunctioning of computers, and call center system and other computer aided delivery system may be down due to different internal and external factors. These all issues in one way or another may have a negative impact for on time delivery of express packages

Fleet mixture is also very key element in resource related issue for delivery business of Courier Company. The feature of the courier service industry is the prompt and secured transfer of packages from the originating location to its final destination per the request of a client. This makes the courier company as the preferred means of unaccompanied items by a wide variety of people. Key to this industry is the transportation infrastructure. As Peter Ofori, 2015 addressed in his research paper of addressing system for delivery business, the role of transport system and its associated features cannot be under-emphasized here. The mode of transport, the channel and drivers play a crucial role in ensuring that the express delivery service remains true to its name and keep customers satisfied at all times. He noted that there were three main transport modes. These are motorcycles, salon cars and vans/trucks. They are the main vehicles used by the operators within the study area. The study shows the preferred vehicle type that must be used by operators should be at least with a mixture of motor bicycles, small vans and medium trucks. As a conclusion, he advice for companies to invest in a wider fleet mixture and better to have more vans, trucks and cars than their local competitors. As a result of this, delivery performance especially on time delivery target will be secured. Based on these theories the student researcher hypothesized the following.

H3; Logistical capability issues (in terms of availability of wide spread delivery centers, delivery route & network and application of information technology) positively affect the performance of on time delivery of courier packages.

2.2.7. Addressing System and Road Congestion/Closure (ASRC*)*

Addressing System; Courier service provision, which is one of urban infrastructure and service, is critical to sustainable urban development. This is so because, in addition to other marketing efforts and business strategies, a key to the success of most businesses within the urban business environment has to do with how goods and products are distributed or delivered to consumers in various parts of the city. In connection with this, street addressing makes it possible to identify the location of roads or a plot or property on the ground, by using a system of maps and signs that give the numbers or names of streets and buildings which will ultimately used to serve as a major infrastructure for delivery business.(Word Bank, 2005).

For efficient movement of goods by courier operators within Addis Ababa, stakeholders including courier operators, local government agencies, transport and urban planners, consumers and others need to play their respective role. Through the provision and implementation of sound policies including street and house address system, coupled with adequate technologies employed by operators, movement in the city can be transformed. Well labeled street, structures and their arrangement along with appropriate transport network and its functioning can bring about positive impact on delivery business. When this is properly done, the outcome is likely to be a more user friendly urban geographical space, which will improve courier delivery (Word Bank, 2005).Put differently, properly managed city systems including instituting proper address system will not only ensure efficient courier services delivery but more importantly improve the city‘s internally generated revenue which is the life blood for any city‘s development. Failure to achieve this would continue to deepen the current urban problems with its inefficient, high cost and limited scope of urban courier services.

As Peter Oferi, 2015 researched in his paper called ‘street addressing system and delivery service’ it is common to find yourself in a community within the city where you have to ask for assistance to find your way. This situation is often the case to most part of the city of Addis Ababa. There are many places in the city where street name signs do not exist. There are few places where these sign post can be spotted. However, the few that do exist are crowded by other advertising signs of different sizes and shapes. This is often the case at intersections and junctions along major roads in the city. The researcher also pointed out that often residents may refer to the streets either by a prominent structure or a particular activity along the streets. Such names are not formal names that a visitor would know until he/she interacts with local people. This situation makes the delivery operator‘s job of locating client extremely difficult.The operators have a difficult task of finding clients in such environment where many parts of the city do not have visible street name and property number signs. This is one of the major challenges to the operators in the courier business and makes on time delivery performance challenging.

Road Congestion; in some big cities, the streets are so crowded that sometimes vehicles are unable to move. In rush hours, government even closes some roads to restrict the amount of moving vehicle in some sub cities. Motorcycle and bicycle, sometimes, become transport tools

that faster than vehicles. Otherwise, courier companies try to deal with the problems through increasing the frequency of delivering or changing delivering schedule. To earn good reputation, most companies are willing to delivery on time and diversify risk through this way, even it is costly ((Meuffels et al., 2009). Therefore, road congestion (closure) negatively affect on time delivery of packages. In fact, "the final leg in a business-to-consumer delivery service whereby the consignment is delivered to the recipient, either at the recipient's home or at a collection point" is more expensive and less efficient for parcel distributors because of delivery failure, congestion and non-optimum loading rates (Gevaers, Van de Voorde, Vanelslander, 2011).

The increasing demands for quicker and more reliable delivery are raising the weight of local delivery operations in the supply chain of e-commerce goods. In both local and long distance delivery services of ecommerce goods, local movements are a very important segment in the whole delivery process because local (typically urban) movements can take up a large segment of the overall delivery time. Some demands driven by e-commerce are extremely sensitive to the time in transit and time of delivery and the transit and delivery times are determined mostly by the traffic conditions in urban areas (Park and Regan, 2014). Therefore, based on the above theory not implementing addressing system and the availability of road congestion is something that is will going to affect on time delivery of express packages. From this theory the student researcher hypothesized the following.

H4; Unavailability of Street Addressing System in the city and the Road Congestion (closure) negatively affect the performance of on time delivery.

2.2.8. Customs' and Carriers / Transporters problem (CC)

Customs issues; Those dispatches especially which come from abroad and to be delivered in domestic cities needs to be first assessed by customs authority and the necessary duties should be collected. In this process there are lots of ups and downs that a customer's dispatches have to go through. I can call it this as custom barriers. As it is asserted by European Express Association (EEA), 2003, Customs operations are very important task to express delivery providers who offer guaranteed delivery times. Delays at customs will reduce delivery speeds, and this potentially will reduce revenue and ultimately increase costs for customers. Study of express industry, 2012, India noted that, customs inspection rules are problematic which result in delay

of processing items at customs. This directly will have resulted in delay of express packages delivery. The long processes and lack of single window clearances many lead to delay in shipment, thereby increasing the transaction cost and impacting the overall service quality for the express services. The cumbersome checking process and manual verification of documents make the process inefficient and results in increased operational costs and delays. Streamlining the verification process and using information technology may help in reducing the clearance time and cost.

Carriers (transporters) Issues; before the express dispatches reach to the final customer and before last mile delivery is performed, it should be transported to its destination center. So, the role of carriers like airlines, road transporters, sea transporters etc in express mail delivery are very critical. Courier service can use several modes of transportation; road transportation and air transportation are the most common modes. Karrus (1998, p. 307) defines courier service as a fast international delivery service specialized to deliver letters and small packages. Chopra & Meindl (2007, p. 388) refer to the service delivering small packages and letters as package carriers. Certain parts offered by Metso are extremely small and light but also valuable. For them, an ideal mode of transportation is air courier or air freight. Therefore, for last mile on time delivery, the performance of these carriers which is beyond the control of Courier Company is very serious matter that should be managed regularly for better result. If there will be a delay in the side of carriers due to different reason, it will have an automatic implication for on time delivery. From these theories the student researcher hypothesized the following.

H5; The cumbersome checking process and manual verification of documents at customs and delay from the side of carriers negatively affect on time delivery of courier packages.

2.2.9. Customer Related Issue (CRI)

As Park and Regan, 2014, asserted in their article of ''Issues in emerging home delivery operations'', there are several reasons for the packages to be successful delivered on time. To mention some of the Not-at-home' Problems is one of the most common one.

As they stated in their article, a major factor for the success of home delivery operations is whether there is someone at the customer's home to receive the delivery. Several social and economic factors like inflexible working patterns, long travel, increases in working women, and

the growth in single-person households are leading to homes being empty for longer periods in a day than they used to be.This result in a relatively high proportion of first time delivery failure, causing higher operating costs for carriers and lower customer satisfaction.

Peter Ofori, 2015 noted in his research, that operators also complain of some clients deliberately using wrong address for their packages. This is the issue of giving incorrect delivery information. However, this is often where the content of the package are either illegal or documents covering the items are fake. This causes the operator to spend more time in identifying the true destination and investigating the matter further. Poor directions given by client; As part of the directions given, the courier operator is often directed to ask anyone around at such landmarks for further directions and in this case the delivery man has to spend a longer time asking for assistance from anyone around. Such assistance may lead them in circles because of the subjective nature of how each person perceives his community. Because of this operators lose time and leads to some items never reaching their destination. He also noted in his research that delivery operators also complain of some clients deliberately using wrong address for their packages. However, this is often where the content of the package are either illegal or documents covering the items are fake. This causes the courier operator to spend more time in identifying the true destination and investigating the matter further. Therefore, delays due to customer related issues can result in low performance of on time delivery.

H6; Customer Related Issues negatively affect on time delivery of courier packages.

2.3.Empirical Reviews

As it is cited by Amer Jzairy, 2018 on his thesis paper titled ‘exploring shippers, logistics service providers and their relationships in facilitating green logistics, Factors influencing logistics performance were researched. After studying around 300 manufacturers in the USA, Stank et al. (1996) found a positive effect of effective information exchange and responsiveness on Logistics service providers’ performance. The issue of information exchange in my research is related with the variables of delivery information and to some extent with application of information technology. Responsiveness in my research proposal can be related with different factors raised in the area of human related and operational related factors. Through longitudinally studying a US shipper-LSP relationship over five years, House and Stank (2001) found that extensive

communication facilitates performance improvements. Even though House and Stank (2001) and Halldórsson and Skjøtt-Larsen (2004) provide insight on some of these factors, there is a need for more in-depth studies to explore the different factors in further detail. Considering aspects of relationship marketing, Knemeyer and Murphy (2004) surveyed 388 US logistics experts and found evidence that communication and trust are crucial to enhance operational logistics performance. Based on a survey of LSPs in Hong Kong, Panayides (2007) found a positive effect of organizational learning and relationship orientation on logistics performance.

Based on the article written by Jacek Karcz Beata Ślusarczyk on their paper titled "IMPROVEMENTS IN THE QUALITY OF COURIER DELIVERY ", they empirically asserted that, few reasons of undelivered shipments which ultimately affect on time delivery of packages are; absence of recipient, refusal to accept, change in delivery address and incorrect address .these issues in my research will be attested by variables of delay due to customer problem and delivery information.

An article is also written by Jacinta WahuNyaga titled as ''Factors affecting the Performance of Courier Service Industry: a survey of courier companies in Kenya, 2017 '' based on this article, the researcher concluded that the high level of motivation observed in courier firms may explain the observed good performance of courier firms. The findings of this article also show that the positive effects of ICT on courier industry outweigh the negative effects. Hence, ICT adoption may explain the good performance of courier firm.

Michael Wang conducted a research on ''Logistics Capability, Supply Chain Uncertainty and Risk, and Logistics Performance: An Empirical Analysis of the Australian Courier Industry'' in September, 2016. Based on his Empirical analysis, he comes up with the following findings with regard to logistical capability (which I put as one of the internal factor for on time delivery of express packages). In my research proposal availability of wide spread of delivery center coverage, design of delivery rout & network, physical equipment related issues and application of Information technology are going to be considered as a factors within the logistical capability and will their relationship with on time delivery will be validated. But, Based on Michael Wang empirical research, he identified the following key factors of logistics capability. These are customer-oriented capability, process-oriented capability, flexibility-oriented capability, and continuous improvement-oriented capability. These factors in one way or another are somehow

related with the variables that being identified in this research. His findings also identified delays due to customers' mistakes, road congestion or closure, high customer expectation, unstable fuel prices, and delays in pickup or delivery influence logistics performance which ultimately impact on time delivery.

Francis M. Mensah, who did his master's thesis on the title called 'how parcel delivery firm can minimize high returns (send again) in the supply chain industry, 2014'' reveal some of the factor which can impact on time delivery of performances of courier company. In his conclusion of the study, He theorized that the absence of customers from their residence, service providers not having access codes to the apartment building, luck of working telephone of the customer has attributed considerably to high re sends again (re delivery attempt again). The researcher also concluded that lack of adequate information dissemination about the customers packages which includes timely texts message from courier firm about pending delivery has also seriously aided to package returns without delivery. These empirical findings of the researcher is somehow related with some of my proposed variables to be hypothesized. In my research I am going to look the relationship between on time delivery and customer related issue in which this researcher concludes as absence of customer from their residence which is result in delay of on time delivery due to customer problem. The issue of lack of adequate information dissemination about the customers packages which includes timely texts message from courier firm is also related to the factor raised in this proposal as application of Information technology which will be tasted if it will have relationship with on time delivery of packages

2.4.Conceptual Framework of the Study

Based on the overall review of related literatures and the theoretical framework, the following conceptual model in which this specific study will be governed is being developed. In the frame work, the variables to be seen in this study is basically from two major dimensions which are different factors internal to the company and external factors . The dimension of internal factors to the company again is categorized in to three major areas which are operational issues, logistical issues and human related issues. These all issues are assumed to lead the researcher to determine the variable which affect on time delivery either negatively or positively. Based on this information, the conceptual framework of the hypothesis is presented below.

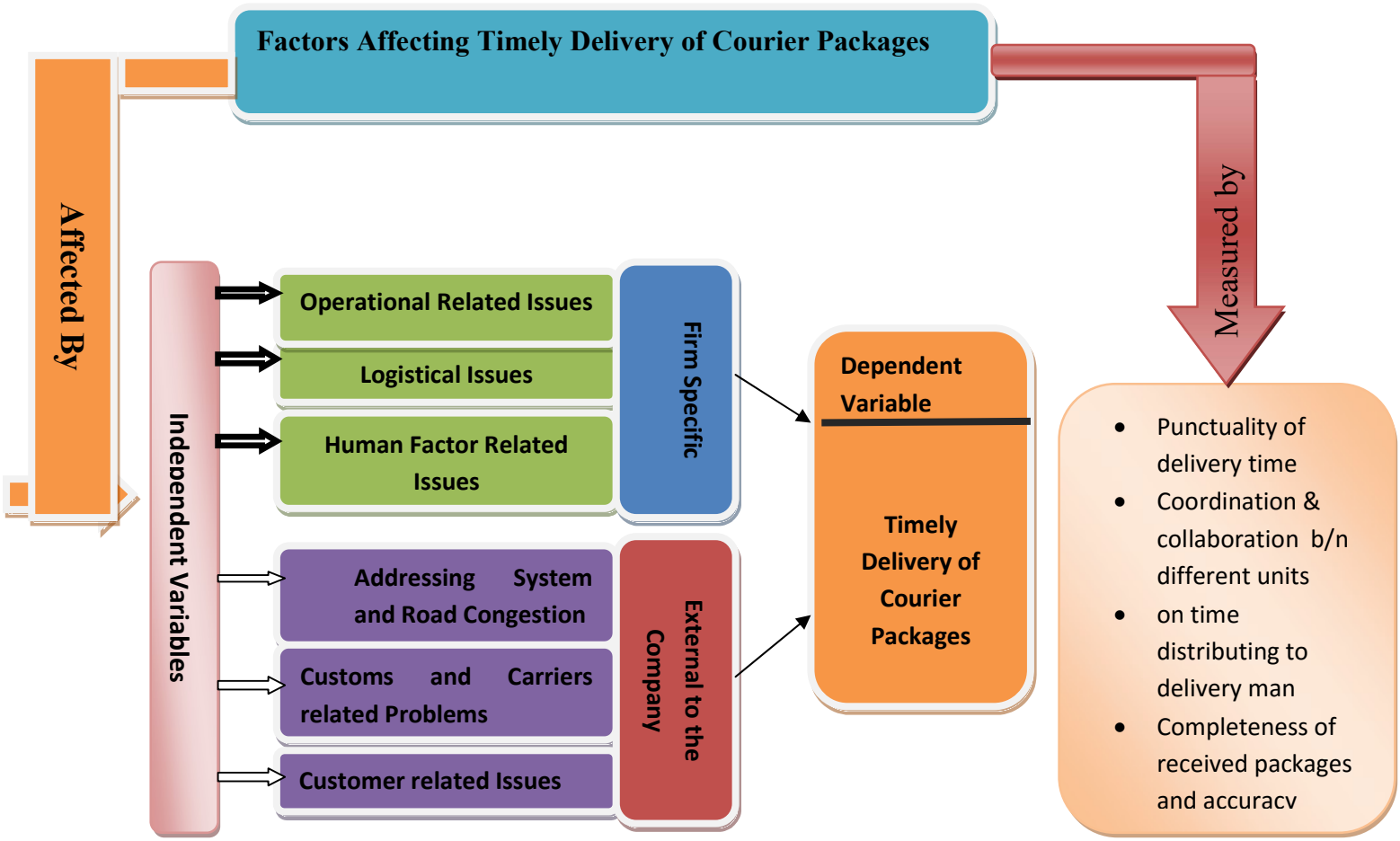

Figure 2.1: Conceptual l model of hypothesized Determinants or Factors for On Time Delivery of Courier Packages.

Source: Own source developed from literature review the researcher Survey.

Summery Research Hypotheses

- H1; Operational related issue (in terms of on time delivery, operational accuracy and delivery model & operational hour) positively Affect on Time Delivery of courier packages.
- H2; Human related issues (in terms of availability of experienced driver/motorist and quality of leadership) have a positive effect for on time delivery of courier packages.
- H3; Logistical capability issues (in terms of availability of wide spread delivery centers, delivery route & network and application of information technology) positively affect the performance of on time delivery of courier packages.
- H4; Unavailability of Street Addressing System in the city and the Road Congestion (closure) negatively affect the performance of on time delivery.
- H5; The cumbersome checking process and manual verification of documents at customs and delay from the side of carriers negatively affect on time delivery of courier packages.
- H6; Customer Related Issues negatively affect on time delivery of courier packages..

CHAPTER THREE
RESEARCH METHODOLOGY

3.1.Introduction

This chapter describes how the study was conducted. It outlines the approach and strategy that was used in undertaking the study. Therefore, this chapter encompasses research design, research approach, sampling techniques, and population, sample size, types of data, instruments of data collection, data analysis and interpretation methods.

3.2.Description of Study Area

The study was conducted in Addis Ababa, Capital City of Ethiopia where the head quarter for EPSE is located. It is a city where the expansion of commerce and related business correspondence and the increased popularity of e-commerce are becoming recent phenomena and the demand of express delivery services has grown rapidly. Addis Ababa, in which the Head quarter for Express mail business, is characterized by the increased demand for express delivery, accounts about 60 percent of the overall transaction of courier business of EMS and on time delivery becomes more sensitive and customers give more value for on time delivery. Therefore, Addis Ababa city is being chosen as the study area because the above factors and has enough dynamics to achieve the goals of this research.

3.3.Research Approach

A research can also be either of qualitative or quantitative in nature. Quantitative research approach are those which generate numerical data and use statistics to improve numerical data (Leedy and Ormord, 2005:147) while qualitative research approach are those that involve human events such as human interactions, social organizations, and the like (Newman and Benz, 1998: 12). Quantitative research approach is helpful to assess the magnitude of something while qualitative approach is suitable to describe, interpret, verify and evaluate a given phenomenon (Newman and Benz, 1998: 12). This research uses a quantitative approach. This is due to the nature of the research and the research question. Besides, the objective of the research is to quantify the magnitude of the impact of each independent variable on dependent variable. Using quantitative design, the research tried to quantify the correlation type and strength between the

independent variables (operational related issue, human factor related issue, logistical capability, addressing system & road congestion, customs & carriers and customer related issue) and its dependent variable (on time delivery).

3.4.Research Design

Polity and Beck (2003) describe a research design as the overall plan for obtaining answers to the questions being studied and for handling some of the difficulties encountered during the research process. In this study, the researcher examines how the dependent variable is affected by the independent variables and involves cause and effect relationships between the variables. The design focuses on two or more categories with the independent variables as compared to the dependent variable (Vogt, 1999).

Explanatory research design is used to identify factors that affect OTD performance of EMS. Close ended questionnaires together with semi-structured interview was employed to get the required information. This research is primarily an explanatory research because it aimed at examining the relationship between on time delivery as a dependent variable and operational related issue, human factor related issue, logistical capability, addressing system & road congestion, customs & carriers and customer related issue as independent variables. The finding of this research explains the relation of each independent variable with the dependent variable that makes the research type causal. However, it has also some features of descriptive research in the sense that it views how employees express their opinion regarding the current performance of OTD using the dimensions provided. Because data was collected at one point of time during a period of few months to assess the relationship between independent variables and dependent a Cross-sectional field survey method was applied.

3.5.Population and Sample

3.5.1. Population of the Study

According to Kombo and Tromp (2006) which is sited cited by Githiri, Emmanuel Muniu on his thesis work of factors affecting customer service delivery, a population can be a set of people, elements, services or groups of things or households from which information is obtained which allows for the generalization of the results. Considering this theory as a base, the population of this study was comprised of 193 employees of EMS, Marketing and Business development,

Postal quality and security, information technology, home to home delivery unit, Banks mail delivery project unit at their Head office in Addis Ababa and members of top management of the organization.

3.5.2. Sampling Design

3.5.2.1.Sampling Frame

A sampling frame has all the sampling components which form the population element from which a sample is obtained (Kombo and Tromp, 2006). The sampling frame for this study was top management of the organization, Team leaders and supervisors in the courier business unit, delivery employees in the banks mail management project unit and marketing& business development and delivery employees at the counter, home to home delivery employees (Motorists and drivers), experts in Courier business unit, postal quality and security and marketing and business development at their Head office in Addis Ababa. These are employees of Ethiopian Postal Service enterprise that are involved in customer service and delivery of the packages in various hierarchical levels.

3.5.2.2.Sampling technique- (Census)

Sampling techniques provide a range of methods that facilitate to reduce the amount of data need to collect by considering only data from a sub-group rather than all possible cases or elements. But if it is possible, practical, and not too expensive to collect data from all the potential units' elements and if the unit of population is manageable size, we can use censes as the required respondents or elements of subjects for the study. As it is supported by Kothari, 2004, census method of sampling technique is a non probability sampling method and basically it is purposive sampling where the student researcher purposively selects those groups in the scope of the study who are directly involved in the delivery job and give supportive role. Here in this study, the number of target population stated below are manageable and due to this the total population was taken as study elements. Based on this, the total numbers of population respondents and their related departments are listed in Table 1 below:

Table: 3.1 Target Population

Category	Frequency	%	Remark
Top management of the Business unit	20	10.4	• 20 top management of the organization including Heads of the courier business unit, marketing & business development and postal quality and security
Middle level management of the business unit	12	6.2	• Team leaders and supervisors in the courier business unit, and marketing& business development, information technology, home to home delivery unit and banks project for delivery.
Non-management Empoyees	161	83.4	• Delivery employees at the counter • Home to home and banks project delivery employees (Motorists and drivers) • Experts in Courier business unit, postal quality and security and marketing and business development, , information technology, home to home delivery unit and banks project for delivery.
Total	193	100	

Source; Human Resource department of the organization.

3.6.Data source and Type

The necessary data for this study was collected from both primary and secondary sources. The reason for this is because of its advantage as it is stated by O'Leary, (2009). The primary data was collected through questionnaires which contained closed & open ended questions related to the subject matter. The secondary data mainly collected from relevant documents of EMS, in addition to this from enterprise reports, newspapers, periodic publications & magazines that was related to the study. When necessary, materials were downloaded from websites.

3.7.Data Collection Method and Procedures

Data collection refers to the procedure through which a student researcher collects information to be used for a study. A survey was a major method of collecting data in which people are asked to

answer a number of questions (usually in the form of a questionnaire). This information can either be primary or secondary. With regard to factors affecting on time delivery of packages in EMS the study used a survey questionnaire administered to each member of the sample. Both close ended and open ended questions were used in the questionnaire. So as to obtain more varied response, the close ended questions were used to test different attributes.

3.8.Measurement Instruments

The questionnaire was comprised of five parts. The first part contains general information questions seeking to find out about the background information of the respondent. The subsequent section seeks to identify different internal factors that affects on time delivery of dispatches. The third part will going to address the external factors that will affect on time delivery of packages, the forth part was about questions to measure the dependent variable of on time delivery and finally the last part of the questionnaire was seeks to find out improvement areas on time delivery of dispatches. Five point Likert scale was used to rate the independent and dependent variables, which ranges from Strongly-disagree (1) to Strongly-agree (5) level of agreement. These five point Likert scale are adapted from different literatures of scholars. The independent variables questions were developed by the student researcher by taking in to account the previous literatures and researches.

3.9.Data Presentation and Analysis Technique

The analysis part starts from simple description statistics and proceed to inferential statistical techniques like; correlation test and multiple regressions and IBM SPSS statistics (statistical Package for social scientists) software version 20 is used to process the data. Once the data was collected, verification was conducted and complete questionnaires were identified. Then the data is coded in to SPSS (statistical package for social science) according to the variables selected and the questions asked. In general, the data were presented and analyzed in a way that can produce important information which answers the basic research questions and ensures the objective of the study to be achieved.

3.9.1. Descriptive Statistical Analysis

The final report of the relevant demographic variables was produced through central tendency measurements (frequency and frequency distribution, valid & cumulative percentage and comparison of mean). The data then presented in form of figures, tables, graphs and charts. Pie and bar charts and graphs were also the methods used to present the result with the help of SPSS.

3.9.2. Inferential Statistical Analysis

In inferential statistical analysis, correlation and multiple linear regression methods were utilized using statistical package for social sciences (SPSS) software. The use of these statistical tools and methods of presentation are described below.

a) Model Specification

Multiple linear regression models are reasonably the most important and extensively used multivariate statistical techniques in most relationship studies that involve ratio/interval variables. This model uses when there will be two or more independent variables to predict the value of one dependent variable. The model is chosen to be used in this study owing to its suitability to analyze the causal relationship between dependent and independent variables. The model can be specified as:

Model (1) $y = \beta 0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5 + \beta_6 x_6 + \varepsilon$

The multiple linear regression models have two orders. However, because of its simplicity and suitability with the empirical data that will be collected, the study adopted to use the second order model.

b) Correlation (r); is used to describe the strength and direction of relationship between two variables. Since all variables are measured as an interval level, Pearson product moment correlation was used. Correlation “r” output always lies between -1.0 and +1.0 and if “r” is positive, there exists a positive relationship between the variables. If it's negative, the relationship between the variables is negative. While computing a correlation, the significance level shall be set at 99 % and 95% with alpha value of 0.01 and 0.05 or a chance of occurrence of odd correlation is 5 out of 100 observations.

c) Multiple Regression Analysis; is a major statistical tool for predicting the unknown value of a variable from the known value of variables. And it is about finding a relationship between variables and forming a model. The Model for this study was developed using six independent factors or predictors which have influences on timely delivery of courier packages.

$$Y = \beta 0 + \beta 1X1 + \beta 2X2 + \beta 3X3 + \beta 4X4 + \beta 5X5 + \beta 6X6 + \varepsilon$$

Where Y is the dependent variable, β0 is the constant term/intercept, x_1, x_2,…x_6 are the independent variables, β_1, β_2…. β_6 are the slope coefficient of continuous variable and Random error/ residual term

Table: 3. 2 Model Specifications of Variables

S.№	Predictor Variable (X)	Beta Coefficient (β)	Predictor X-
1	Operational related issues	β1	X1
2	Human factor related issues	β2	X2
3	Logistical capability related issues	β3	X3
4	Addressing system & road congestion	β4	X4
5	Customs and carriers	β5	X5
6	Customer related issues	β6	X6
7	On time delivery	Constant	Y

3.10. Validity and Reliability

3.10.1. Validity

The scientific soundness of a research finding is determined by the validity of the instruments used. All possible efforts were exerted to make the data collection instruments easily understandable by the respondents so that the intended information can be collected thereby increasing trustworthiness of the ultimate findings. After the questionnaire was constructed, pre-testing (piloting) was done with 20 respondents who were within the target populations. Constructive comments were collected from the individuals and the questionnaire was adjusted accordingly.

3.10.2. Reliability

Reliability is an indicator of a measure's internal consistency. Consistency is the key to understanding reliability (Zikmund, 2013). A measure is reliable when different attempts at measuring something converge on the same result.

Among the models of reliability, Alpha (Cronbach) was used in this study to estimate the consistency /uniformity of the measurement of collected data.

Generally speaking, scales with a coefficient (α) between 0.80 and 0.95 are considered to have very good reliability. Scales with a coefficient (α) between 0.70 and 0.80 are considered to have good reliability, and when the coefficient (α) is below 0.7, the scale has poor reliability. A coefficient alpha of 0.7 percent and above implies that the data is reliable and can be used for analysis. So, based on this theory, Alpha (Cronbach) was calculated for the dependent variable of OTD and the result was 0.784 for the pilot test and 0.793 was for the final survey. This result was within the acceptable range of reliability coefficient. The scale consistencies of the independent variables are described in table 3.3.

Table: 3.3 Cronbach's Alpha coefficient Summery of Independent variables

No	Independent Variable	NO of Items	Alpha Value	
1	ORI	14	0..833	Very good
2	HFRI	8	0.705	good
3	LCI	14	0.782	good
4	ASRC	3	0.701	good
5	CC	5	0.780	good
6	CRI	5	0.729	good
	On time delivery	5	0.793	good
	Over al Cronba ch's Alpha	54	0.880	Very good

Source: Respondents Survey Test Result, 2019.

3.11. Ethical Considerations

The source of data for the study was questionnaire from employees of Ethiopian postal service enterprise. The respondents were assured that the information provided by them is confidential and used exclusively for academic purpose. In addition, respondents were informed not to

include any identity detail and personal reference in the questionnaire. This minimized the baseness of the response collected from the respondents. In addition, the different research studies, articles and text books used as a reference in the study are exhaustively cited.

Generally, the whole process of the research was controlled to be within acceptable professional ethics.

CHAPTER FOUR
RESULTS AND FINDINGS

4.1.Introduction

This chapter discusses the interpretation and presentation of the findings obtained from the responses of case company. The chapter intends to address the research questions using the data collected from the sample respondents. The chapter is organized into three sections. The first section presents the demographic data of the respondents. In the second section, analysis of central tendency measurements (frequency distribution, mean) was carried out to report the central value of data and standardeviation was used to measure dispersion or variation. In the third section, correlation and multiple linear regression analysis were also used to present the relationship and effect of the independent variables and the dependent variable. Finally, the results are discussed in the last section of this chapter.

4.2.Response Rate

The target population size was made up of 193 respondents and from which a total of 169 of them filled and returned the given questionnaires. This response rate represented 87.6% of the total target population size. This is shown in the figure 4.1 below. This response rate was representative and satisfactory enough to draw conclusions for the study. Mugenda and Mugenda (1999), explain that a 50% response rate is adequate for reporting and analyzing the results; a response rate of 60% is said to be good while a response rate of 70% and above is said to be excellent which is a case for this research.

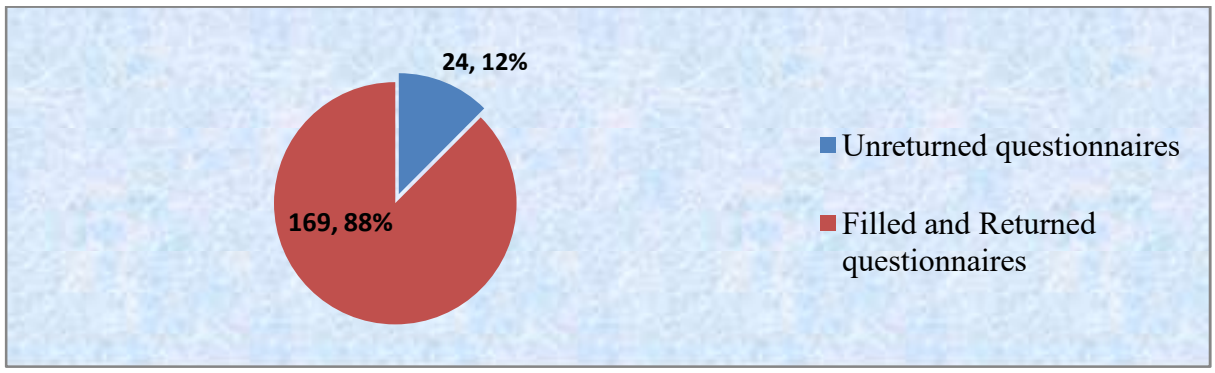

Figure 4.1: Response Rate

Source: SPSS output of the survey, 2019

4.3.Demographic characteristics of respondents

The following table summarizes the demographic data of respondents:

Table 4.1: Demographic Data of Respondents

variable	Values	Frequency	Valid Percent
Gender	Male	130	77.4
	Female	38	22.6
Age	20-30 years	80	48.2
	31-35	35	21.1
	36-40	22	13.3
	above 41 years	29	17.5
Educational level	Certificate	35	20.8
	Diploma	36	21.4
	Degree	89	53
	Masters & above	8	4.8
year of service	Less than 2 years	23	13.9
	3-5 years	44	26.5
	5-7 years	32	19.3
	Above 7 years	67	40.4
Department	EMS	58	34.7
	Quality & Security	5	3
	Marketing & Business Development	12	7.2
	Home to Home and Banks project delivery Unit	69	41.3
	Management Member	16	9.6
	Information Technology	7	4.2
Position	Counter Delivery Clerk	24	14.7
	Driver /Motorist	61	37.4
	Supervisor	8	4.9
	Team leader	14	8.6
	Expert	39	23.9
	Head of Department	17	10.4

Source: SPSS output of the survey, 2019

As shown in table 4.3 above that majority of the respondents are male which accounts for 77.4% while the rest 22.6% are female.

The majority of respondents are between 20 and 30 years of age, which accounts to 48.2% of the total respondents. 21.1% and 17.5% of the respondents fall between 31-35 and 36-40 age group category and the remaining 17.5% fall above40 years of age. This result indicates that majority of age group were between 20 to 30 which indicate young and energetic respondents who actually perform the delivery business were targeted for the study.

The academic qualification of the respondents' shows that majority of the employees 53% hold bachelor degree, 21.4% hold their Diploma, 20.8% hold certificate and the rest 4.8% hold master's degree. The academic qualification of respondents is expected to enhance the quality of the data as they are likely to understand the questioner and forward their view fairly accurately.

Experience of the respondents show 40.4 % have served in the organization for over 7 years, 26.5 % of the respondents served the company for 3 to 4 years, 19.3 % indicated to have served in the organization for 5-7 years, whereas 13.9 % of the respondents indicated to have served for less than two years. This implies that majority of the respondents had worked for a considerable period of time and therefore they were in a position to give credible information.

Positions of the respondents show, half of the respondents (14.7% and 37.4%) are counter delivery clerk and driver /motorist, the remaining of the respondents are (4.9%), team leaders (8.6%), experts (23.9%) and heads of departments. So, since these are the peoples who actually involved in the delivery business and are expected to give the reality in the current status of timely delivery, we can conclude that the responses were worthwhile which make the result very credible.

Department of the respondents' show 4.6, 76% of the respondents (EMS 35% and Home to home 41%) were from delivery business unit, 10% of the respondents were management member, 12.7% of the respondents were in marketing department, 7.4% were from information technology and 5.3% of the respondents were from postal quality. These findings depict that although all concerned departments were participated in this research, majority of the respondents were in EMS & home to home department, and this shows the research targeted the user department where first hand and credible information about OTD current status is obtained.

4.4.Descriptive Analysis

This section tries to assess and describe the result of each of the independent variables (operational related issues, human factor related issues, logistical capability issues, addressing system & road congestion, customs & carriers and customer related issues) to the dependent variable of on time delivery. To do so, the section will look at the independent variables one by one and finally all in one. Picking each independent variable at once, it first assessed the status of the company in relation with independent variables, and then it has tried to describe the variable with regard to timely delivery.

Criterion-referenced scale definition is used to discuss the findings of the descriptive statistics of each statement of independent variable mean score. Unlike norm-referenced scales, criterion-referenced scale measure response scores against a fixed set of criteria.

Therefore, based on the likret scale "3" means "neither agree nor disagree, while value "4" means "agree", etc. Here in criterion- referenced scale, if value of 3 is recorded as any of the subsequent measurement, it means that level is neither high nor low, or in other words it is in "average or medium level". If a value of (4) is obtained, it means s "high" level. similarly value one(1) and five(5) mean "very low" level and "very high" level respectively while value two (2) mean "low" level . Criterion – referenced scale definition is presented in the following table

Table 4.2: Criterion – referenced scale definitions

Mean rating	Respondents level of	Description of respond
1.00 - 1.49	Strongly disagree = SD	Very low= VL
1.50 - 2.49	Disagree = D	Low = L
2.50 - 3.49	Neutral = N	Medium =M
3.50 - 4.49	Agree = A	High =H
4.50 - 5.00	Strongly agree = SA	Very high =VH

Source; (MacEachron, 1982)

4.4.1. Operational Related Issues

For the purpose of this research, operational related issues refer availability of delivery information for the dispatches, operational accuracy (in terms miss sort, miss sent address recording and packing related issues) and delivery model & operational hours which are being seen as major factors to examine service quality of on time delivery. To describe the level of the respondent's satisfaction, fourteen statements were presented for respondents to rate them on a Likert scale. The following table presents the responses in each statement and the average reaction of respondents in all of the statements.

Table 4.3: Response Related with Operational issues

		Frequency	Percent	Valid	Cumulative Percent
Valid	Disagree	0	0	0	0
	neutral	26	15.4	15.4	15.4
	Agree	132	78.1	78.1	93.5
	Strongly	11	6.5	6.5	100.0
	Total	169	100.0	100.0	

Source: SPSS output of the survey, 2019

The above table shows the average responses of the respondents for fourteen statements in relation with operational matters and based on the average respondent's result, shows, 15.4%, are neutral (moderate) about the current status of delivery information, operational accuracy and delivery models & operational hours on the other hand, 78.1% of the respondents are agreed with these stated operational issues. Lastly, about 6.5 % seem to be strongly agreed with the operational related issue.

4.4.2. Human resource Related Issues

The same way as it is done to operational related issues, eight statements that can measure human factor related issues in two sub groups were forwarded to the respondents. The first sub was about availability of experienced drivers and motorist and the second sub-group was about quality of leadership. In line with this, the results of the respondents' response are compiled and presented in the following table.

Table 4.4: Response related with Human Factor issues

		Frequency	Percent	Valid	Cumulative*
Valid	Strongly	0	0	0	0
	Disagree	0	0	0	0
	Neutral	44	26	26	26
	Agree	120	71	71	97
	Strongly agree	5	3.0	3.0	100.0
	Total	169	100.0	100.0	

* Source: SPSS output of the survey, 2019

As the table above shows, it is the average responses of the respondents for eight different statements in relation with human factor related issues. Based on the result, the average respondent's response shows, 74 % of them agree and strongly agree with EMS's current practice of human related issues that is being raised to respond. It is also seen in the table that, nearly quarter of the respondents, 26%, are neutral (moderate) about the current status of quality of leadership and availability of experienced drivers/motorist.

4.4.3. Logistical capability Related Issues

A total of fourteen questions were presented to the respondents to assess their feeling and level of agreement towards the logistical capability in general, for analysis purpose and to understand the issue clearly and deeply, this logistical capability were categorized and seen in terms of availability of wide spread service center, application of information technology and physical equipment related issues. Three questions were presented in relation with availability of delivery centers, four questions were presented to the respondents in relation with application of technology and five questions were given to the respondents in relation with physical resources related issues. The following table presents the summarized result of the questions.

Table4.5: Responses Related to Logistical capability Issues

		Frequen	Percent	Valid	Cumulative
Valid	Disagr	0	0	0	0
	Neutral	40	23.7	23.7	23.7
	Agree	128	75.7	75.7	99.4
	Strongl	1	.6	.6	100.0
	Total	169	100.0	100.0	

* Source: SPSS output of the survey, 2019

As we can see from table 4.5, about 23.7 % of the average respondent's shows that they are not agreed or disagreed (indifferent) with the current EMS's delivery centers coverage, application of information technology and usage and application of physical resource issues. It is also seen in the table that, more two third of the respondents, 76.4 %, of the respondents are agree and strongly agree with the statements raised in this logistical capability issues.

4.4.4. Addressing system & road congestion Related Issues

Addressing system and road congestion is one of the factors which is very critical in performance of timely delivery of courier packages and to assess the current situation in this theme, three statements were presented for respondents to rate them on a Likert scale. Table 4.6 below outlines the responses in each statement and the average reaction of respondents in all of the statements.

Table4.6: Responses Related to Addressing system & road congestion

		Frequen	Percent	Valid	Cumulative
Valid	Strongly	0	0	0	0
	Disagree	0	0	0	0
	Neutral	15	8.9	8.9	8.9
	Agree	139	82.2	82.2	91.1
	Strongly agree	15	8.9	8.9	100.0
	Total	169	100.0	100.0	

* Source: SPSS output of the survey, 2019

In general, it can be referred that more than 91.1 % (agree 82% and strongly agree 8.9%) of the respondents showed addressing system is important for delivery of courier packages and only 5.9% of the respondents gave negative response with respect to the statements, which is a clear indication for the company to introduce this addressing system. This has an implication that, for secured and timely delivery courier providers needs to seek out innovative and time-effective ways of getting packages to their owners. So, for evolving new ways of ensuring secured and time responsive delivery, the company should work closely with the respective government body to implement addressing system.

4.4.5. Customs &carriers Related Issues

Five questions were presented to the respondents to assess the current situation of customs and carriers on timely delivery of courier packages. The following table presents the summarized result of the questions related with customs and carriers.

Table4.7: Responses Related to Customs & carriers

		Frequency	Percent	Valid Percent	Cumulative
Valid	Strongly disagree	0	0	0	0
	Disagree	1	.6	06	.6
	neutral	21	12.4	12.4	13
	Agree	105	62.1	62.1	75.1
	Strongly agree	42	24.9	24.9	100.0
	Total	169	100.0	100.0	

* Source: SPSS output of the survey, 2019

On average, 87% (62.1% and 24.9%) of the respondents agree and strongly agree with the questions that focused on negative influence of custom clearance procedure, custom clearance fulfillment, selection of mode of transport and air freight performance for timely delivery of packages. About 12.4% of the respondents are neutral on the matter. This implies that there is high gap in the relationship between EMS with Customs and transport companies including air lines. Therefore, EPSE needs to work hard in managing the relationship with these key stakeholders so as to improve the timely delivery of courier packages.

4.4.6. Customer Related Issues

Five statements were presented to respondents to look at the employees' level of agreement on the different action of customers which may influence timely delivery of courier packages. The issues were related with appropriateness of delivery information address given by customer, customers reaction when a call is given to them by courier company, if customers sometimes uses an old address where the recipient is no longer at that address, if customers are asked to pay cash on delivery without having clue of such payments and lastly customers reaction if they are asked to pay customs duties which is more than what they paid to buy. The following table summarizes the responses of the questions.

Table 4.8: Responses Related to Customer

		Frequency	Percent	Valid Percent	SDA
Valid	Strongly disagree	0	0	0	0
	Disagree	0	0	0	0
	neutral	25	14.8	14.8	14.8
	Agree	130	76.9	76.9	91.7
	Strongly agree	14	8.3	8.3	100.0
	Total	169	100.0	100.0	

* Source: SPSS output of the survey, 2019

As it can be seen on the above table, 76.9 % and 8.3 % (a total of 85.2%) have agreed and strongly agreed respectively that customers may give vague delivery information may not answer unfamiliar call, uses old dress which is not updated and refuses to pay custom duties which more than purchasing cost of the item. these all have a negative influence on the performance of OTD. On average of 14.8% remained neutral on the matter. This has an implication that customers are contributing for delay of timely delivery in one way or another. Therefore, EMS needs to develop a strategy to manage this customer related issues.

4.4.7. Summary of survey result for dependent variable.

Five statements were presented to respondents to look at different issues that can measure the dependent variable of OTD. Basically OTD is measured by the time that must be met by Courier Company as promised to customer. But there are also other parameters to be considered when we think of OTD. Like, it can be seen from sorting and distributing timely to delivery personnel, from coordination aspect between different operational units while hand over packages to be delivered, it can be seen from collaboration aspect of different stakeholders, since it has something to do with timely delivery and lastly delivering full list of received item without damage and lost is another very key parameter for OTD. Considering all these different parameters, the following table summarizes the views of respondents with regard to OTD.

Table 4.9: Responses related to on time delivery

		Frequenc	Percent	Valid %	Cumulative %
Valid	Strongly disagree	0	0	0	0
	Disagree	0	0	0	0
	neutral	23	13.6	13.6	13.6
	Agree	138	81.7	81.7	95.3
	Strongly agree	8	4.7	4.7	100.0
	Total	169	100.0	100.0	

Source: SPSS output of the survey, 2019

The table 4.9 shows that majority of the respondents, 81.7 % and 4.7 which is about 146 respondents from 169 have rated the current status of OTD as agree level of the five point Likers scale**.**

4.4.8. Summary of Descriptive Results and Mean Score for Variables

As it is known, the mean value or score of a certain set of data is equal to the sum of all the values in the data set divided by the total number of values. In this context, the mean of the response and score of all statements for each dependent variables and dependent variables is being calculated and the meaning of the score is interpreted accordingly. In this research operational related issues, human factor relate issues, logistical capability issues, addressing system and road congestion, customs and carriers and customer related issues were the independent variables and on time delivery as dependent variables. Statements under this variables are scaled 1 to 5 with a meaning of 1= strongly disagree, 2=disagree, 3=neutral, 4=agree and 5=strongly agree. As it was explained before, to match the result of mean score of each variable with the respondent level agreement in likert scale and to summarize the narrative out comes; the researcher used criterion-referenced definitions for rating scales to describe the collected data.

Table 4.10; Frequency of respondents for each level of agreement

		Disagree	Neutral	Agree	Strongly agree	Mean	Std. Deviation	N
ORI	N		26	132	11	3.91	0.46	169
	%		15.4	78.1	6.5			
CC	N	1	21	105	42	4.11	0.62	169
	%	.6	12.4	62.1	24.9		`	
CRI	N		25	130	14	3.93	0.48	169
	%		14.8	76.9	8.3			
OTD	N		23	138	8	3.91	0.42	169
	%		13.6	81.7	4.7			
HFRI	N		44	120	5	3.77	0.49	169
	%		26.0	71.0	3.0			
LCI	N		40	128	1	3.77	0.44	169
	%		23.7	75.7	.6			
ASRC	N		15	139	15	4.00	0.42	169
	%		8.9	82.2	8.9			

Source: SPSS output of the survey, 2019

As the percentage of each level of agreement shows in the above table, almost all the respondents are agreed with the statements given to them to rate it in the likert scale.

Table 4.11; Mean score result summary according to Criterion – referenced scale definitions.

Variables	ORI	HFRI	LCI	ASRC	CC	CRI	OTD
Mean Score	3.87	3.65	3.46	3.97	4.08	3.49	3.87
Degree/level of agreement	A	A	A	A	A	N	A
Description	**H**	**H**	**M**	**H**	**H**	**M**	**H**

*Source: SPSS output of the survey, 2019

As it shown in the above table, the average mean score of the respondents for ORI, HFRI, LCI, ASRC, CC and CRI are 3.87, 3.65, 3.46, 3.97, 4.08, and 3.49 respectively.

Based on criterion- referred definitions of Table 4.2, mentioned above, the mean of ORI, HFRI, ASRC, and CC shown as high, this implies that, the response for those individual question to these independent variables were scored/respond to agree. Respondents on LCI and CRI of all mean score shown as medium, though the response for individual questions ranges from strongly disagree to strongly agree or very low to very high. This implies the contribution of independent factors like ORI, HFRI, LCI, ASRC, CC and CRI for the performance of timely delivery is high. On the other hand LCI and CRI contribution for the performance of OTD is moderate.

The grand or cumulative mean score of the dependent variable OTD is 3.87. This implies that in general it has got the high level of agreement which indicates that the current position of EMS on time delivery performance level is high.

4.5.Correlation Analysis

Research often uses inferential analysis (correlation and regression) to determine if there is a relationship between an intervention and an outcome as well as the strength of that relationship. So, inferential statistics are used to reach on conclusion about associations between the variables of the study and is designed to test hypotheses.

The objectives of this research is to explore whether the three internal factors/variables & three external factor/variables namely; operational related issues, human factor related issues,

logistical capability issues, addressing system and road congestion, customs & carriers and customer related are significantly determine the performance of timely delivery of courier packages in the case of EMS within the post office. To do so, the researcher tried to undertook hypothesis testing using correlation & regression analysis to illustrate conclusion in the study area.

Correlation is one of the inferential statistics methods for assessing the relationship between variables. To be more precise, it measures the extent of association between the ordering of two random variables. As a rule, we can categorize the type of correlation by considering as one variable increases what happens to the other variable. That is, we can say there is positive correlation, if the increase in independent variable will result in a tendency to increase the other variable. We can say there is negative correlation, if the increase in independent may result the other variable to decrease; No correlation means the increase or decrease in independent variable does not affect the other variables.

In measuring correlation and to express the strength of the relationship, we make use of the linear product-moment correlation coefficient, also known as Pearson's correlation coefficient; this coefficient is generally used when variables are of quantitative nature, that is, ratio or interval scale variables. Pearson's correlation coefficient is denoted by r. Pearson moment correlation chen (1198) who provides the following guidelines on the strength of the relationship of variables.

Table 4.12. Measures of Associations and Descriptive Adjectives

Measure of Association	Descriptive Adjective
> 0.00 to 0.20 ; < -0.00 to – 0.20	Very weak or very low
> 0.20 to 0.40; < -0.20 to – 0.40	Weak or low
> 0.40 to 0.60; < -0.40 to – 0.60	Moderate
> 0.60 to 0.80; < -0.60 to – 0.80	Strong or high
> 0.80 to 1.0; < -0.80 to – 1.0	Very high or very strong

* Source: (MacEachron, 1982)

4.5.1. Correlation analysis between independent and dependent variables of OTD

The following correlation tests are made to assertion whether or not relationship exist b/n independent variables (operational related issues, human factor related issues, logistical capability issues, addressing system & road congestion, customs & carriers and customer related issues) & dependent variables of on time delivery. Then after, the correlation output of each dependent variable with the independent variables is interpreted based on the following tables.

Table 4.13 Correlation between independent variables & on Time Delivery

		OTD	ORI
OTD	Pearson Correlation	1	.741**
	Sig. (2-tailed)		.000
	N	169	169
ORI	Pearson Correlation	.741**	1
	Sig. (2-tailed)	.000	
	N	169	169
		OTD	CC
OTD	Pearson Correlation	1	.248**
	Sig. (2-tailed)		.001
	N	169	169
CC	Pearson Correlation	.248**	1
	Sig. (2-tailed)	.001	
	N	169	169
		OTD	CRI
OTD	Pearson Correlation	1	.338**
	Sig. (2-tailed)		.000
	N	169	169
CRI	Pearson Correlation	.338**	1
	Sig. (2-tailed)	.000	
	N	169	169

		OTD	HFRI
OTD	Pearson Correlation	1	.639**
	Sig. (2-tailed)		.000
	N	169	169
HFRI	Pearson Correlation	.639**	1
	Sig. (2-tailed)	.000	
	N	169	169
		OTD	LCI
OTD	Pearson Correlation	1	.720**
	Sig. (2-tailed)		.000
	N	169	169
LCI	Pearson Correlation	.720**	1
	Sig. (2-tailed)	.000	
	N	169	169
		OTD	ASRC
OTD	Pearson Correlation	1	.663**
	Sig. (2-tailed)		.000
	N	169	169
ASRC	Pearson Correlation	.663**	1
	Sig. (2-tailed)	.000	
	N	169	169
		OTD	ORI
OTD	Pearson Correlation	1	.741**
	Sig. (2-tailed)		.000
	N	169	169
ORI	Pearson Correlation	.741**	1
	Sig. (2-tailed)	.000	
	N	169	169

**. Correlation is significant at the 0.01 level (2-tailed).

Source: SPSS output of the survey, 2019

Based on the above guideline of degree of correlation, the survey result in table 4.13 shows Statistically positive and strong /high significant correlation is found between ORI & OTD with (R =.741**) calculated p value .000 which is < 0.01 level of P value, HFRI & OTD with (R =.639**) calculated p value .000 which is < 0.01 level of P value, LCI & OTD with (R =.720**) calculated p value .000 which is < 0.01 level of P value and ASRC & OTD with (R =.663**) calculated p value .000 which is < 0.01 level of P value, These means, the increase in these

independent variables will result in high/strong increase and a decrease in these variables will result high/strong decrease on the performance of OTD. In other words, a positive performance / change in these variables will result in better performance of OTD.

On the other hand, Weak or smaller and statistically insignificant positive correlation is found between CC & OTD at (R = 0.248**) calculated value of P 0.01 which is = 0.01level of p and CRI & OTD at (R = 0.338**) calculated value of P 0.000 which is < 0.01 level of p value. These means, the customs procedures and documentation fulfillment and the performance of carriers result in or contribute an insignificant (low) positive impact in the performance of timely delivery of packages. And also smaller relationship is existed between customer related issues with timely delivery of courier packages. Meaning, the different positive reaction from customer results in or contributes a significant but weak positive impact on delivering packages timely. Conversely, the negative actions of customers result in low performance in timely delivery of courier packages.

4.5.2. Correlation matrix analysis between independent variables

Table 4.14: Correlation Matrix within dependent variables

		ORI	CC	CRI	HFRI	LCI	ASRC
ORI	Pearson Correlation	1					
	Sig. (2-tailed)						
CC	Pearson Correlation	.449**	1				
	Sig. (2-tailed)	.000					
CRI	Pearson Correlation	.477**	.470**	1			
	Sig. (2-tailed)	.000	.000				
HFRI	Pearson Correlation	.539**	.173*	.260**	1		
	Sig. (2-tailed)	.000	.025	.001			
LCI	Pearson Correlation	.679**	.405**	.409**	.593**	1	
	Sig. (2-tailed)	.000	.000	.000	.000		
ASRC	Pearson Correlation	.721**	.498**	.371**	.403**	.608**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	

Source: SPSS output of survey questionnaire, 2019

In the above inter-correlation matrix table, association among six independent variables (Operational Related Issues, Human Factor Related Issues, Logistical Capability issues, Addressing system and road congestion, customs' & carriers, and Customer related issues) was tested and found to be positive and they are significantly correlated, to each other at the given level of significance.

4.6.Multiple Linear Regression Analysis

Before running multiple linear regression analysis, the researcher has conducted basic assumption tests for the model. These are normality of the distribution, linearity of the relationship between the independent and dependent variables and multi collinearity tests. Each test is explained below.

4.6.1. Assumptions of Multiple Regressions

Assumption 1 - Normality Distribution Test

Multiple regressions require the independent variables to be normally distributed. Skewness and kurtosis are statistical tools which enable the researcher to check if the data is normally distributed or not. According to Smith and Wells (2006), kurtosis is defined as “property of a distribution that describes the thickness of the tails. The thickness of the tail comes from the amount of scores falling at the extremes relative to the Gaussian/normal distribution”. Skewness is a measure of symmetry. A distribution or data set is symmetric if it looks the same to the left and right of the center point.

If the skewness and kurtosis test results of the data is within the acceptable range (-1.0 to +1.0), it can be concluded that the data is normally distributed. For this purpose and taste of normal distribution, the kurtosis and skewness results are shown in table 4.15.

Table 4.15 Normality of data distribution

	N	Mean	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
ORI	169	3.8668	.010	.187	.141	.371
HFRI	169	3.6524	.302	.187	.329	.371
LCI	169	3.6644	.132	.187	.664	.371
ASRC	169	3.9704	.545	.187	.258	.371
CC	169	4.0793	-.021	.187	-.329	.371
LCI	169	3.6644	.132	.187	.664	.371
OTD	169	3.8722	.208	.187	.732	.371
Valid N (listwise)	169					

Source: SPSS output of survey questionnaire, 2019

The acceptable range for normality for both statistics is b/n -1.0 and + 01.0 .as showed in table 4.15, all variables for both of skewenss & kurtuisis statistics are fall in the acceptable standard of normality (-1.0 - , +01.0). Graphically this normality assumption distribution is shown below.

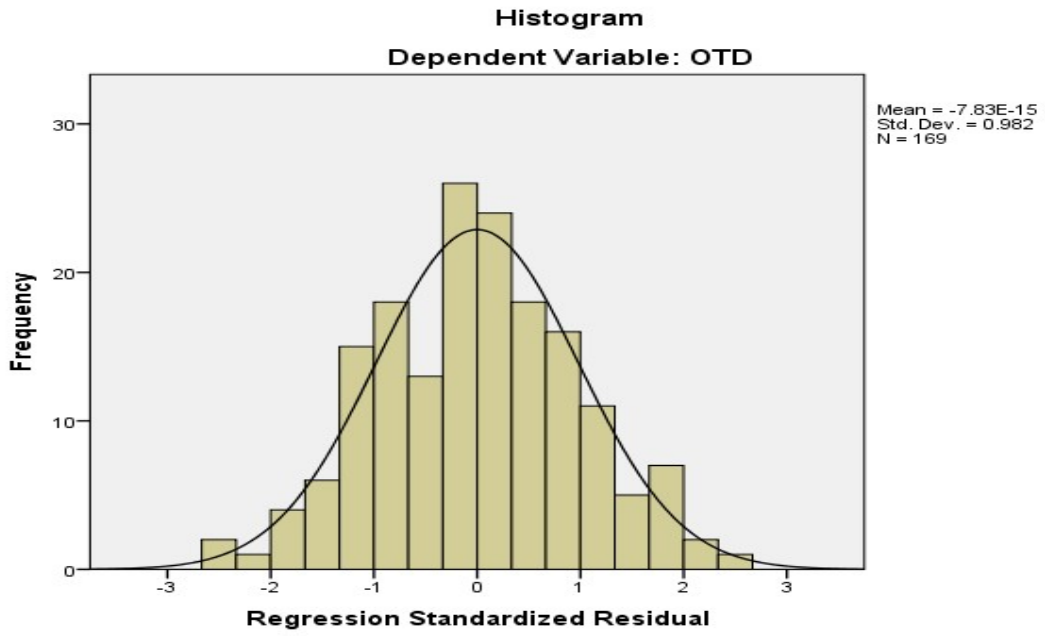

Figure 4.7 Normality distribution taste figure

Source: SPSS output of survey questionnaire, 2019

Assumption 2 - Linearity of the Relationship Test

The second assumption for computing multiple regressions is test of the linearity of the relationships between dependent and the independent variables. As depicted in the appendix II, the visual inspections of the scatter plot shows there exists a linear relationship between the dependent variable (OTD) and Independents variables.

Assumption 3 - Multicollinearity Test

Multicollinearity refers to the situation in which the independent/predictor variables are highly correlated. When independent variables are multicollinear, there is "overlap" or sharing of predictive power. This may lead to the paradoxical effect, whereby the regression model fits the data well, but none of the predictor variables has a significant impact in predicting the dependent variable. This is because when the predictor variables are highly correlated, they share essentially the same information. Thus, together, they may explain a great deal of the dependent variable, but may not individually contribute significantly to the model. Meaning, they can be considered as one variable than two separate variables. Existence of multicollinearity can be checked using "Tolerance" and "VIF" values for each predictor variables. Tolerance values less than 0.10 and VIF (variance inflation factor) greater than 10 indicates existence of multicollinearity (Robert, 2006). As it can be seen from appendix III, multicollinearity is not an issue for this current data.

As it is stated above for the assumption to be met values of Variance Inflation Factor (VIF) scores must be below 10, and tolerance scores to be above 0.1; which is the case in as shown in appendix III, the tolerance and VIF of Operational Related Issues, customs' & carriers, Customer related issues, Human Factor Related Issues, Logistical Capability issues and Addressing system & road congestion are .344, .641, .682, .598, .427, .422 and 2.911, 1.559, 1.466, 1.673, 2.343, 2.369 respectively. Therefore, this research model fists the requirement and colinearity is not a problem.

Summary: The three assumptions of multiple regressions are met and the next step is processing the regression analysis to determine the values of the model summary (R and R^2), the model fit (ANOVA) and the beta coefficients.

With the help of multiple linear regression analysis, model summary, ANOVA and Beta coefficient were determined and the regression model was developed. Accordingly, the relative effect of independent variables on Timely Delivery was identified.

4.6.2. Model Summary

According to Ho (2006), a measure of strength of the computed predication equation is R-square, sometimes called the coefficient of determination. In the regression model, R-square is the square of the correlation coefficient between the observed and predicated value of dependent variable. If R-square is 1, there exist a perfect linear relationship between the predicators and dependent variable. An R-square of 0 indicates no linear relationship

Table 4.16 Model Summary Table

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.844[a]	.713	.702	.19978	1.834

a. Predictors: (Constant), ASRC, CRI, HFRI, CC, LCI, ORI

b. Dependent Variable: OTD

Source: SPSS output of survey questionnaire, 2019

R is the multiple correlation coefficients which show the relationship between the study variables. From the findings shown in the table 4.17, there is a positive relationship of .844 between on time delivery and the six independent variables.

$\mathbf{R^2}$ = .713 reveals that the model accounts for 71.3% of the variation in the timely delivery and is explained by the linear combination of all the independent variables. And the remaining 28.7 % of variation is not explained by these factors.

Adjusted R squared is coefficient of determination which tells us the variation in the dependent variable due to changes in the independent variable. From the findings in the table 4.17since adjusted R-square of all the six variables is 0.702, we can say that 70.2 % of the variability in the level of on time delivery is accounted for by determinants or drivers of on time delivery stated above. In other words, the value of adjusted R squared was 0.702 and this is an indication that

there was variation of 70.2% on timely delivery due to the independent variables, at 95 percent confidence interval. This shows that 40.2% of changes in timely delivery could be accounted for by combination of all the independent variables.

4.6.3. ANOVA Model Fit

The regression model overall fit can be examined with the help of ANOVA (analysis of variance) which provides F value. As per the approval standard rule, the significance (P-value) has to be < 0.05 and the table 4.18 below showed that F is 67.036. This means, the F Statistics is significant at 0.000 levels which show the fitness of the model. This indicates that, in general the model is fitted for this study. Therefore, it can be conclude that further regression can be conducted on the predictors (the different six independent factors).

Table 4.17 Anova Model Fit Table

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	16.053	6	2.676	67.036	.000[b]
	Residual	6.466	162	.040		
	Total	22.519	168			

a. Dependent Variable: OTD

b. Predictors: (Constant), ASRC, CRI, HFRI, CC, LCI, ORI

Source: SPSS output of survey questionnaire, 2019

4.6.4. Beta Coefficient

Standardized Beta Coefficient; the standardized coefficients are the coefficients which can explain the relative importance of explanatory variables. These coefficients are obtained from regression analysis after all the explanatory variables are standardized.

The regression sum of squares tells us how much variability is accounted for by the regression model, which is the fitting of the least-squares line. The residual sum of squares tells us how much variability (again, not variance yet) is unaccounted for by the regression model. The total variability is the sum of both regression and residual variability.

The extent to which the regression sum of squares is large relative to the residual sum of squares is the extent to which more variability than not is accounted for by the model.

ANOVA findings (P- value of 0.001) in table 4.18 show that there is correlation between the predictor's variables (ORI, HFRI, LCI, ASRC, CC and CRI) and response variable (OTD of the company as measured by keeping promised delivery time, accuracy of sorting and distributing timely to delivery person, availability of coordination between different units, existence of collaboration between EMS and other stakeholders and delivering full list of received items.). An F ratio was calculated which represented the variance between the groups, divided by the variance within the groups. A large F ratio indicates that there is more variability between the groups (caused by the independent variable) than there is within each group, referred to as the error term.

Table 4.18: Coefficients[a]

Model		Un standardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	.022	.215		.103	.918		
	ORI	.331	.073	.325	4.527	.000	.344	2.911
	CC	-.122	.036	-.178	-3.393	.001	.641	1.559
	CRI	-.002	.043	-.003	-.053	.958	.682	1.466
	HFRI	.225	.055	.223	4.097	.000	.598	1.673
	LCI	.364	.082	.286	4.432	.000	.427	2.343
	ASRC	.232	.059	.255	3.929	.000	.422	2.369

a. Dependent Variable: OTD

The standard errors associated with both the intercept and the slope parameters. The standard errors provide us with a measure of how much we should expect the given sample coefficient to vary under the assumption of each hypothesis.

Predicating the level of on time delivery from the six drivers (factors); the above regression coefficient's table values of standardized beta coefficients state that how intensely/strongly/ those six independent variables predict the behavior of on time delivery. The significance tests of the 6 explanatory variables indicate that 5 of the explanatory variables (ORI, CC, HFRI, LCI and ASRC) are significant with p-value ($P<0.05$) for predicting on time delivery.

This can interpreted as from the total variance occurred in timely delivery (dependent variable), 32.5 % is the reflection of operational related issue, 22.3% is a reflection of human factor related issues, 28.6% is a reflection of logistical capability issue, 25.5% is a reflection of addressing system and road conjunctions, related issue and -17.8 % is accounted from customs and carriers related issue.

CRI have a p-value >0 .05 ($P > \partial$), and this factor is not statistically significant to predict on time delivery. In other words, on time delivery(y) is not "statistically" dependent on the insignificant independent variables of customer related issues.

As it can be seen from the table above, the standardized coefficient of operational related issue is the largest value followed by logistical capability issue, addressing system & road congestion, human factor related issue and customs & carriers. The larger the standardized coefficient, the higher is the relative effect of the factors to the timely delivery of packages.

4.6.5. Relationship of the variables

Un standardized Beta Coefficient As it is defined in chapter three, the un standardized coefficients (1 up to 6) are the coefficients of the estimated regression model. Hence, by including the error term (ε), the model for on time delivery can be written as;

$Y_{OTD} = 0.022+0.331ORI + 0.225HFRI + 0.364LCI + 0.232ASRC -0.122CC +\varepsilon$ (0.1998)

The intercept ($_0$) is the point on the vertical axis where the regression line crosses the Y axis. The value of $_0$ is 0.022 which means the expected value of on time delivery is 0.022 when all the eight variables assume zero value.

Among the six factors, 5 of them are found to be statistically significant factors and significant predictors of the dependent variable which is on time delivery. These are ORI, HFRI, LCI, ASRC and CC. The beta coefficients of these factors indicate that an increase in the implementation factors will result in the increase in the performance of on time delivery. On the other hand customer related issue is not statistically significant predictors of on time delivery. In this model customer related issues is excluded since it did not statistically significant predictor of OTD. To make it clear;

Constant = 0.022, shows that if ORI, HFRI, LCI, ASRC, CC and CRI all rated as zero, the OTD performance of the company would be at a rate of 24%.

ORI = 0.331, shows that one unit change in operational related issue results in 33.1% improvement in OTD.

HFRI = 0.225, shows that one unit change in human factor related issues results in 22.5% improvement in the OTD performance of the company as measured by meeting delivery time.

LCI = 0.364, shows that one unit change in logistical capability issues results in 36.4% improvement in the OTD performance of the company as measured by meeting delivery time.

ASRC = 0.232, shows that one unit positive change in addressing system & road congestion results in 23.2% improvement in the OTD performance as measured by meeting delivery time.

CC = -0.122, shows that one unit change in custom and carriers performance results in -12.2% decrease in the OTD performance as measured by meeting delivery time.

Table 4.19: Summary of Hypothesis Testing Results from Regression Analysis Coefficients

No	Hypothesis	Result	Reason
1	ORI	Supported	Beta = 0.33, at Sig. 0.000
2	HFRI	Supported	Beta = 0.225 , at Sig. 0.000
3	LCI	Supported	Beta = 0.364, at Sig.0.000
4	ASRC	Supported	Beta = 0.232, at Sig. 0.000
5	CC	Supported	Beta = -0.122 , at Sig. 0.00
6	CRI	Not supported	Beta = -0.002 , at Sig. 0.958

4.7.Discussion of the Results

In this section, the main findings of the data presented in the previous sections were discussed in detail. Some of the key findings of the research were presented and have augmented with results of similar research endeavors in other settings.

4.7.1. Hypotheses test and findings

This study addresses issues relevant to deliver courier packages timely as promised to customers, for this, the researcher tried to identify six key factors affecting OTD, and examines the causal effects relationships of these factors.

All the hypotheses test results are summarized in Table 4.19 and 4.20. The results from beta coefficient confirm that five of the six hypotheses are supported. More specifically, operational related issues (in terms of delivery information, operational accuracy and delivery model & operational hour), human factor related issues (in terms availability of experienced driver/motorist and quality of leadership), logistical capability issues (in terms of availability of wide spread delivery coverage, delivery route & network updating, application of information technology and physical equipment resources), addressing system & road congestion and customs and carriers affect on time delivery of courier packages positively, And from these five factors customs & carriers has a negative impact on the timely delivery of courier packages. On the other hand customer related issues were not statistically significant predictors of on time delivery.

4.7.2. Effect of operational related issues on timely Delivery

The study established that operational related issue (in terms of availability of delivery information, operational accuracy and delivery model & operational hour) positively Affect or influence the performance of timely delivery of courier packages in EMS Ethiopia to a great extent.

In this study finding, based on the mean comparison of the six on time delivery factors, operational related issue is ranked third with mean value of 3.87 which implies that, respondents agreed on the proposition of ORI affect the performance of OTD and have positive relationship with the performance of OTD. This shows that this independent variable is very important to affect the performance of OTD. This variable also have a very strong, significant and positive correlation with on time delivery at R=.741 (P<0.01). This means there is positive and strong relationship between this independent variable and OTD. So, the increase (good performance) in operational related issue (availability of delivery information, operational accuracy and delivery model & operational hour will motivates or increase the performance of OTD. ORI is also statistically significant predictor of on time delivery with beta coefficient of .331 at significance level of .000. This means, on time delivery (y) is statistically dependent to this significant independent variable of operational related issue and as a model shows, a one unit change (improvement) in operational related issue results in 33.1% improvement in OTD performance of the company.

Literatures and empirical researches also clearly indicates on time delivery highly depend on this independent variable of operational related issue in terms of delivery information (Peter Ofori, 2015), operational accuracy (Coyle et al. 2008) delivery model and operational hour ((Fransis M, 2014.. This means, the result is consistence with the proposed research hypothesis and in line with empirical research reviews which clearly indicate ORI as having positive significant effect in determine/ predicating on time delivery.

4.7.3. Effect of human factor related issues for on time delivery

The study established that human factor related issues (in terms of availability of experienced driver & motorist and quality of leadership) positively Affect on Time Delivery of courier packages in EMS Ethiopia to a great extent. In this research, it is found out that more than 74% of the respondents have agreed availability of experienced drivers / motorist and the quality of leadership positively affect OTD. This finding was consistent with the mean score value of 3.65 which means the respondents were on average agreed with the relationship between the performance of human factor and OTD. The correlation result as well reveal HFRI is positively & significantly correlated with on time delivery performance with R=.639 (P<0.01) which shows there is a strong association between the performance of HRF and OTD. The coefficient of determination result also shows this factor is statistically significant predictor of on time delivery performance with beta coefficient of 0.225 at significance level of .000. This means, a positive / negative performance change in HFRI will result in better/worse performance of OTD. The result is consistent with proposed research hypothesis which was hypothesized as ‘’Human related issues (in terms of availability of experienced driver/motorist and quality of leadership) have a positive effect for on time delivery of courier packages’’. This finding is also supported by Literatures and empirical researches. As Peter Ofori, 2015, researched in his paper called addressing system and Delivery business, operators prefer drivers who have worked for many years in the city or have stayed in the city for longer periods. As part of human related issues quality of leadership in terms of commitment (Laarhoven, Berglund, & Peters, 2000), communication (Karrus 1998, p. 310), motivation (Hogan Curphy and Hogan (1994) and training contribute to the timely delivery of courier packages. Therefore, human factor related issue was found to be a significant predictor and positively affects on time delivery of courier packages. The study therefore concludes that, the increase (good performance) in human factor

related issue, through availability of experienced driver and motorist, availability of proper quality of leadership motivates staff to offer better service to customers and in return will increase the performance of OTD.

4.7.4. Effects of logistical capability issues for on time delivery

The study established that logistically capability issues (in terms of availability of wide spread of delivery centers, delivery route & networking and application of information technology) positively Affect on Time Delivery of courier packages in EMS Ethiopia to a great extent.

In this research, it is found out that, about respondents (76.3 % agree and 36.7% neutral which we can consider as moderately agree) agree with the importance of logistical capability issue. Meaning, logistical capability issue through availability of wide spread delivery centers, importance of rout and network design and updating regularly, and application of information technology positively affect OTD. This finding was found to be consistent with those mean score value of 3.46 which fall in the agreed level of likert scale. It is also positively & significantly correlated with on time delivery performance with R=.720 ($P<0.01$) which shows the existence of association and relationship between the two variables and this variable is statistically significant predictor of on time delivery performance with beta coefficient of 0.364 at significance level of .000. This means, a positive performance change in LCI will result in better performance of OTD and as a model shows, a one unit change (improvement) in logistical capability issue results in 36.4% improvement in OTD performance of the company.

The result is consistent with proposed research hypothesis which was hypothesized as 'Logistical capability issues (in terms of availability of wide spread delivery centers, delivery route & network and application of information technology) positively affect the performance of on time delivery of courier packages.''. This finding is also supported by Literatures and empirical researches. Meaning, other studies have also identified logistical capability issues as one of the important factors for timely delivery of courier packages. (Importance delivery centers coverage for OTD, Weltevreden 2008. Mentzer, and Krapfel,1989; importance of proper routing and updating delivery networks, Meuffels et al. 2009, importance of application of information technology of timely delivery, Peter Ofori, 2015, Christopher & Lee 2004; Sanchez-Rodrigues, Vasco, Potter &Naim 2010)

Therefore, logistical capability issue was found to be a significant variable and positively affects on time delivery of courier packages. The study therefore concludes that, a positive performance change in LCI will result in better performance of OTD and motivates staff to offer better service to customers and in return will increase the performance of OTD. This gives a valuable feedback to the company to focus and work on logistical capability issue in order to satisfy customers by improving OTD.

4.7.5. Effects of addressing system and road congestion for on time delivery

The study established that Unavailability of Street Addressing System in the city and the Road Congestion (closure) negatively affect the performance of on time delivery of courier packages of EMS Ethiopia. Obviously, if street addressing is not available and road congestion is prevalent, the lower performance of OTD would like to exist.

Based on the mean comparison of the six OTD factors, addressing system and road congestion is ranked first with mean value of 3.97. This means almost all respondents showed their agreement level with their response and were consistent with this hypothesis. From those respondents only 8.9% were neutral (indifferent) to agree with the importance of addressing system and the negative impact of road congestion for timely delivery of packages. Above 85 % of respondents believe and agree that unavailability of addressing system and existence of road congestion negatively affect OTD. Previous research findings and literature reviews also identified or suggest that unavailability of street addressing system and prevalence of road congestion as one of the important factors for OTD performance. (Word Bank, 2005, Peter Oferi, 2015, Gevaers, Van de Voorde, Vanelslander, 2011).

This variable is positively & significantly correlated with timely delivery performance at $R=.663(P<0.01)$ which shows the existence of association and relationship between the two variables and this variable is statistically significant predictor of on time delivery performance with beta coefficient of 0.232 at significance level of .000. This means, a positive performance change in ASRC will result in better performance of OTD and as a model shows, a one unit change (improvement) in addressing system & road congestion results in 23.2% improvement in OTD performance of the company.

Therefore, addressing system & road congestion was found to be a significant predictor and positively affects on time delivery of courier packages. The study therefore concludes that, a positive performance change in ASRC will result in better performance of OTD. This is a valuable feedback to the company to focus and work on introducing addressing system and design different strategy to deal with road congestion in order to satisfy customers by improving OTD.

4.7.6. Effects of customs and carriers for on time delivery

The study established that the cumbersome checking process and manual verification of documents at customs and delay from the side of carriers negatively affect on time delivery of courier packages. Based on the mean comparison of the six OTD factors, customs and carrier performance is ranked first with mean value of 4.08. From those respondents only 13% were not agree and neutral (indifferent) to agree with the relationship of customs and carriers performance with OTD. The rest of respondents (about 87 %) believe and agree that the performance of customs and carriers have relationship with OTD and affect the performance of OTD. This finding was found to be consistent with those mean score value of 4.08 this means almost all respondents are agreeing with this hypothesis. The result is similar with literatures and previous researches and also with the proposed hypothesis which clearly indicates CC performance have influence the performance of OTD.

Meaning, previous research findings and literature reviews also support this result in such a way that, the performance of customs' operation in checking and inspection of packages timely and the performance of carriers' as one of the important factors for OTD performance. (European Express Association (EEA), 2003, Karrus (1998, p. 307).

This variable is positively & significantly correlated with timely delivery performance at $R=.248(P<0.01)$ which shows the existence of association and relationship between the two variables and this variable is statistically significant predictor of on time delivery performance with beta coefficient of -0.122 at significance level of .001. This means, as a model shows, for every unit increase in customs cumbersome checking process and manual verification of documents at customs and delay from the side of carriers, OTD performance is predicated to be lower by 12.2%.

Therefore, customs and carriers issue was found to be a significant predictor and affects on time delivery of courier packages. The study therefore concludes that, a positive performance change in CC will result in better performance of OTD. This is important observation to the company to focus and work on strengthening the relationship between these important stakeholders in order to satisfy customers by improving OTD.

4.7.7. Effects of customer related issue for on time delivery

The study established that the different actions of customer related issues can result in low performance of on time delivery and negatively affect on time delivery of courier packages.

To find out the result of this hypothesis, different analysis is being done. When we look at descriptive result of the mean value (3.49), customer related issues is the 5^{th} ranked OTD Performance with which means, on average respondents are agreed that the actions of customers negatively contribute to the poor performance of OTD. About 85.2 % of the respondents believe that different customer action influence the performance of OTD and only 14.8% are indifferent or neutral to believe in this statement. Customer related issue is positively & significantly correlated with OTD at ($R = 0.338^{**}$), ($P< 0.01$). This implies that, the different positive reaction from customer result in or contributes a significant positive association on delivering packages timely. Conversely, the negative actions of customers result in low performance in timely delivery of courier packages. Previous research findings and literature reviews also support this result in such a way that, the performance of customs' operation in checking and inspection of packages timely and the performance of carriers' as one of the important factors for OTD performance. (Francis M. Mensah, 2014,. Karcz, B. Ślusarczyk, 2016). But in terms of regressing OTD, it is not statistically significant predictor of OTD performance since its beta coefficient is -0.002 at significance level of 0.958 which means this variable is not statistically significant predictor of on time delivery. The result is in contrary to the literatures and previous researches and also with the proposed hypothesis which clearly indicates CRI performance has influence the performance of OTD.

In general, the research has found out that CRI has a strong correlation with OTD, even though the variable is statistically insignificant predictor of OTD performance.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1.Introduction

The driving force behind this research with the theme of "Examining Factors that affecting timely delivery of packages in Courier business industry" taking EMS Ethiopia as a case company stems from my vested interest in the topic because I work in the organization as head of marketing and business development which is directly related with customer service and in this position, on time delivery is a concern and point of discussion that comes to my attention every day. So, the concern of investigating this research was to find out the factors that affect timely delivery of courier packages firms in this business venture and how can EMS take relevant and strategic actions to maximize the performance of OTD. What I intend to achieve from this study, is to find a clear way out in tackling and solving the problem of low performance of OTD and how OTD performance can be maximized.

Therefore, this chapter presents the data findings, the conclusions that are drawn from these findings and the recommendations that can made from these conclusions. The conclusions and recommendations discussed in this chapter seek to meet the main objective of the study.

5.2.Summary of Findings

The research is designed according to the structure of the sub-questions. Therefore, based on these sub questions, the key findings and relevant implications derived from this thesis are summarized and presented in response to each sub-question respectively.

- The totals of 193 questionnaires were distributed to the respondents out of which, 169 questionnaires were returned with a response rate of 87.6% (of which, 77 % were male and 23%were female. 57.8% have first and second degree and 42.2% have diploma and certificate. 59.7% have more than five years experience and 40.4% have less than five years of company experience. The sum of the independent variables average Cronbach's alpha value is ($\alpha = 0.880$) and the reliability test of the study is located on "Acceptable" range.

- Descriptive statistics result shows, operational related issue was ranked third from six factors which affect OTD with mean value of 3.87 which implies that, respondents agreed on the proposition of ORI affect the performance of OTD. The correlation analysis also revealed that this variable have a very strong, significant and positive correlation with on time delivery at R=.741 (P<0.01). The output from regression analysis also indicated that ORI is statistically significant predictor of on time delivery with beta coefficient of .331 at significance level of .000. This means, on time delivery (y) is statistically dependent to this significant independent variable.
- Based on the mean comparison of the six on time delivery factors, human factor related issue is ranked forth with mean value of 3.65 which implies that, respondents agreed on the proposition of HFRI affect the performance of OTD. The correlation analysis also revealed that this variable have a very strong, significant and positive correlation with on time delivery at R=.639 (P<0.01). The output from regression analysis also indicated that HFRI is statistically significant predictor of on time delivery with beta coefficient of .225 at significance level of .000. This means, on time delivery (y) is statistically dependent to this significant independent variable.
- logistical capability issues was ranked 6^{th} from the six on time delivery factors with mean value of 3.46 which implies that, respondents agreed on the proposition of LCI affect the performance of OTD. The correlation analysis also discovered that this variable have a very strong, significant and positive correlation with on time delivery at R=.720 (P<0.01). The output from regression analysis also indicated that LCI is statistically significant predictor of on time delivery with beta coefficient of .364 at significance level of .000. This means, on time delivery (y) is statistically dependent to this significant independent variable.
- The descriptive empirical results (with a mean of 3.97) support that; there is a relationship between addressing system & road congestion and on time delivery. This finding was also supported by the correlation result. That is, statistically positive and strong /high significant correlation is found between ASRC & OTD with (R =.663**) Therefore, the study findings proved that there is a relationship between ASRC and OTD. The output from regression analysis also indicated that ASRC is statistically significant predictor of on time delivery with beta coefficient of .232 at significance level of .000.

This means, on time delivery (y) is statistically dependent to this significant independent variable.

- Descriptive result (with average mean score of 4.08 responses) shows there Customs & carriers performance (CC) greatly affect the performance of timely delivery of courier packages. Even though the correlation between this variable and OTD is weak/smaller, statistically significant positive correlation is found between CC & OTD at (R = 0.248**). The output from regression analysis also indicated that CC is statistically significant predictor of on time delivery with beta coefficient of .248 at significance level of .001. This means, on time delivery (y) is statistically dependent to this significant independent variable.
- The descriptive mean score of customer related issue (average mean response level of 3.49) shows it has a moderate impact on timely delivery of packages. Weak/smaller but statistically significant positive correlation is found between CRI & OTD at (R = 0.338). Therefore, the descriptive mean result and the correlation result proved that there is a positive relationship between CRI and OTD but the relationship is weak or small between the two variables. But, the output from regression analysis indicates that CRI is statistically insignificant predictor of on time delivery with beta coefficient of -.002 at significance level of .958. This means, on time delivery (y) is not statistically dependent to this significant independent variable.
- The ANOVA test result showed that R and R2 found from the model summary was statistically significant at (F=67.036), P<0.001) this indicates that, in general the model is fitted for this study. Therefore, it can be said that there is a relationship between on time delivery and the predictors (the different six independent factors).

5.3.Conclusion

The main purpose of this study is to analyze the factors affecting timely delivery courier packages and based on the findings presented in the previous section, the following conclusions are drawn.

- Respondents were educated enough to understand the questions, the majority of the respondents in Ethiopian Postal Service Enterprise had worked for a considerable period of time and therefore they were in a position to give credible information relating to this

study. In addition to this, since all the relevant positions were part of the respondents, the research targeted the user department where first hand and credible information about OTD current status is obtained. Therefore, it is concluded that the result were all worthwhile and praiseworthy.

- Based on the result, operational related issues in terms of in terms of availability of delivery information (availability about delivery time and location, recording accurate delivery information & proper communication between the customer and the employees of the company), operational accuracy (accuracy in terms of marking details, miss sorting, miss sent, wrong address recording, packing & in labeling and accuracy manual sorting while placing sorted mails in tray for delivery.) and delivery model & operational hour (extended delivery operating hours, applying secured delivery box in apartments, using agents like and Implementing home to home delivery) is proved to have positive significant effect in determine/ predicating on time delivery. The regression and correlation coefficient result of the study therefore concludes that there is a statistically significant relationship between Operational related issues and the performance OTD.
- From the empirical findings it is concluded that human related issues were also proved as one of the most determining factors of on time delivery. The study therefore concludes that, the increase (good performance) in human factor related issue, through availability of experienced driver and motorist, availability of proper quality of leadership motivates staff to offer better service to customers and in return will increase the performance of OTD.
- Logistical capability issues (in terms of availability of wide spread of delivery centers, designing and updating delivery route & networking constantly and application of information technology) is also proved to have as indispensable role and important factors for timely delivery of courier packages. The study therefore concludes that, a positive performance change in LCI will result in better performance of OTD and motivates staff to offer better service to customers and in return will increase the performance of OTD.
- Addressing system& road congestion is another important factor which is identified as having effect on timely delivery of courier packages. The study therefore concludes that, a positive performance change in ASRC will result in better performance of OTD. This is

a valuable feedback to the company to focus and work on introducing addressing system and design different strategy to deal with road congestion in order to satisfy customers by improving OTD.

- Regression analysis and correlation coefficient concludes that customs & carriers (CC) have negative but significant effect on timely delivery of courier packages. According to the finding, customs and carriers issue was found to be a significant predictor and affects on time delivery of courier packages. The study therefore concludes that, a positive performance change in CC will result in better performance of OTD. This is important observation to the company to focus and work on strengthening the relationship between these important stakeholders in order to satisfy customers by improving OTD.
- Finally, despite literature proves the different actions of customer (not picking unknown call, giving old addresses & vague delivery addresses, etc) can result in low performance of on time delivery and negatively affect on time delivery of courier packages, the study indicated that it is not important predictor of timely delivery of courier packages.

5.4.Recommendations

From my many years of work experience in Courier Company coupled with the empirical findings of this study and specific comments of the respondents, the following recommendations are provided which will help the enterprise to improve service quality in the area of timely delivery of packages.

- Delivery information should be given proper attention to deal with timely delivery of courier packages. Therefore the company needs to start use of contact numbers of customers for notifying delivery. By doing so, the company can improve timely delivery performance of packages.
- When we talk of operational accuracy, it all about miss sent to other location, improper packaging or marking details, processing errors like miss-sorting, wrong address recording, wrong delivery, and loss or missing of goods in the hands of Courier Company. Therefore, the researcher would like to recommend the company to benchmark and experience of other organizations, trying to introduce related technologies and software application in this business, in place a system of accountability for such

incorrect practices, through time, employees are not following the standard practices and process of postal operation, even they don't know the standard procedures to be followed in sorting, recording and managing the operations, so the company needs to revise formats, focus on reinstate/put back and strictly following standard procedures of doing operations.

- As part of operational related issue, applying secured delivery box in apartments will reduce the returns of courier packages without delivery, strengthening home to home delivery model as a major delivery mode greatly contributes for timely delivery of packages and the company should also start late evening's deliveries not only at peak season but as a standard service. Finally, EMS should start extended delivery operating hours including weekends and delivery after working hours.
- To deal with the problem of delivery drivers/motorists (overloaded above the maximum capacity) the company either match the work volume with the numbers delivery personnel or to use other delivery modes as alternatives (eg. using agents like gas stations, supermarkets etc.)
- As the courier firms deal in valuable consignments, they should properly motivate their employees as the gains currently being made can be reversed if the employees' dissatisfaction is not addressed. Department leader must also treats employees as the organization's most valued so as to produce the best results in delivery performance.
- EPSE should make its service delivery process flexible by extending the working hours of delivery, strengthening the door to door service, notifying customers using SMS or telephone call when courier packages arrive and ready for delivery.
- Increasing the accessibility of the post office by increasing the number of branches and convenience of service center location to collect packages and to perform delivery is a major recommendation for adherence to delivery time table, the management should promote to design, plan and continually update delivery, nodes routes & network in a suitable way.
- The study also recommends that the firms should ensure to adapt the new technology in order to cope with the fast changing technology. Meaning, application of Information Technology by making Online tracking & tracing is fully functional, by introduces online

tracking and tracing system, through applying electronic mobile signature capture devices for delivery of package

- The study further recommends the company needs to introduce wireless communication technologies which will contribute to facilitate delivery operations, to provide work telephone to delivery person which will make possible timely delivery.
- In addition to this, on the technological front the courier services need to watchful on the turn of events to ensure they are made obsolete by the technological advances.
- As a policy issue, the study highlights the urgent need to facilitate and hasten the implementation of an effective address system in the metropolis. So, the company need to take initiatives in implementing national addressing system and then after postal addressing system.
- To deal with the problem of road congestion, the company must focus using motor bicycles, assign a specific line haul personnel who can continually update/rearrange delivery route and redesign delivery network & nodes.
- On the issue of customs and carriers, the company needs to work on strengthening the relationship between these important stakeholders.

5.5.Limitation and Suggestion for Future research

This study employs data from one courier company i.e EMS, therefore, the principal limitation of this study is in the generalizability of its findings to other courier companies or other industries. As such, the findings reported here cannot be generalized to the larger population of courier service providers or extended to other types of firms in other industries. However, while the results are not generalizable, the approach presented in this study can be generalized to other contexts.

This study was conducted based on six on time delivery factors and accounted for 71.3% of the variation of the dependent variable. Other researchers may consider other factors and study the reason for the remaining variation (28.7%). In addition, this study is conducted in only one case company. Research can be done by considering more than one case company to compare the power of the independent variables.

This research focuses on three internal factor and three external factor, research effort in the future could be made either in a much wider context to employ more significant factors consistent for all contexts or in the direction of a deeper single context to seek some specific indicators that have been overlooked.

Empirical researches can be also conducted on the effects of the noted factors on the various growth indicators such as market share, revenues and profits. Such a study would verify or repute the findings of this study. Future study can also be conducted on an individual factor identified in the conceptual framework of this study. A deeper analysis of the effect of each one of these factors would clearly bring out the issues which seem to be somehow unclear in the study. For example a study can be on effect of Technology on the growth of courier service firms.

Unavailability of similar study in Ethiopian context was one of the challenges of the study. Due to this, the researcher relies mainly on questionnaire results and related study conducted in other country to present the discussion of the study.

Hence, future research could address these above-indicated limitations and deepen the study so as to increase the reliability of the result of this study.

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APPENDICES

Appendix I: Questions

Addis Ababa University

School of Commerce, Department of Logistics and Supply Chain Management

Questionnaires to be filled by employees of Ethiopian Postal Service Enterprise

Dear respondents;

I am a postgraduate student of Addis Ababa University, School of Commerce, who is conducting a research on: "**Factors Affecting on Time Delivery of Courier Packages**'': The Case of Courier Service Operator in Ethiopian Postal service Enterprise". The research is conducted in partial fulfillment of the requirement for the Masters of Logistics and supply chain Management. You are kindly requested to complete this questionnaire. Your responses will be kept confidential and used for academic purpose only.

Thank you in advance for your support and participation.

Direction; Please put a thick mark (√) in the box that corresponds to your response about your profile.

Name (Optional): ---------- Telephone (Optional):----------

1. ፆታ: ☐ ሴት ወንድ ☐
2. ዕድሜ; ☐ ከ 20-30 ☐ ከ 31-35 ☐ ከ36-40 ☐ ከ 40 በላይ
3. የትምህርት ደረጃ:

   ☐ ሰርትፊኬት ☐ ዲፕሎማ ☐ የመጀመሪያዲግሪ ☐ ሁለተኛዲግሪ
4. የስራ ልምድ; ☐ ከሁልት ዓመት በታች ☐ ከሶስት እስከ አራት ዓመት

   ☐ ከአምስት እስከ ስባት ዓመት ☐ ከስባት ዓመት በላይ
5. የስራ መደብ ☐ የካውንተር ዕደላ ሰራተኛ ☐ ሾፌር/ሞተረኛ

   ☐ ሱፐርቫይዘር ☐ ኤክስፐርት ☐ ቡድን መሪ ☐ የዲፓርትመንት ኃላፊ

6. የሚሰሩበት ክፍል ☐ ኢ.ኤም.ኤስ ☐ የጥራት እና ደህንነት ☐ ማርኬቲንግ

☐ ቤት ለቤት እና ባንኮች ፕሮጀክት ☐ አይቲ

☐ የማኔጅመንት አባል

PART II:-The questionnaire items regarding Internal and External factors which may or may not affect On Time Delivery of courier packages.

Please tick (√) for the following statements to indicate the level of your agreement or disagreement with the statement given about EMS:

የሚሞሉ ቁጥሮች ትርጉም; 1 = በጣም አልስማማም, 2 = አልስማማም, 3 = ገለልተኛ, 4 = እስማማለሁ እና 5 = በጣም እስማማለሁ

ተ.ቁ	የመለኪያ መስፈርቶች	የመለኪያ ደረጃ				
		1	2	3	4	5
	Operational elated Issue					
ORI1	The use of the recipient phone and calling to the customer contributes for the good performance of timely delivery. (የተቀባዩ ደንበኛ ስልክ ላይ መደወል በሰዓቱ ለማደል አስተዋፅኦ ያደርጋል፤)					
ORI 2	Information is Available about delivery time, (ዕደላው የሚከናወንበት ሰዓት በግልፅ መልዕክቱ ላይይፃፋል፤)					
ORI 3	Information is available about delivery location (መልዕክቱ ስለሚታደልበት ቦታ የሚያሳይ መረጃ በመልዕክቱ ላይ ይፃፋል፤)					
ORI 4	Customers may sometimes give inaccurate delivery information that result in spending more time in identifying the destination of the customer. (ደንበኞች አልፎ አልፎ ትክክለኛ ያልሆነ የዕደላ መረጃ ይሰጣሉ፤)					
ORI 5	There is poor communication between the customer and the employees of the company while accepting the packages. (በመልዕክት ቅበላ ጊዜ በደንበኛው እና በተቀባይ ሰራተኛ መካከል የመረጃ ልውውጥ ክፍተት አለ፤)					
ORI 6	EMS experiences operational inaccuracy in terms of marking details; miss sorting, miss sent, and wrong address recording which ultimately affect on time delivery. (በመልዕክት ቅበላ፣ ዝግጅት፣ ዝርዘራ እና መሰል ስራዎች ላይ በስህተት መዘርዘር፣ ወደተሳሳተ አድራሻ መላክ፣ የተሳሳተ አድራሻ መመዝገብ… ተደጋግሞ ያጋጥማል፤)					

ORI 7	Employees of EMS are accurate in writing details of addresses while processing delivery documents. (ሰራተኞች የሚታደሉ መልዕክቶችን ለዕደላ ዝግጁ ሲያደርጉ የተቀባይ አድራሻ እና ዝርዝር የዕደላ አድራሻ በሚጽፉበት ወቅት ሁልጊዜ በትክክል ይሰራሉ፤)					
ORI 8	There is Improper packing and error in labeling which may affect the overall delivery process and delivery on time. (መልዕክቶችን በማሸግ ሂደት እና አስፈላጊ መረጃ የሚሰጡ ሌብሎችን መልዕክቱ ላይ በመለጠፍ ሂደት ችግሮች/ስህተቶች ይከሰታሉ፤)					
ORI 9	There are errors in manual sorting while placing sorted mails in tray for delivery. (መልዕክቶችንለዕደላዝግጁለማድረግየመልዕክትዝርዘራሥራሲሰራስህተቶችይፈፀማሉ፤)					
ORI 10	EMS should start extended delivery operating hours including weekends and delivery after working hours. (አሁን ካለው የዕደላ ፕሮግራም በተጨማሪ ኢ.ኤም.ኤስ እሁድን እና የዕረፍት ቀናትን ጨምሮ የዕደላ ጊዜውን ማሳደግ አለበት፤)					
ORI 11	The company should have late evening's deliveries not only at peak season but as a standard service. (አሁን ካለው መደበኛ የዕደላ ፕሮግራም በተጨማሪ ከስራ ሰዓት ውጭ አምሽቶ የማደል ሥራ መስራት ስራ ሲበዛ ብቻ ሳይሆን እንደ መደበኛ የዕደላ ፕሮግራም አድርጎ መጀመር አለበት፤)					
ORI 12	Applying secured delivery box in apartments will reduce the returns of courier packages without delivery. (በአፓርታማዎች እና በጋራ መኖሪያ ቤቶች አካባቢ የዕደላ ሳጥን ማዘጋጀት ሳይታደሉ የሚመለሱ መልዕክቶችን መጠን ይቀንሳል፤)					
ORI 13	The strategy of using agents like gas stations, and others as an alternative delivery model improves timely delivery of packages. (የተለያዩ ወኪሎችን ምሳሌ የነዳጅ ማደያዎችን፣ የጉዞ ወኪሎችን እንደ አማራጭ የዕደላ ጣቢያ አድርጎ መጠቀም መልዕክቶች በወቅቱ እንዲታደሉ አስተዋፅኦ ያደርጋል፤)					
ORI 14	Implementing home to home delivery model as a major delivery model greatly contributes for timely delivery of packages. (የቤት ለቤት ዕደላ አገልግሎትን ሙሉ ለሙሉ መተግበር መልዕክቶች በወቅቱ እንዲታደሉ ለማድረግ አስተዋፅኦ ያደርጋል፤)					
	Human Factor Related Issue					
HFRI1	Knowing different parts of the community is essential requisite for the position as a driver and this helps to reduce long periods of searching for clients. (የተለያዩ የከተማውን ቦታዎች ማወቅ አካባቢውን በመፈለግ ሂደት የሚጠፋውን ጊዜ ስለሚቀንስ የዕደላ ሰራተኛ ቦታ ላይ ለመመደብ እንደ ቅደመ ሁኔታ መታየት አለበት፤)					
HFRI2	The company has skilled and qualified personnel with the required amount in number for packages delivery. (ድርጅቱ ብቁ እና ችሎታ ያለው የዕደላ ሰራተኛ በመጠንም በዓይነትም አለው፤)					

HFRI3	Delivery drivers often overloaded above the maximum capacity and because of this they don't have enough time to meet the promised delivery date. (የዕደላ ሰራተኞች በቀን ማደል ከሚገባቸው በላይ መልዕክት ስለሚሰጣቸው በወቅቱ መታደል የሚገባቸው መልዕክቶች ይዘገያሉ፤)					
HFRI4	Department leader acts in ways to inspire a strong commitment to your assigned job. (የስራ ክፍል ኃላፊዎች/መሪዎች ሰራተኞችን የማነቃቃት እና የማበረታታት ስራ ይሰራሉ፤)					
HFRI5	Department leader treats employees as the organization's most valued asset. (የስራ ክፍል ኃላፊዎች/መሪዎች ሰራተኞችን የድርጅቱ ቁልፍ ሀብት እንደሆኑ አድርግው ያያሉ፤)					
HFRI6	The way the organization rewards employees helps to produce the best results in delivery performance. (የድርጅቱ የማበረታቻ ስርዓት የዕደላ ስራው ውጤታማ እንዲሆን አስተዋፅኦ ያደርጋል፤)					
HFRI7	Training of employees greatly contributes on the performance of on time delivery. (ሰራተኞችን በስልጠና መደገፍ መልዕክቶች በወቅቱ እንዲታደሉ አስተዋፅኦ ያደርጋል፤)					
HFRI8	As part of communication skill, there is proper communication flow all the time between the leaders and delivery employees regarding to delivery information. (በቅርብ ስራ ክፍልኃላፊዎች/መሪዎች እና በዕደላ ሰራተኞች መካከል ስለዕደላ ጉዳይ ትክክለኛ የመረጃ ልውውጥ ይደረጋል፤)					
	Logistical Capability Issue					
LCI1	The company has enough delivery centers where customers can pick up their package. (ደንበኞች ከዋናው መስሪያ ቤት ውጭ መልዕክታቸውን ለመቀበል ቢፈልጉ ድርጅቱ በቂ የሆነ የዕደላ ማዕከላት አሉት፤)					
LCI2	Convenience of service center location to collect packages and to perform delivery is a major factor for adherence to delivery time table. (መልዕክት ለመቀበልም ሆነ ለማደል የአገልግሎት መስጫዎች አመቺነት መልዕክቶችን በወቅቱ ለማደል አስተዋፅኦ ያደርጋል፤)					
LCI3	The company allocates the required resources for each delivery locations. (ድርጅቱ አስፈላጊውን አቅርቦት ለአገልግሎት መስጫ ማዕከላት አሟልቷል፤)					
LCI4	It is important to arrange and design nodes in a suitable way, and to plan the routes well. (የዕደላ አቅጣጫዎችን እና መስመሮችን አመቺ በሆነ መንገድ ዲዛይን ማድረግ አስፈላጊ ነው፤)					
LCI5	The company regularly updates delivery routes and delivery networking. (ድርጅቱ የዕደላ አቅጣጫዎችን እና መስመሮችን በየጊዜው በመፈተሽ ያስተካክላል፤)					
LCI6	Online tracking &tracing is fully functional and provides accurate and timely information for delivery. (መልዕክቶች ስለመታደል አለመታደላቸው የሚያሳውቀው የትራኪንግ እና ትሬሲንግ አሰራር ሙሉ ለሙሉ በድርጅቱ ተተግብሯል፤)					

LCI7	The company introduces online tracking and tracing system and uses all the time. (ድርጅቱ የትሬሲንግ እና ትራኪንግ አሰራርን ሁለጊዜም ሳይቆራረጥ እየተገበረው ይገኛል፤)					
LCI8	The company applies electronic mobile signature capture devices for delivery of package. (ድርጅቱ ለዕደላ ስራ የሚያገልግል የኢሌክትሮኒክ የሞባይል ፊርማ አያያዝ መሳሪያ ይጠቀማል፤)					
LCI9	Automatic SMS (text messaging) is sent out to customers to facilitate on time delivery. (ዕቃ እንደመጣላቸው የሚያሳውቅ መልዕክት ለደንበኞች የመላክ ስራ ሁልጊዜም እየተተገበረ ይገኛል፤)					
LCI10	Wireless communication technologies are helpful to facilitate delivery operation. (ገመድ አልባ እና በዕጅ የሚያዙ የመገናኛ መሳሪያዎች የዕደላ ስራውን ለማሳለጥ አስፈላጊ ናቸው፤)					
LCI11	Provision of work telephone to delivery person helps to make possible timely delivery. (የስራ ስልክ ለአዳይ ሰራተኞች መስጠት መልዕክቶች በወቅቱ እንዲታደሉ በማድረግ ሂደት አስተዋፅ ያደርጋል፤)					
LCI12	So as to deal with different customers order, fleet mixture is very key element resource for delivery business of Courier Company. (የተለያዩ ደንበኞችን ፍላጎት ለማስተናገድ የተለያዩ የእደላ ተሽከርካሪዎች በአይነትም በመጠንም መኖሩ አስፈላጊ ነው፤)					
LCI13	Vehicle type that must be used by operators should be at least with a mixture of motor bicycles, small vans and medium trucks. (ድርጅቱ ለዕደላ ስራ የሚጠቀምባቸው የተሽከርካሪ አይነቶች ስብጥር ቢያንስ ሞተርሳይክል፣ ትንሽ እና መካከለኛ ቫን እንዲሁም የጭነት መኪና ማካተት አለበት፤)					
LCI14	Using electronic navigation equipment increases the performance of timely delivery. (የጉዞመ ስመሮችን እና አቅጣጫዎችን የሚያሳይ ኤሌክትሮኒክ መሳሪያ መጠቀም የዕደላ አፈፃፀምን ያሳድጋል፤)					
	Addressing System and Road congestion					
ASRC1	Unavailability of proper street addressing system has made delivery job very difficult. (የአቅጣጫ ማሳያ ስርዓት አለመኖር የዕደላ ስራን አስቸጋሪ አድርጎታል፤)					
ASRC2	Finding clients addresses is a difficult task in the absence of addressing system. (የአቅጣጫ ማሳያ ስርዓት ባለመኖሩ ምክንያት የተቀባዮችን አድራሻ ማግኘት አስቸጋሪ ነው፤)					
ASRC3	Traffic congestion significantly affects the performance of on time delivery. (የትራፊክ መጨናነቅ መልዕክቶችን በወቅቱ በማደል ስራ አፈፃፀም ላይ አሉታዊ ተፅዕኖ አሳድሯል፤)					
	Customs and Carriers Related Issues					
CC1	Custom clearance procedures contribute for poor execution of on time delivery. (የጉምሩክ የፍተሻ ሂደት መልዕክቶችን በወቅቱ ላለማደል አስተዋፅኦ ያደርጋል፤)					
CC2	Selection and choice of mode of transport affect the performance of timely delivery. (መልዕክት የሚያጓጉዙ አመላላሽ ድርጅቶች አመራረጥ እና የማመላለሻ አይነት መረጣ መልዕክቶችን በወቅቱ የማደል አፈፃፀም ላይ አስተዋፅኦ ያደርጋል፤)					

CC3	Road transport performance has made impact on the performance of timely delivery. (የየብስ ትራንስፖርት አመላላሽ ድርጅቶች የስራ አፈፃፀም መልዕክቶችን በወቅቱ በማደል ስራ ላይ ተፅኖ አላቸው፤)					
CC4	Air freight performance has impact for timely delivery of packages. (የአየር ትራንስፖርት አመላላሽ ድርጅቶች የስራ አፈፃፀም መልዕክቶችን በወቅቱ በማደል ስራ ላይ ተፅኖ አላቸው፤)					
	Customer Related Issues					
CRI1	Customers may sometimes provide vague delivery information which is not correct and updated delivery information. (ደንበኞች አንዳንዴ የሚያምታታ፣ ወቅታዊ እና ትክክለኛ ያልሆነ የማደያ መረጃ ይሰጣሉ፤)					
CRI2	Customers are not answering unfamiliar number when they are called to inform about the delivery. (ደንበኞች መልዕክትከእንዳላቸው ለመንገር ስልክ ሲደወልላቸው ስልኩን ላይመልሱ ይችላሉ፤)					
CRI3	Sometimes the sender shipped the packages to an old address of the recipient where she/he no longer at that address. (ላኪዎች አንዳንዴ የቆየ እና ተቀባዩ የማይገንበት የማደያ አድራሻ ሊሰጡ ይችላሉ፤)					
CRI4	Some customers may be required to pay cash on delivery while they have no clues about such payment. (አልፎ አልፎ ደንበኞ መልዕክት ሊቀበሉ ሲሄዱ ክፍያ መክፈ እንዳለባቸው አስቀድሞ ሳይነገራቸው ዕቃውን ለመውሰድ እንዲከፍሉ ይደረጋሉ፤)					
CRI5	Customers are refusing to accept packages because of customs duties cost which are more than what they paid to buy the goods. (ደንበኞች መልዕክት ለመቀበል የሚጠየቁት የቀረጥ ክፍያ ከዕቃው ዋጋ በላይ ሲሆንባቸው ሳይቀበሉ ትተው ይሄዳሉ፤)					

PART III:-The questionnaire items regarding the dependent variables of On Time Delivery of courier packages.

Please tick (√) for the following statements by indicating the level of agreement that you agree or disagree with the different indicators of timely delivery of packages stated below:

The values of scales are; 1 = Strongly Disagree, 2 = Disagree 3 = Neutral, 4 = Agree and 5 = Strongly Agree

ተ.ቁ	የመለኪያ መስፈርቶች	የመለኪያ ደረጃ				
		1	2	3	4	5
	On time delivery					
OTD1	EMS able to deliver the packages with in the promised time at acceptable cost. (ኢ.ኤም.ኤስ የሥራ ሂደት መልዕክቶችን ቃል በገባው የማደያ ጊዜ ያድላል፤)					

OTD2	EMS packages are sorted and distributed timely to delivery person so as to ensure punctuality of delivery time. (የኢ.ኤም.ኤስ መልዕክቶች በአግባቡ ተዘርዝረው እና ተለይተው ለአዳይ ስራተኛ በሰዓቱ ይሰጣሉ፤)					
OTD3	There are strong coordination b/n d/t operational units within EPSE in the process of handover EMS packages from one department to other department. (የኢ.ኤም.ኤስ መልዕክቶችን ከአንዱ የስራ ክፍል ወደ ሌላኛው የስራ ክፍል በማስተላለፍ ሂደት ጠንካራ የሆነ ቅንጅት ይታያል፤)					
OTD4	EMS is working closely in collaboration with transport companies so as to reduce waiting and transit time to ensure timely delivery. (በአየር መንገድ ፣ በጉምሩክ እና በየብስ ትራንስፖርት በኩል ያለውን የመልዕክቶችን የመቆያ ጊዜ ለመቀነስ የኢ.ኤም.ኤስ የስራ ክፍል ከሌሎች አጋር ተቋማት እና አማላላሽ ድርጅቶች ጋር በቅርበት ይሰራል፤)					
OTD5	EMS is able to deliver full list of received items without damage and losing so as to maintain completeness & accuracy of delivery. (ኢ.ኤም.ኤስ የስራ ሂደት የተቀበላቸውን መልዕክቶች በሙሉ ሳይቀንስ፣ ሳያበላሽ እና ሳያጠፋ ለደንበኛው ያድላል፤)					

55. Please write down improvement areas in the delivery process of courier packages……

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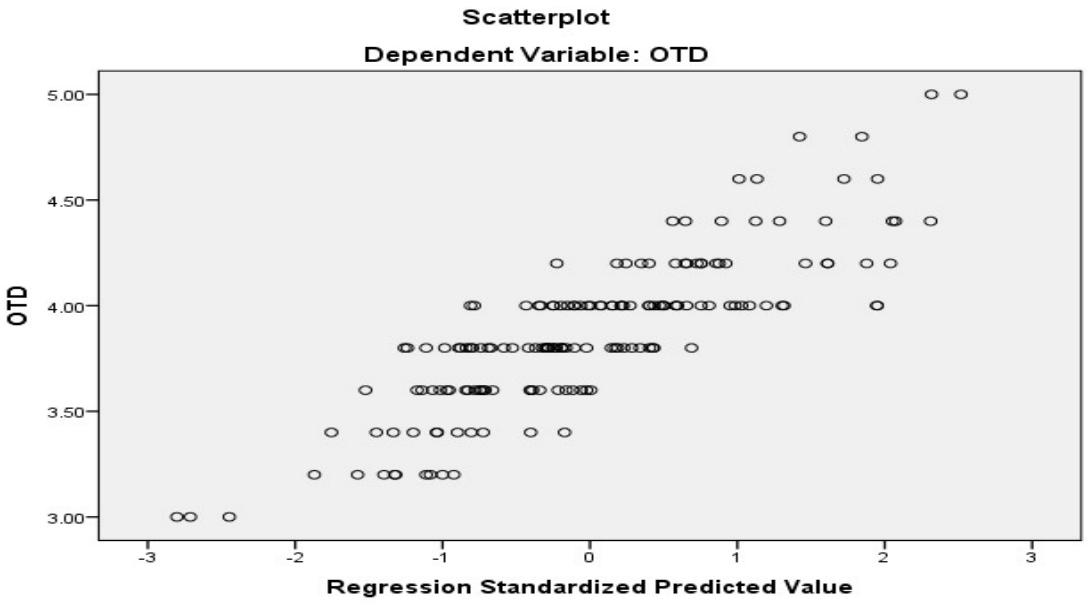
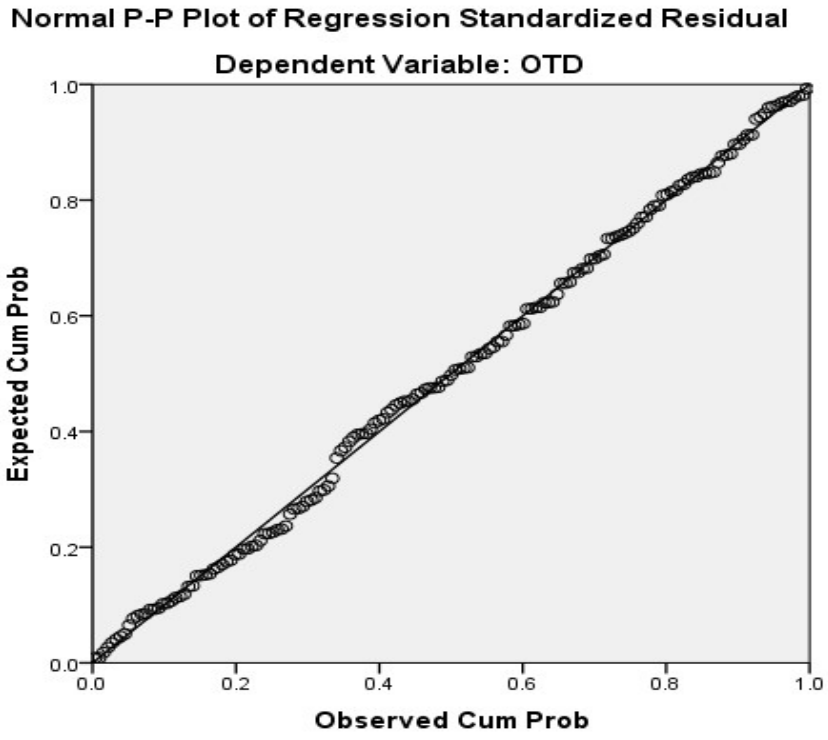
Appendix II: Linearity of the Relationship Test

Fig: 4.8





Source: SPSS output of survey questionnaire, 2019

Appendix III: Multicollinearity Test Table

Fig: 4.9

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	ORI	.344	2.911
	CC	.641	1.559
	CRI	.682	1.466
	HFRI	.598	1.673
	LCI	.427	2.343
	ASRC	.422	2.369

a. Dependent Variable: OTD

Source: SPSS output of survey questionnaire, 2019