



**ASSESSMENT OF THE ROLE OF THIRD-PARTY TRANSPORTERS'
PRACTICES
ON LOGISTICS PERFORMANCE:
CASE OF HABESHA BREWERIES S.CO.**

**BY
BETESEB KEBEDE**

**A THESIS SUBMITTED TO ADDIS ABABA UNIVERSITY, SCHOOL OF
COMMERCE FOR THE PARTIAL FULFILMENT OF THE DEGREE OF
MASTER OF ARTS IN LOGISTICS AND SUPPLY CHAIN MANAGEMENT.**

**ADVISOR
FESSEHA AFEWORK (ASSIT. PROFESSOR)**

**ADDIS ABABA, ETHIOPIA
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DECLARATION

I declare that the project titled the assessment of the role of third-party transporters' practices on logistics performance in the case of Habesha Breweries S.Co. is my work, has not been submitted for a degree at any other university and that all pieces of data utilized in the project have been adequately referenced.

BY: BETESEB KEBEDE

DATE: July 2021

SIGNATURE: _____

CONFIRMATION

This is to confirm that Beteseb Kebede worked under my supervision to conduct this research on the assessment of the role of third-party transporters' practices on logistics performance in the case of Habesha Breweries S.Co. This work is original and has never been submitted for a degree at another university and it can be presented for the partial fulfillment of the requirements for the award of the degree of Master of Art in Logistics and Supply Chain Management.

Assit. Prof. FESSEHA AFEWORK

Date July 2021

Signature_____

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ACRONYMS AND ABBREVIATIONS

3PL – Third Party Logistics

OE – Order Entry

OP – Order Processing

SPSS- Statistical Package for Social Science.

FSMS – Food and Safety Management System

TAT – Truck Turnaround Time

FMS – Fleet Management System

KPI – Key Performance Indicator

VAS – Value-added Service.

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ABSTRACT

One of the components of logistic management is transportation which plays a significant role in delivering a good from the point of origin to point of destination. This section of operation could be performed in house capability of an organization or would be outsourced to those who are specialized on the subject matter- named as 3PL – third-party logistics providers. 3PL engage in different forms of logistics practices like warehousing, transportation, etc. The main objective of this research or study was to assess the 3PL transporters' practices on the logistics performance of Habesha Breweries S.co and to do so, a quantitative research approach was engaged where the data was collected through questionnaires and personal interviews to gather the primary data and some of the organization's data had been reviewed as a secondary source of data. From the population of 96 respondents 77 of them – 80% of the response rate – had responded. The data were analyzed under descriptive and inferential statistics. According to the finding, there exists a significant positive correlation among the 3PL transporters practices and logistics performance, delivery speed has significant and positive relationships among all of the independent variables- inbound logistics practice, customer response, and product return. Thus, it is recommended that the company should arrange and/or enforce the transporters to arrange safe driving training and FSMS (Food and Safety Management System) for their respective drivers to enhance operational efficiency and to reduce unnecessary costs. The lack of this training was the major challenge that was experienced and observed during the study.

Key words– 3PL providers, transporters, logistics Performance

CHAPTER ONE

INTRODUCTION

1.1. Background of the study

Third-party logistics has emerged to manage the supply chain management of a certain company as these companies need to focus on their core competencies and outsourcing these tasks for those 3PL would enable them to bring operational efficiency and simplification on the supply chain management. (Green, F.B., Turner, W., Roberts, S., Nagendra, A. and Wininger, E., 2011).

The development of the 3PL industry can be divided into three main stages. The first one was in the early 1980s when only traditional logistics service providers existed such as transportation companies, warehouses, forwarders, shippers, and agents. The second stage was in the early 1990s when network players, mainly parcel and express companies got involved in the industry. These were companies such as DHL, UPS, and TNT. The third and the last stage of evolution started in the late 1990s when companies from different sectors such as consulting, finance, and IT companies entered the 3PL industry (Berglund, Laarhoven, Sharman & Wandel, 1999).

The outsourcing of logistics functions to 3PL companies has increasingly become a powerful alternative to the traditional company (Boyson, Corsi, Dresner & Rabinovitch, 1999). Moreover, according to Ansari and Modarress (2010), apart from cost reduction, cargo security is also an important reason to outsource logistics activities to 3PL providers. Furthermore, market knowledge, data access, improved expertise, and flexibility are some other benefits (Aghazadeh, 2003).

Logistics Service Providers (LSP) or alternately Third-Party Logistics Service Providers (3PL) are firms that carry out the logistics activities of one or more companies within the supply chain to a vendor, primary manufacturer, or user of product or services; functioning as an intermediary in between the industry and services providers; to suppliers, wholesalers, and retailers (A. Aguezzo, 2012). These third-party service providers engaged in providing transportation together with warehouse service to be competitive in the market

and/or to meet their customers' relentless demand concerning marketing, product distribution. (Skjoett-Larson, 2007).

Habesha Breweries S.C. is conveniently located in Debre Birhan, 130 KM from the capital of Ethiopia, Addis Ababa, in what could be considered the center of the country from where the beers get transported to most towns in the region. Founded in 2009 by 8,000 Ethiopian Shareholders, it started brewing in 2015 with 300,000 HL. After three years of market experience, it has undergone production capacity enhancements with no signs of slowing down as projected expansion of the brewery is continuing.

Habesha beer is sold in the retail and catering industry (also called Off-Trade and On-trade) in the following states in the United States: Washington D.C., Virginia, and Montgomery County in Maryland. In Europe, Habesha beer is available in the Netherlands mainly in on-trade and selected off-trade.

Habesha is a beer with a refreshing taste and a unique golden color that is made from barley and pure spring water of Debre Birhan. With 5% alcohol content, Habesha is famously dubbed Cold Gold with both the brand name and the motto translated in Amharic, one of the main local languages in the country. Gold represents Habesha Beer's rich color and winning personality while Cold (2-4-degree Celsius) is the ideal temperature to serve Habesha. The unique feature on the bottle which uses thermochromic papers indicates the right coldness of your beer with the words COLD GOLD turning from white to blue.

Habesha breweries S. Co had been using both owned transport and rental - 3rd party transport to deliver the product(s) from the factory to commercial warehouses. Subsequently, the decision is made to fully outsource the transport operation to 3rd party transport service providers. Therefore, assessment and evaluation of their performance are vital. Performance measurement is described by Neely *et al.* (1995) as the method of determining the effectiveness and efficiency of the undertaken actions. Effectiveness is understood as the degree of fulfillment of customer expectations, while efficiency is a measure of the extent to which business assets are used to provide a given level of customer satisfaction.

1.2. Statement of the problem

At the commencement of the business operations, Habesha Breweries used both insource and outsource transportation to deliver a product to point of production to different commercial warehouses in Ethiopia. The company had eight Volvo truckers with a loading capacity of 22 pallets - 1680 crates. These Volvos were engaged in the transportation of products/crates specifically in Eastern and Southern parts of Ethiopia due to the cost reduction purpose and topography convivence. The outsourcing of logistics services has been one of the most common logistics options for the last two decades. (Knemeyer & Murphy, 2005). Quélin and Duhamel (2003), argued that for the past 20 years, outsourcing of logistics activities has been one of the most used services in many companies. Companies that used this new strategy of using third-party logistics scored greater logistics performances instead of sourcing them from within, *International Journal of Business and Management* (2014). Subsequently, Habesha Breweries S.Co. transferred all the transportation operations to 3rd party transporters and these 3rd party transporters have designated areas of operation, but not limited to it. As transportation cost is the higher cost that a company could incur, assessment of these 3rd party transport is vital.

According to Abrahamson & Rehme (2010), Schramm-klein & Morschett (2006), well-managed transportation was capable of positively influencing firm performance. This was in agreement with Fugate, Mentzer & Stank (2010) study which established that there was a positive relationship between logistics performance and firm performance. Studies by Shang & Marlow (2005), Bowersox, Closs & Cooper, (2010); Graeml, & Peinado, (2011) confirm there was a strong link between logistics performance and firm performance.

Different studies have been done on the evaluation of the performance of 3rd party transporter and related subject matters. Afework Legesse (2018), the performance of 3rd transporters was evaluated, and the researcher selected some KPIs - vehicle fill, empty running, on-time-in-full, schedule deviations, safety and found that the performance of the vehicle filling of the transporters was significantly above average with 83% performance rate across the transporters. The study also signified empty running, on-time-in-full, deviations from schedule, and safety performance was different among the transporters and the existing performance is far lower than the expected level.

Yalew Mersha Gelaye (2018) examined the impact of transportation on logistics performance in the military with the dimension of logistics differentiation, effectiveness, and efficiency. The research found that without well-developed transportation systems, logistics could not bring good performance. Well-structured ways of working in transportation would undoubtedly play a significant role in the logistics efficiency of the company, decrease the loss of an injured soldier, and promote service quality (food service, water service, contingency base services, hygiene services, and mortuary affairs).

Emebet Zerihun (2016) on the effect of the use of rental vehicles on logistics performance: Case of GOAL Ethiopia; found that among the variable's satisfaction, cooperation, response time, safety/security and infrastructure have a significant effect on logistics performance.

As a primary study of the case, the preliminary phone interview has done with the materials manager, who oversees the materials (raw and finished goods) management of the company as well as responsible for the warehouse operation of the brewery and personal interview with the transportation manager who has a direct relation with the transporters. From this interview, it is observed that the challenges of flexibility on the operation, assurance of the delivery quality of the product, empty running – truck returned with null truck, route planning, security issues, and communication-related issues have been observed and these and other issues that are going to be studied on this research would affect the company logistics performance.

According to the review of the recent transport activities data of the company, the following cost has been incurred for the last quarter of 2020 due to the empty running that is obtained from the transport section of the company.

Table 1.1: Cost of Empty-Running

Division	Cost Incurred
Addis Ababa	ETB 138,579.00
Northeast	ETB 55,904.00
Northwest	ETB 102,332.50
South	ETB 32,306.00
West	ETB 30,907.00

Source: - Company's transportation section (2021)

1.3. Objective of the study

1.3.1. General Objective

The general objective of the study is to assess the role of transporters' practices on the logistic performance of Habesha Breweries S.Co.

1.3.2. Specific Objectives

The specific objectives of the study are:

1. To assess the logistics performance of Habesha Brewery S. Co with respect to delivery dependability, delivery flexibility, delivery speed, and responsiveness.
2. To assess the 3rd party transporters' practices' effect on logistics performance of Habesha Breweries S.Co.
3. To identify the challenges of Habesha Brewery while working with 3rd party transporters.

1.4. Research Questions

1. How is the logistics performance of Habesha Brewery S. Co look like with respect to delivery dependability, delivery flexibility, delivery speed, and responsiveness.
2. What is the effect of 3rd party transporters' practices on the company's logistics performance?
3. What are the challenges of Habesha Brewery while working with these 3rd party transporters?

1.5. Significance of the study

Since logistics costs are one of the higher costs that manufacturing companies incur and investigate the logistics efficiency of the key actor of the logistics operation - the 3rd party logistics provider will help the industry and its players, as a practical significance, to recognize the deficiency to correct, the strength to sustain and thus to maximize operations and so on. Policymakers, on the other hand, will also benefit from this research through

national policymaking on transport-related issues. This study could be used by Habesha Breweries to review its logistics efficiency and take corrective action on the gaps to stay competitive in the market. Finally, the researcher who is interested in exploring 3rd party providers and other related subjects will use this thesis as an additional resource to refer, academically.

1.6. Scope of the study

Habesha Breweries plant is situated in, Amhara region, Debre Birhan town 130 km away from the capital, Addis Ababa. All transportation operation is carried out from the factory to different part of the country and transport operation management is carrying out in Addis Ababa. Therefore, the scope of the study, geographically, was Debre Birhane and Addis Ababa where the data collection was carried out. Conceptually, the logistics performance was encompassed delivery dependability, responsiveness, delivery flexibility, and delivery speed and on the other hand, from the 3PL practices, only the transportation part studied.

1.7. Limitation of the Study

The major limitations of the study were the current global pandemic -COVID 19 which makes the data collection effort more arduous. Moreover, to have the opinion of some of the expert's interviews was also planned for this study; however, most of them were out of the office and did not have the willingness to avail themselves for the interview.

1.8. Conceptual definitions and terms

1. **Third-Party Logistics** - the administration of outsourced transportation, distribution operations, logistics, is referred to as third-party logistics (Rushton & Walker, 2007)
2. **Transportation:** - According to Wikipedia, transportation is defined as the movement of people and goods from a point of origin to a point of destination.
3. **Delivery dependability** -. It is measured by perfect order fulfillment and demonstrates the degree to which a supplier can serve its customers within the promised delivery time. (https://en.wikipedia.org/wiki/Delivery_reliability)

4. **Responsiveness** - The capability of firms to respond persistently, at an appropriate time to the demand of customers or change in the marketplace to sustain their competitive advantage is known as responsiveness. (Holweg, 2005). On the other, Responsiveness refers to customers' expectations of the willingness and ability of supplier personnel to provide prompt service. This extends beyond mere delivery to include issues related to quick handling of inquiries and resolution of problems. Responsiveness is a time-oriented concept and customers have expectations regarding suppliers' timely handling of all interactions. (Donald J. Bowersox, David J. Closs, M. Bixby Cooper, 2002).
5. **Delivery flexibility** - in a logistic sense here is the ability to adapt lead times to customer requirements. Just-in-time (JIT) represents the high flexible delivery level that suppliers must deliver their products to the customer at the immediate right quantity, time, and place. (Yueru Zhong, 2015)

1.9. Organization of the research

Chapter one contains the study background, problem statement, general and specific questions, the objectives of the study, conceptual definitions of terms, the significance of the study, the scope of the study, and the limitation of the study. Chapter two contains the literature review related to the study. It has an introduction, a theoretical review, and the conceptual framework of the study. Chapter three research methodology; describes the type and design of the research, the subjects/participant of the study, the sources of data, the data collection tools/instruments, the procedures of data collection, and the methods of data analysis. Chapter four results and discussion/Data presentation, analysis & interpretation; this chapter summarized the results/findings of the study and interpret and/or discuss the findings. Finally, in chapter five summary, conclusion, recommendation; are presented as a summary of findings, conclusions, limitations of the study, and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1. Theoretical Literature Review

2.1.1. Third-party logistics providers definitions

Third-party service providers abbreviatedly called 3PL, are those that are engaged in providing outsourcing operation business especially on supply chains management activities like distribution, warehousing, and distribution (Rushton & Walker, 2007). 3PL are also engaged in different forms of logistics activities like cross-docking, freight forwarding & customs clearance service (Payaro & Papa, 2017), (Mothilal et al, 2012), (Park & Jeong, 2016), (Ellinger et al, 2008), (Zailani et al, 2017) and they are also engaged on packaging and order processing, barcoding, etc. Precisely, 3PL are a company that provides and/or engaged in different supply chain activities which were performed in-house of a certain organization (Soodyall, 2013)

The disparity between the things a company needs to do and what a company manages to conduct in-house is increasing as the global market becomes more complex. The tendency among firms from all sectors is to outsource their logistics activities that are more costly and time-consuming to external entities, namely in logistics, third-party logistics providers (Lambert *et al.*, 2006). 3PL companies offer several services related to logistics, including shipping, warehousing, distribution, and freight consolidation, for example. Outsourcing these tasks helps firms to minimize costs and concentrate on their core activities, providing a strategic advantage over opponents. (Christopher, 2005). Nonetheless, it is also a difficult decision to choose the right partnership.

2.1.2. Third-party logistics providers' practices and activities.

Different scholars defined different activities performed by 3PL. For instance, Lieb (1992) demonstrates 3PL are those that are engaged in the logistics process, on the other hand, Zailani, Shaharudin, Razmi & Iranmanesh (2017) said the major tasks of 3PL on the supply chain are transportation, warehousing, custom related operation. Similarly, Razzaque & Sheng (1998), defined 3PL activities as more or less similar to previous scholars, 3PL are those engaged in materials handling, order processing, inventory/ stock management, warehouse, and transportation. Below the activities of 3PL are discussed

2.1.2.1. Freight forwarding

Freight forwarding is one of the 3PL activities which is focused on managing the efficient movement of products or goods from one place to another for importers and/or exporters. Freight forwarders use any sort of transportation mode like rails, airline, and shipping lines to move the goods (Rushton and Walker, 2007)

2.1.2.2. Inventory management and Planning.

Inventory and planning management is focused on maintaining the level of stock, determining economic order quantity, planning of stock replenishment, and stock/inventory dispatching based on the given customer service requirements and stock demand. (Ensermu, 2015).

2.1.2.3. Warehousing service

Storage-which is a means to keep different materials, packing and labeling different materials, distribute and deliver those packed, and label materials based on delivery - catalog order are some of the activities that could be categorized under warehouse service. (Chopra and Meindl, 2010).

2.1.2.4. Customer response

Order entry (OE), order processing (OP), and invoice are the element of customer response for which it importantly focused on delivering customer orders on time with the required quantity and quality. Failure to do so will result in lose customers' trust which is the major competitive advantage to stay competitive in the current tough business market. Irresponsive to customer demand would adversely affect the relationship with the customers. (Esserman, 2015)

2.1.2.5. Transportation service or freight transport service

Transportation is one 3PL activity where it is all about moving customers' products or goods from the point of origin to the destination where the goods are needed. This can be carried out in several modes, including air, sea, rail, and road transport (Rushton and Walker, 2007) and on the other hand, Ensermu (2015) demonstrates some sort of activities that could be included in transportation like network design, carrier & freight management, and shipment management.

2.1.2.6. Product assembly/packing/labeling

Product assembly, packaging, and labeling are a kind of activities that are performed by the 3PL where those activities are interrelated which could be done simultaneously. (Bhat & Raghu, 2012).

2.1.2.7. Customs clearance

This cover required customs clearance services that the company provides its customer to enable them to move their goods across international borders. These services comprise customs document preparation and delivery, management of the actual clearance process, import document preparation, and so on.

2.1.3. Value-added service of the 3PL.

There are also many additional services offered by third-party logistics providers, the more traditional functions of logistics. These are often known as 'value-added' services because

they consist of those functions and services that add significant additional value to the product being distributed. Alan Rushton, Phil Croucher, Peter Baker (2014) mentioned some of the following value-added services.

- 1. Product return:** - Another issue that has arisen due to environmental concerns is the recent legislation for the return of consumer products that have reached the end of their working life. In Europe, this is reflected in the Waste Electrical and Electronic Equipment (WEEE) Directive. The objective of this EU directive is to reduce the amount of WEEE being produced and to encourage its reuse, recycling, and recovery. Organizations that manufacture, supply, and use electronic and electrical equipment are all covered by this legislation and there are significant implications for their operations. As already indicated with previous examples of reverse logistics, this is extremely difficult to undertake through existing logistics structures, so it is a prime opportunity for third-party service providers to set up and run reverse operations to fulfill these legislative requirements.
- 2. Inbound logistics** the provision and movement of goods into a manufacturing company is also seen as an area for additional value-added service. This involves the coordination of the collection of the raw material, components, and packaging products that a manufacturing company requires. It typically might include not just the collection and transport of all these different products, but also the stock control, ordering, and order progress chasing. It has been a much-neglected area and offers a good opportunity for cost-saving and improved stock and supplier control and is one that several 3PL now offer as suitable services.

On the other hand, Foulds and Luo (2006,) state that the term “value-added” refers to “the collection of activities within a company or a supply chain resulting in the creation of a product or service valued by the consumer”. Berglund (2000) claims that value-adding services stand for all types of activity that traditionally are not part of the transportation and warehousing-based service offering of TPL firms. Bowersox and Closs (1996) argue that value-added services are something extra, something more than the firm’s high-level basic service. However, it must be pointed out that the authors are talking about value-added services in logistics in general and not particularly about value-added services in

third-party logistics. Bowersox and Closs (1996) argue that value-added services by definition are unique to the specific customers and extend over the firm's basic service program.

Bowersox and Closs (1996) assume a narrower view and use the VAS notion for additional services that are customized to specific customers' requirements. The firm is thus performing unique actions to provide value to individual customers. They find that specialized, unique solutions drive the demand for 3PLs who can provide such value-added operations. According to Bowersox and Closs (1996), value-added services may be divided into five primary performance areas:

1. **Customer-focused VAS** constitutes alternative ways for third-party specialists to distribute products, e.g. direct store delivery or home delivery. Picking, packing, and repacking services are also common to enable the distribution of a standard product in unique configurations selected by the receiver.
2. **Promotion-focused VAS** involves making point-of-sale displays and other services whose purpose is to stimulate sales. Point-of-sale displays can also combine products from different suppliers in one display for a particular store. Often gifts and related promotion materials are handled and shipped by the provider.
3. **Manufacturing-focused VAS** are mainly postponement activities that delay product finalization until the exact customer order is known. The costs of such operations by outside providers can be higher than incorporating them in the original manufacturing process. But the reduced risk of producing products that lack demand can be very advantageous.
4. **Time-focused VAS** are services where providers sort, mix and sequence inventory before it is delivered to manufacturing facilities. Just-in-time deliveries to factories are popular services of this type. This reduces handling and inspections performed at the manufacturer's site and removes unnecessary work.

Other VAS classifications also exist. As an example, Vaidyanathan (2005) provides a quite extensive categorization of non-standard services in different functional areas.

Table 2.1: Value-added service types

VAS type	Example services
IT	tracking, transparency, order booking, self-service access, flow analysis
Product-related	product assembly, postponement, labeling, packaging, just-in-time support
Customer-focused	direct delivery, cross-docking
E-commerce	payment platform
Promotional	point-of-sale displays, promotional materials, telemarketing
Reverse logistics	Repair, recycling
Administrative	purchasing, order processing, invoicing, export/import, customs brokerage
Customer service	Phone support
Consulting	Supply chain optimization
Financial	Stock ownership

Source: Meier and Andersson, (2003).

2.1.4. Pros and cons of 3rd party logistics providers

Lau *et al.* (2006) Some common key factors that enable organizations to use 3PL firms have been summarized. Such considerations have been broadly classified as fiscal, strategic, and environmental perspectives. Solakivi *et al.* (2011) agree outsourcing logistics activities to 3PL companies can make cost reduction, cost-saving, and capital investment reduction. According to those factors, it can improve profitability, efficiency, return on assets, and add value to the product. Brewer *et al.* (2013) state, for strategic factors, can make companies focus on core competence, acceleration of business process re-engineering, and enhancement flexibility.

Influenced by those factors, 3PL can improve performance, competitiveness, and achieve competitive advantages. Meanwhile, companies can leverage the organization's skills and resources and improve business focus. Finally, it can reduce an organization's productive capacity, increase responsiveness to market change, and reduce risks. For environmental factors, it refers to IT development, globalization, and 19 capabilities of the supplier. IT development can meet increasing demand and manage resources more efficiently and economically (Christopher, 2005).

However, it is observed that there is a gap using the 3PL. Lau *et al.* (2006) also summarized the drivers against 3PL usage. Kumar *et al* (2007) agree there are many potential problems of using 3PL companies where the loss of control made the companies lose core

competencies and alienating customers. The loss of critical skills made organizations lose competitive advantage and increased the number of competitors. The low capabilities of 3PL providers made organizations lose market share. The loss of flexibility reduced responsiveness for the fast-changing market. Failure to realize the hidden costs of the contract increased operating costs. Indecisiveness on which activities to outsource and less support from the organization increased the chances of failure. The fear of job loss increased resistance to change and lower staff morale.

Table 2.2: Advantages and Disadvantages of using Third-party logistics provider.

Advantages	Disadvantages
Cost Reduction	Loss of control over the logistics function
Improved efficiency, service, and flexibility	Impact on in house workforce
Focus on core competency	More distance from client's loss of personal touch
Freeing up resources	Inconsistence of services by 3PL provider
Avoidance of inhouse resources	Perception issues regarding 3PL service quality
Risk sharing	
Better cash flow	
Other' resource accessibility and utilization	

Source: Forrest B.*et al* (2008)

2.1.5. Logistics

Logistics is one of the dynamic activities that enables the connection between production and consumption (Bartolacci, *et al.* 2012). Council of Supply Chain Management Professionals states that logistics consists of a set of processes encompassing the process of planning, implementing, and managing the flow of commodities, services, and associated data (Vitasek, 2013). Logistics is a complex business and that can be measured from different perspectives. One of the objectives of logistics is to guarantee the efficiency and the efficacy of all the procedures from the point of origin to the point of the destination whilst meeting the customers' required quality, including information reliability and sensibility to customers' needs. Logistics is estimated as one of the major expenditures for businesses, though varying widely across sectors (Waters, 2003).

Waters (2003) refers that without logistics, no materials move, no operations can be done, no products are delivered, and no customers are served to position the right products, close to the right consumer, several activities must be performed, including transport, customer service, information technology, and communications, finance, warehousing, and outsourcing (Frazelle, 2002). To perform these activities, the participation of several actors is required: freight forwarders, carriers, third-party logistics providers (3PL), warehouses, shipping companies, manufacturers, and retailers, to name a few. In addition to the ones mentioned there are two vital participants in the complex logistics system: the first one is responsible for the demand - the consumer – the second one oversees regulating the activities – the authorities.

Logistics is not only relevant to the production sector, but it is also crucial for enterprises from all segments, e.g., banks, retailers, government, and institutions. Logistics plays a key role in the competitiveness of organizations whilst creating value by providing time and place utility Christopher (2005), Lambert *et al* (2006) & Waters (2003) refers that without logistics, no materials move, no operations can be done, no products are delivered, and no customers are served. To position the right products, close to the right consumer, several activities must be performed, including transport, customer service, information technology, and communications, finance, warehousing, and outsourcing (Frazelle, 2002).

2.1.6. Logistics Performance

Performance measurement is the process of collecting and analyzing data regarding the performance of an organization or individual (Crow, 2012). It is also defined as the process of measuring the efficiency and effectiveness of the undertaken actions. Effectiveness is understood as the degree of fulfillment of customer expectations, while efficiency is a measure of the extent to which business assets are used to provide a given level of customer satisfaction (Neely *et al.* 1995). In turn, the performance measuring system should be understood as a set of Key Performance Indicators (KPIs) used to measure the efficiency and effectiveness of operations (Shepherd, Günter 2012).

One of the definitions that defined by Bobbitt (2004), (Cameron 1986). logistics performance is focused on how the logistics operations are effective, efficient, and

differentiated to perform given certain tasks. Logistics functions or companies should strive for excellence in all three dimensions. First, they should aim at higher efficiency, which implies minimizing the ratio of resources utilized against the derived results. Second, the companies should place importance on accomplishing pre-defined goals, i.e., effectiveness. Last, a substantial effort should be placed on gaining superiority when compared to competitors. In the logistics sector, the last dimension is referred to as logistics differentiation (Langley & Holcomb 1992), which is equivalent to the process of “benchmarking” as used in the general quality management research and practices (Basak *et al.* 2001).

Different scholars put their views and definition about effectiveness, efficiency, differentiation. For instance, Mentzer & Konrad (1991) said logistics performance is all about measuring how effectively and efficiently a certain task is performed where efficiency could be explained doing things economically and effectively is majorly focused on the achievement of goals. However, Fugate *et al.* (2010) include differentiation as part of logistics performance in addition to effectiveness and efficiency and (Karagöz & Akgün, 2015) define differentiation as an activity that could add more value to the customer service. Thus, measuring 3PL performance is very critical but there a few studies available regarding performance management of 3PL. (Lai, 2004; Gunasekaran & Kobu, 2007; Kucukaltan *et al.*, 2016)

2.1.7. Logistics performance and its attributes

The success of several industries is attributed to the performance of logistics operations (Knemeyer and Murphy, 2004); which would be defined as individual or integrated services in transportation, warehousing, materials management, order management, customer services, and procurement (Robeson and Copacino, 1994; Skjoett-Larsen, 2000). Reduction of costs while providing the quality and schedule to satisfy the customers are the major objectives of operational performance (Lynch, 2000). Studies on supplier selection analyses these criteria in general (Bevilacqua and Petroni, 2002; Chang *et al.*, 2006; Demirtas and Üstün, 2008) or detail as an inter-operation mix classified by a business

(Lai *et al.*, 2004), by processes (Robertson *et al.*, 2002; Tyan *et al.*, 2003) or by decision variables (Liu and Ma, 2005; Jharkharia and Shankar, 2007).

Principal components of cost reduction in transportation are ascribed by vehicle allocation and routing (Ross *et al.*, 2007). The three measures which are independent of the industry are the size of fleet capacity (Tarantilis and Kiranoudis, 2001; Tarantilis *et al.*, 2004; Hsieh and Tien, 2004), distance (Di Benedetto, 1999; Chen *et al.*, 2005), and the driving force (Zhao and Stank, 2003; Di Benedetto, 1999). The quality in transportation is helping to realize the delivery commitments in quality and time by avoiding the loss of goods (Bowersox *et al.*, 1999; Panazzo *et al.*, 1999) and relocation (Leung *et al.*, 2002; Powell and Topaloglu, 2003).

The increasing demand on 3PL service providers service observed all around the world as business organizations preferred to focus on core business as well as outsourcing resulted in cost reduction and improve the quality of logistics service. To mention some, Japan and the USA outsourced 70% and 42% of logistics operations respectively (Li *et al.*, 2012) and Italy outsourced 70% of operations in the food and fashion industry. (Payaro & Papa, 2017). Globally, 40% of logistics activities are outsourced to 3PL. (Jiang & Qureshi, 2006).

Order rate and order cycle are indispensable measures in logistics service sales (Boyson *et al.*, 1999; Dong and Chen, 2005). These two measures ensure the success of transportation and warehouse management success as well as customer services (Chen *et al.*, 2005). Improvements in sales cost reduction are realized by balancing the demand rates and order rates (Van Norden and Van de Velde, 2005). Customer relations management also contributed to new measures like changes in customer portfolio and complaint rates (Collins *et al.*, 2001; Wouters and Sportel, 2005).

2.1.8. Determinants of logistics performance measurement

Management experts often say that "you can't manage what you can't measure." What is measured, how it is measured, and how data are presented can affect how problems are evaluated and solutions selected. There is a consensus among the scholars on the logistics performance measuring indicators which are named as effectiveness, efficiency, and

differentiation. (Bobbit, 2004; Cameron, 1986; Fugate, 2010) and those could be done simultaneously (Fugate, 2010).

2.1.8.1. Efficiency

1. The ratio of assets used compared to the result obtained. (Mentzer and Konrad, 1991).
2. According to Chamberlain 1968; Van der Meulen and Spijkerman, (1985), efficiency is the ratio of input with the real output derived from the inputs.
3. The ratio of how properly the resources used are employed (Fugate. 2010).

2.1.8.2. Effectiveness

1. The extent to which the logistics function's goals are accomplished (Mentzer and Konrad, 1991).
2. Langley and Holcomb, (1992), demonstrate effectiveness as the capacity to meet customer requirements that are critical like availing stock on time, providing product guarantee. The efficient transport management practice is perceived to ensure efficient movement of and coordination of goods and commodities to and from the organization (Mugo, 2013).

2.1.8.3 Differentiation

1. Identifying where an organization placed/ranked compared to the existing competitors in the market (Langley and Holcomb, 1992).
2. Being outstanding on the given task from the competitors. (Fugate. 2010).

2.1.9. Transportation

It is of the most visible elements of logistics operation it provides two services product movement and storage. Generally speaking, transportation type could be categorized by infrastructure, operations, and vehicles, where the modes are air, rail, pipelines which engage the movement of goods and people from the point of origin to point of destination. (Coyle et al, 2011)

As per (Coyle *et al*, 2011) transportation service is very frequently important for the selection of a particular mode operating between two points. The dimensions of transportation service would include reliability, accessibility, and security. These factors are looked at in terms of their cost impact as well as the actual transportation cost itself in selecting a particular model. Transportation is a critical link in the overall supply chain, which has become an important concept for organizations in the 21st century. Transportation can be viewed as the glue that helps to hold the supply chain together.

2.1.10. Logistics and transportation practices

Logistics and transportations have emerged as one of the most supply management practices in most institutions. Logistics activities entail all the production activities undertaken to ensure all the goods are effectively produced while transportations cover how the consumer gets the final products at the right time. These two concepts do not exist as separate entities but ought to be well coordinated as successful transportation will be achieved when the logistics were well managed (Ketchen & Hult, 2007).

The main objective of logistics activities in an organization is to enhance the overall supply chain management of the company. Unfortunately, this business stream lacks expertise who could perform as required. As a result, outsourcing of those logistics activities to 3PL is inevitable to improve performance. (Stevenson, 2009). Transportation majorly focused on the operating logistics activities with lower cost, delivery of the goods to the customer on time and in full through playing a crucial role as a connective dot on both deliveries of service and meeting customer satisfaction. (Byrne & Markham, 1991). It is a critical business operation, and it needs to be very responsive in the current business environment where delays in customer response would adversely affect the entire business. (Shankar, 2001).).The inventory and distribution management in a certain organization leads to the incorporation of logistics and transportation practices where inventory management focuses on enhancing worthiness and transparency in transport operations and business transactions. Failure to implement an adequate inventory control system will adversely affect the transportation scheme and consequently, it will not meet the objective. (Phelan, 2009).

2.2. Empirical Literature Review

Different scholars studied the performance of 3PLs with different perspectives.

2.2.1. Performance Measurement by Customer Perspective.

(Li, 2011; Zailani et al., 2017), Stank et al., (2003), Forslund, (2007); Wallenburg et al., (2010), Liu & Lyons, (2011) performed their research on the performance of third-party logistics providers based on the customer perspective. The researchers collected the data for their study from the companies or organizations that use third-party logistics providers as means to manage their logistics activities. Those entities include manufacturing companies, wholesalers, and retailing organizations. To mention some, Zailani et al. (2017), for instance, studied the logistics performance of third-party companies that are engaged in the electronics business, and on the other hand, Forslund (2007) performed the research in Sweden companies that are engaged in manufacturing business.

2.2.2. Performance Measurement by selected variable.

In the other studies, variables like logistics cost, flexibility, on-time delivery, and lead time were used as means to measure the logistics performance of third-party logistics providers. Wallenburg et al. (2010) used the aforementioned variables to measure the logistics performance of companies that work in the USA and Germany.

Emebet Zerihun (2016) on the effect of the use of rental vehicles on logistics performance: Case of GOAL Ethiopia; found that among the variable's satisfaction, cooperation, response time, safety/security and infrastructure have a significant effect on logistics performance.

Yalew Mersha Gelaye (2018) examined the impact of transportation on logistics performance in the military with the dimension of logistics differentiation, effectiveness, and efficiency. The research found that without well-developed transportation systems, logistics could not bring good performance. Well-structured ways of working in transportation would undoubtedly play a significant role in the logistics efficiency of the

company, decrease the loss of an injured soldier, and promote service quality (food service, water service, contingency base services, hygiene services, and mortuary affairs).

2.2.3. Performance Measurement by Employees Perception.

Fugate et al. (2010), Fawcett & Cooper, (1998), Töyli et al., (2008), Green et al., (2008), Schramm-Klein & Morschett, (2006), Daugherty et al., (2009), Töyli et al. (2008) asked the respondents selected within the organization to assess the logistics performance of Finnish small and medium-sized enterprises. This research aimed to clarify the perception of those employees who worked with the organization and create the comparison of their company's logistic performance with the competitor in the market based on the evaluation parameter or variable like service quality, logistics efficiency, time-oriented operational metrics. On the other hand, a study carried out by Green et al. (2008) based the data collected from the factory manager in the USA who works in the manufacturing companies of the country on the impact of logistics and marketing performance on the financial performance of a manufacturing company.

2.3. Conceptual Framework

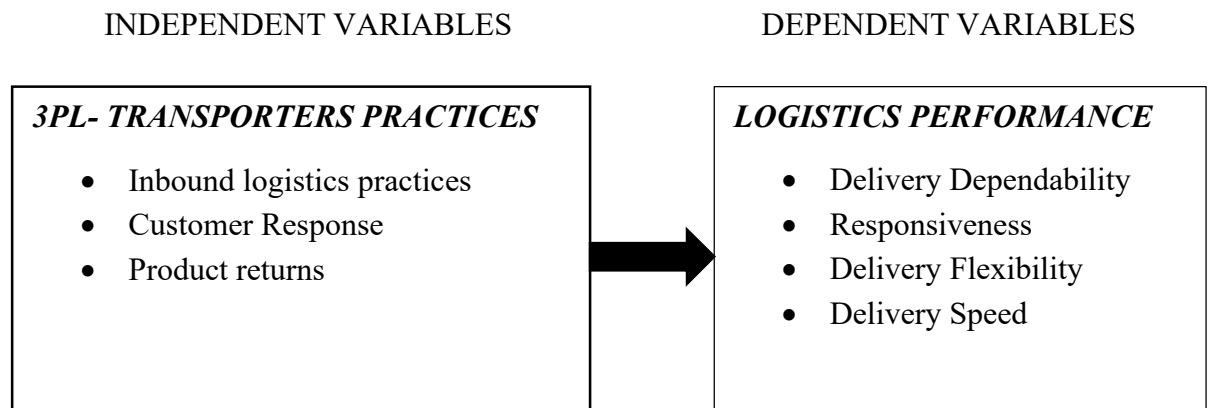


Figure 2.1: Conceptual Framework

Source: Developed by the researcher June 2021

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1. Research Design

In this research, quantitative research was used. Descriptive and explanatory (casual) designs were used to acquire information to assess the effect of transporters' practices on logistic performance Habesha breweries S.Co.

3.2. Research Approach

3.2.1. Population of the study

According to Hair *et al.* (2010), a population could be defined as a certain group of people for which questions could be queried and observations are made to develop the required data structures and information. Therefore, in this study, the population – 96 were all stakeholders direct and indirect related to the transportation operation those are the brewery warehouse operation team, area sales managers, transportation teams, raw-materials procurement team, central order processing team.

3.2.2. Sample and Sample Techniques

In this study, the population was studied as it was less than 100. Habesha Brewery working with four 3rd party transporters and therefore, in this study, the population was all stakeholders direct and indirect related to the transportation operation those are the brewery warehouse operation team, area sales managers, transportation teams, raw-materials procurement team, central order processing team. will be a part of the census.

3.2.3. Instruments of data collection

The questionnaire technique was used to collect primary data with the close-ended questionnaire. The questionnaires were filled by the brewery warehouse operation team, area sales managers, transportation teams, procurement team, central order processing team. Furthermore, different sources of the documents were used to collect secondary data.

3.2.4. Source of data collection

In this study, both primary and secondary data collection have been employed. Primary data was gathered through questionnaires and secondary data was obtained through a review of records and research papers.

3.2.5. Data analysis

Quantitative statistical methods are used to analyze quantitative data. The researcher had applied descriptive statistics which is in terms of frequency percentage, mean and standard deviation, and inferential statistics used with multiple linear regression to analyze the extent of the relation of transporter's practices and logistics performance of Habesha breweries.

3.3. Validity and Reliability

3.3.1. Validity

Validity is the accuracy of a measure or the extent to which a score truthfully represents a concept. Validity is a means to assure/check whether the given measuring instruments enable to measure what they are expected to measure or not. Good measures should be both consistent and accurate. If a measurement is valid, it is also reliable (Joppe, 2000). The validity of the data collection instrument was conducted through the advice of professionals and academicians of the subject matter as well the literature reviewed throughout doing the research.

3.3.2. Reliability

Measuring techniques to be called reliable, they must be consistent and stable on the score obtain while the researchers measuring and/or assessing over the given period of time and condition. Thus, reliability assured those measure techniques placed on the given research are being consistent and dependable. If the measurement is reliable, then there is less chance that the obtained score is due to random factors and measurement error (Geoffrey *et al*, 2005). To measure the reliability of certain research data collection instruments, customarily, Cronbach's alpha engaged as it draws impartial estimation on data

generalization as it is described by (Zinbarg, 2005), and the threshold point for acceptability of the instrument is regarded to be proposed ≥ 70 . In this study, the pilot test was engaged to determine the reliability of the questionnaire that was being used.

Table 3.1: Test for Reliability

Variable	No. Items	Cronbach's alpha
Inbound logistics practices (ILP)	4	0.875
Customer Response (CR)	4	0.856
Product returns (PR)	3	0.753
Delivery Dependability (DD)	3	0.834
Responsiveness (RES)	3	0.829
Delivery Flexibility (DF)	3	0.821
Delivery Speed (DS)	3	0.834
Challenge (CHL.)	4	0.841

Source: Own Computation June 2021

3.4. Ethical Considerations

According to Kumar and Kandasamy (2012) ethical considerations in research work includes the following:

1. **Right to Choose:** everyone has the right to determine whether to participate in a marketing research project.

2. **Right to Safety:** research has the right to safety from physical or psychological harm. While it is unusual for a respondent to be exposed to physical harm, it is common for a respondent to be placed in a physiologically damaging situation. Individuals might experience stress when an interviewer presses them to participate in a study.

3. **Right to be informed:** research participants have the right to be informed of all aspects of a research task. Knowing what is involved, how long it will take, and what will be done with the data, a person can make an intelligent choice as to whether to participate in the project.

4. **Right to Privacy:** all consumers have the right to privacy. Consumer privacy can be defined in terms of two dimensions of control. The first dimension includes control of unwanted telephone, mail, e-mail, or personal intrusion in the consumer's environment, and the control of the second concern of information about the consumer.

5. **Confidentiality:** Moreover, ethically, confidentiality concerns must be observed. E.g., we use only number codes to link the respondent to a questionnaire and storing the name–to–code linkage information separately from the questionnaire, and refuse to give the names of respondents to anyone outside the research project. Individual respondents should never be identified in reporting survey findings; completely anonymous summaries, for example, in terms of tables and charts should be given. Respondents must be asked for their consent to participate in a survey, and their privacy and rights must be observed.

CHAPTER FOUR

DATA ANALYSIS AND INTERPRETATION

4.1. INTRODUCTION

This research was aimed to assess the performance of 3PL service providers, and their contribution toward the logistics performance for the company – Habesha breweries S.co. To do so, a questionnaire was distributed to 96 respondents and 77 of them returned the questionnaire. Therefore, in this chapter, the finding and the interpretation is discussed and for data analysis, SPSS 20 was used.

4.2. Demographic Status

Table 4.1: Demographic Profiles

Respondent Profile		Count	%
Gender of Employee	Male	72	93.5
	Female	5	6.5
Age of Employee	20-30	38	49.4
	31-40	39	50.6
	41-50	0	0
	Above 50	0	0
Job title of Employee	Procurement officer	11	14.3
	Supervisor	19	24.7
	Head of Section	4	5.2
	Head of Department	2	2.6
	Sales Manager	41	53.2
Educational level	Certificate and below	0	0
	Diploma/Leve	2	2.6
	First degree	62	80.5
	Second degree and above	13	16.9
Work experience	Below 3 years	13	16.9
	3 - 5 Years	27	35.1
	Above 5 Year	37	48.1

Source: Own Computation June 2021

The respondents were asked their demographic status, gender, age, position, educational level, and work experience. The results show that 93.5 % of respondents were male, 50.6 % of the respondents fell between the age range 31 to 40. The highest portion of respondents was the sales manager which 53.20% and 80.5 % of the respondent are degree holders and have a working experience of above 5 years which 48.1%.

4.3. Descriptive Statistics

Under this section, respondents’ results, and feedback on practices of 3PL transporter – inbound logistics practices, customer response practices, and empty return practices will be discussed as well as the logistics performance indicators - delivery dependability, responsiveness, delivery flexibility, and delivery speed of the company also discussed.

4.3.1. Assessment of logistics performance of Habesha Brewery.

Here the assessment of the logistics performance of Habesha Breweries S.Co. with regard to delivery dependability, responsiveness, delivery flexibility, delivery speed, and responsiveness have been discussed.

Table 4.2: Descriptive analysis of Delivery Dependability

Delivery Dependability		SD	D	N	A	SA	Mean	St.Dev.
The company has a predefined route planning to deliver the product to its customer (agent)	Count	1	3	10	22	40		
	%	1.3	3.9	13.2	28.9	52.6	4.28	0.93
The company has well-defined order planning and shipment planning to deliver products to its customer (agent)	Count	2	5	11	25	33		
	%	2.6	6.6	14.5	32.9	43.4	4.08	1.04
The company’s sales operation system is dependable enough where the customer would get the product on time and in full.	Count	3	1	13	17	42		
	%	3.9	1.3	17.1	22.4	55.3	4.24	1.04
Average Mean							4.2	1

Source: Own Computation June 2021

The respondents were asked the dependability of the company and the respondents were asked where the company has a predefined route planning to deliver the product to its

customers or agents. Thus, shown in table 4.5, 52.6% of them strongly agreed, 28.9% of respondents agreed, 13.2% of respondents are neutral, 3.9% of them have disagreed about it, and 1.3% of the respondents were strongly disagreed. The mean and the standard deviation are 4.28 and 0.93, respectively. Under the question, whether the company has well-defined order planning and shipping planning to deliver products to its customers and 43.4% of the respondents strongly agreed, 32.9% of them agreed, 14.5% of them neutral about, 6.6% of them disagreed, and 2.6% of them strongly disagreed. The mean 4.08 and the standard deviation 1.04 which indicated most of the respondents were agreed. On the company's sales operation system dependability with regards to the customer get the product on time and in full, 55.3% of them strongly agreed, 22.4% of the agreed, 17.10% of them neutral, 3.9% of the respondents strongly disagreed, and 1.3% of them disagreed. The mean and standard deviation 4.24 and 1.04 respectively which showed most of the respondents are agreed about the company has delivered its product to its customer on time and in full. Averagely, the delivery dependability of the company resulted in 4.2 of mean and 1.00 standard deviation which we can conclude that most of the respondents are agreed about the dependability of the company.

Table 4.3: Descriptive analysis of Responsiveness

Responsiveness		SD	D	N	A	SA	Mean	St.Dev.
Prompt response will be given to the customer's inquires and complaints regarding product availability.	Count	2	1	11	30	32		
	%	2.6	1.3	14.5	39.5	42.1	4.17	0.91
Prompt response will be given to the customer related to fulfillment of a necessary shipment documentation	Count	3	3	6	29	35		
	%	3.9	3.9	7.9	38.2	46.1	4.18	1.02
Multiple product destination requests by an agent have been treated by the company positively	Count	3	2	11	26	34		
	%	3.9	2.6	14.5	34.2	44.7	4.13	1.02
Average Mean							4.16	0.98

Source: Own Computation June 2021

The respondents were asked about the responsiveness of the company toward its customer. About whether promote response would be given to customers inquires and complaints

regarding product availability, respondents are replied as 42.1% of them strongly agreed, 39.5% of the respondents agreed, 14.5% of them were neutral about, 2.6% of the respondents strongly disagreed, and 1.3% of them disagreed. The mean and standard deviations are 4.17 and 0.91 respectively which indicate most of the respondents are agreed about it. On addressing prompt response toward customer requests about the fulfillment of necessary shipment documentation 46.1% of them strongly agreed, 38.2% of them agreed, 7.9% of them neutral and 3.9% of the respondents disagreed and 3.9% of the respondents strongly disagreed. The mean and standard deviation 4.18 and 1.02 respectively which showed most of the respondents are agreed. Finally, respondents were asked responsiveness of the company on treating multiple product destinations positively and 44.7% of the respondents strongly agreed, 34.2% of them agreed, 14.5% of them neutral, 2.6% of them disagreed, and 3.9% of them strongly disagreed, the mean and standard deviation 4.13 and 1.02 respectively which showed most of the respondents are agreed. Averagely, the mean and standard deviation of the responsiveness is 4.16 and 0.98 which indicate most of the respondents are agreed on the responsiveness of the company toward its customer.

Table 4.4: Descriptive analysis of Delivery Speed

Delivery Speed		SD	D	N	A	SA	Mean	St.Dev
The company use its Fleet Management System (FMS) effectively to manage the truck- turnaround time (TAT) of the transporter	Count	1	5	15	29	25		
	%	1.3	6.7	20	38.7	33.3	3.96	0.96
Products are delivered based on the predefined schedule	Count	2	3	13	28	30		
	%	2.6	3.9	17.1	36.8	39.5	4.07	0.98
The predefined truck- turnaround time (TAT) is continuously evaluated, assessed with the transporter to have a continuous improvement of speed of truck- turnaround time (TAT)	Count	2	2	20	26	22		
	%	2.8	2.8	27.8	36.1	30.6	3.89	0.97
Average Mean							3.97	0.97

Source: Own Computation June 2021

The respondents were asked about the delivery speed of the company. About whether the company uses its fleet management system effectively to manage truck turn around (TAT)

of the transporters and respondents are replied as 38.7% of them agreed, 33.3% of the respondents strongly agreed, 20.0% of them were neutral about, 6.7% of the respondents disagreed, and 1.3% of them strongly disagreed. The mean and standard deviation are 3.96 and 0.96 respectively which indicates most of the respondents are agreed about it. On whether the products are delivered based on the predefined schedule or not the respondents replied as 39.5% of them strongly agreed, 36.8% of them agreed, 17.1% of them neutral and 3.9% of the respondents disagreed and 2.6 % of the respondents strongly disagreed. The mean and standard deviation 4.07 and 0.98 respectively which showed most of the respondents are agreed. Finally, respondents were asked about the existence of a continuous evaluation and assessment in the company on predefined TAT (truck turnaround time to improve the service of delivery and 36.1% of the respondents agreed, 30.6% of them strongly agreed, 27.8% of them neutral, 2.8% of them disagreed, and 2.8% of them strongly disagreed, the mean and standard deviation 3.89 and 0.97 respectively which showed most of the respondents are agreed. Averagely, the mean and standard deviation of the responsiveness is 3.97 and 0.97 which indicate most of the respondents are agreed on the delivery speed of the company toward its customer.

Table 4.5: Descriptive analysis of Delivery Flexibility

Delivery Flexibility		SD	D	N	A	SA	Mean	St.Dev.
The company delivered the product to a place where the customer (agent) requires having the product.	Count	2	2	7	19	46		
	%	2.6	2.6	9.2	25	60.5	4.38	0.95
The company delivered the product to the customer (agent) based on their quantity requirement	Count	2	3	6	21	44		
	%	2.6	3.9	7.9	27.6	57.9	4.34	0.97
The company delivered the product to the customer (agent) at the exact date and time when the customer was required to obtain it.	Count	1	3	15	31	26		
	%	1.3	3.9	19.7	40.8	34.2	4.03	0.91
Average Mean							4.25	0.94

Source: Own Computation June 2021

The respondents were asked about the delivery flexibility of the company. Concerning whether the company delivers the products to a place where the customer needs to have a

product and respondents are replied as 60.5% of them strongly agreed, 25.0% of the respondents agreed, 9.2% of them were neutral about, 2.6% of the respondents disagreed, and 2.6% of them strongly disagreed. The mean and standard deviation are 4.38 and 0.95 respectively which indicate most of the respondents are agreed about it. On whether the company delivers products to its customer based on the needed quantity or not the respondents replied as 57.9 % of them strongly agreed 27.6% of them agreed, 7.9% of them neutral and 3.9% of the respondents disagreed and 2.6 % of the respondents strongly disagreed. The mean and standard deviation 4.34 and 0.97 respectively which showed most of the respondents are agreed. Finally, respondents were asked the company to deliver the product on time and 40.8% of the respondents agreed, 34.2% of them strongly agreed, 19.7% of them neutral, 3.9 % of them disagreed, and 1.3% of them strongly disagreed, the mean and standard deviation 4.03 and 0.91 respectively which showed most of the respondents are agreed. Averagely, the mean and standard deviation of the delivery flexibility is 4.25 and 0.94 which indicate most of the respondents are agreed on the delivery speed of the company toward its customer.

4.3.2. Assessment of 3PL transporters' Practices and effect on Logistic Performance of Habesha Breweries.

From the given practices of 3PL service provider – transporter, for this study purpose three of the practices have been chosen to evaluate the providers – accordingly, the following result found.

The respondents were asked to answer the level agreement and disagreement on inbound logistics practices of the 3PL transporter for the transporter has delivered the required raw material on time and at the exact amount. as 1 – (SD)strongly disagree, 2 – (D)disagree, 3 – (N)neutral, 4 – (A)agree, and 5-(SA) strongly agree.

Table 4.6: Descriptive analysis of inbound logistics practices

Inbound Logistics Practices		SD	D	N	A	SA	Mean	St.Dev.
The transporter has to deliver the required raw material on time and at the exact amount.	Count	1	4	13	33	25		
	%	1.3	5.3	17	43	33	4.01	0.92
The vehicle used by the transporter to transport the raw materials is good enough to maintain the quality of the raw materials.	Count	2	2	15	29	28		
	%	2.6	2.6	20	38	37	4.04	0.96
The transporters and their respective driver are well-trained in Food and Safety Management System (FSMS) and have adequate knowledge of it.	Count	7	13	17	19	20		
	%	9.2	17	22	25	26	3.42	1.3
The transporters are a reliable partner on assurance of continuous supply of raw materials to the production.	Count	1	6	17	24	27		
	%	1.3	8	23	32	36	3.93	1.02
Average Mean							3.85	1.05

Source: Own Computation June 2021

Based on the result summary in table 4.2. 43.4% of them agreed, 32.9% of them strongly agreed, 17.1% of them neutral, 5.3% of them disagree, and 1.3% strongly disagree, and the mean 4.01 and 0.92 standard deviation which shows that most of the respondent agreed. The respondents are also asked vehicles used by the transporter to transport the raw materials are good enough to maintain the quality of the raw materials and 38.2% of them agree, 36.8% of them strongly agree, 19.7% of them neutral, and 2.6% of the respondents are disagreed and strongly disagree for each, the mean of 4.04 and the standard deviation .096 and therefore, most of the respondents are agreed on it. On the other hand, 26.3% of the respondents are strongly agreed, 25% of them agree, 22.4% of them neutral, 17.10% of them disagree, and 9.2% of the respondents strongly disagree about transporters and their respective drivers are well-trained in Food and Safety Management System (FSMS) and have adequate knowledge of it. On the last question, on the reliability of transporters on a continuous supply of raw materials to the production, 36.0% of the respondents are strongly

agree, 32.0% of them agree, 22.7% of them neutral, 8.0% of them disagree, and 1.3% of them have disagreed where 3.93 mean and 1.02 standard deviation so that most of the respondents are agreed about the case. Aggregately, the mean of 3.85 and standard deviation of 1.05 indicate that 3PL- transporters' have good inbound logistics practices while working with the company.

Table 4.7: Descriptive analysis of Customer Response Practice

Customer Response Practice		SD	D	N	A	SA	Mean	St.Dev.
Product orders by customers are delivered as required and on time.	Count	0	5	20	25	27		
	%	0	6.5	26	32.5	35.1	3.96	0.94
The transportation practices and ways of working are carrying out in such a way to keep the quality of the product.	Count	1	4	12	30	27		
	%	1.4	5.4	16.2	40.5	36.5	4.05	0.93
The transporter and their respective driver understand the product availability is critical to the market.	Count	2	6	18	26	25		
	%	2.6	7.8	23.4	33.8	32.5	3.86	1.05
The transporters fulfill the proper dispatch documentations for every shipment	Count	1	3	4	23	46		
	%	1.3	3.9	5.2	29.9	59.7	4.43	0.86
Average Mean							4.07	0.94

Source: Own Computation June 2021

On this variable – customer response practices – respondents were asked four questions and, on the product, ordered by customers are delivered as required and on time, 35.1% of them strongly agreed, 32.5% of them agreed, 26.0% of them neutral, 6.5% of them disagreed and the mean 3.96 and .94 standard deviations which indicate most of the respondent agreed about. Respondents are also asked the transportation practice performed by the third-party transporter were carried out in such a way to keep the quality of the product and 40.5% of them agreed, 36.5 of them strongly agreed, 16.2% of them neutral, 5.4% of them disagree, and 1.4% of them strongly disagreed and 4.05 of mean and .93 standard deviation. Thus, it indicates that most of the respondents are agreed about it. Thirdly, the respondents were asked on the understanding of drivers' and the transporters' the criticality of product availability of to the market, and 33.8% of them agreed, 32.5% of them strongly agreed, 23.4% of them neutral, 7.8 % of them disagreed, and 2.6% of the

respondents have disagreed. And the mean 3.86 and 1.05 standard deviation is found thus it indicates that most of the respondents are agreed about it. Finally, they were asked the fulfillment of documentation by drivers/transporter for every shipment and 59.7% of them strongly agreed, 29.9% of them agreed, 5.2% of them neutral, 3.9% of them disagree, and 1.3% of them strongly disagreed whereas the mean and standard deviation 4.43 and 0.86 respectively which indicates most of the respondents are agreed about it.

Table 4.8: Descriptive analysis of Product/Empty Return

Product/Empty Return		SD	D	N	A	SA	Mean	St.Dev.
The brewery production section is fully supported by the transportation through refilling of the empty crate to the production.	Count	3	5	12	32	24		
	%	3.9	6.6	15.8	42.1	31.6	3.91	1.05
The empty crate and bottle collected from the transporter are adequate and proper to use for production.	Count	1	6	10	36	24		
	%	1.3	7.8	13	46.8	31.2	3.99	0.94
The drivers understand crate and bottles are the main raw materials and therefore, they transport it with due care.	Count	3	5	10	29	30		
	%	3.9	6.5	13	37.7	39	4.01	1.07
Average Mean							3.97	1.02

Source: Own Computation June 2021

The respondents were also asked about the product/empty return practices on whether the brewery production section is fully supported by the transportation through refilling of the empty crate to the production. From the respondents 42.1% of them agreed, 31.6% of them strongly agreed, 15.8% of them neutral, 6.6% of them disagreed, and 3.9% of them strongly disagreed. The mean and the standard deviation 3.91 and 1.05 respectively which implies most of the respondents are agreed. On the adequacy of empty crates and bottles collected from the transporter – 46.8% of the respondent agreed, 31.2% of them strongly agreed, 13.0% of them neutral, 7.8% of the respondents have disagreed, and 1.3% of the respondents strongly disagreed about it. The mean and the standard deviation become 3.99 and 0.94 respectively which implies most of the respondents are agreed. On another variable or question drivers' understanding on crates and bottles are the main raw materials

for production and their transportation practice with due care and thus 39.0% of the respondent strongly agreed, 37.7 % of them agreed, 13.0% of the respondents were neutral, 6.5% of them disagreed, and 3.9% of them strongly disagreed. The mean of 4.01 and the standard deviation of 1.07 indicate most of the respondents are agreed. The overall result, averagely the mean, and the standard deviation is 3.97 and 1.02 respectively and which showed that there is agreed with practice on product/empty return on 3rd party transporter's drivers.

4.3.3. Challenges while working with 3PL transporters.

Table 4.9: Descriptive analysis of Challenges

Challenges		SD	D	N	A	SA	Mean	St.Dev.
The transporters are incapable of availing the required number of trucks upon request.	Count	8	5	24	18	16		
	%	11.3	7	33.8	25.4	22.5	3.41	1.24
The drivers have adequate knowledge of safe driving and awareness of the Food Safety Management System (FSMS)	Count	9	7	12	21	24		
	%	12.3	9.6	16.4	28.8	32.9	3.6	1.36
The communication gap is observed among the transporters and the transport sections of Habesha Breweries.	Count	8	13	15	22	16		
	%	10.8	17.6	20.3	29.7	21.6	3.34	1.3
Documentations issues are observed on providing of payment request by the transporter	Count	7	8	21	17	17		
	%	10	11.4	30	24.3	24.3	3.41	1.26

Source: Own Computation June 2021

According to the above table, the most experienced challenge in the company is the lack of drivers' knowledge toward safe driving and FSMS (Food Safety Management System) followed by the incapability of transporters on availing the required number of trucks on time.

4.3.4. Relationship between transporters’ practices and logistics performance of Habesha Breweries.

Correlations are the measure of the linear relationship between two variables. A correlation coefficient has a value ranging from -1 to 1. Values that are closer to the absolute value of 1 indicate that there is a strong relationship between the variables being correlated whereas values closer to 0 indicate that there is little or no linear relationship. Therefore, in this research, Pearson Correlation analysis is conducted to determine the relationship between the independent variable, transporters’ practice, and the dependent variable, logistics performance of Habesha Breweries.

Table 4.10: Pearson Correlations

		Correlations						
		ILP	CRP	PR	DF	DD	RES	DS
ILP	Pearson Correlation	1						
	Sig. (2-tailed)							
	N	77						
CRP	Pearson Correlation	.754**	1					
	Sig. (2-tailed)	0						
	N	77	77					
PR	Pearson Correlation	.707**	.832**	1				
	Sig. (2-tailed)	0	0					
	N	77	77	77				
DF	Pearson Correlation	.586**	.725**	.728**	1			
	Sig. (2-tailed)	0	0	0				
	N	76	76	76	76			
DD	Pearson Correlation	.649**	.675**	.727**	.827**	1		
	Sig. (2-tailed)	0	0	0	0			
	N	76	76	76	76	76		
RES	Pearson Correlation	.545**	.711**	.719**	.857**	.780**	1	
	Sig. (2-tailed)	0	0	0	0	0		
	N	76	76	76	76	76	76	
DS	Pearson Correlation	.724**	.786**	.750**	.724**	.761**	.749**	1
	Sig. (2-tailed)	0	0	0	0	0	0	
	N	76	76	76	76	76	76	76

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

As indicated in the above table 4.10 the transporters practice inbound logistics practices, customer response practices, and product return practices, and the logistic performance

variables: - delivery flexibility, delivery dependability, delivery speed, and responsiveness have a positive correlation.

Based on the above table the result of correlation matrix between each four building blocks of logistics performance all variables there are positive relationships among the variables and as well as with logistics performance. This fact (Bwari, 2016) also proved that these non-financial measures of performance include profitability, quality responsiveness, effectiveness, flexibility, and reliability.

4.4. Inferential Statistics

4.4.1. Assessing Linearity Assumption

The dependent variable is defined as a linear function of the predictor (independent) variables when the dependent variable is linear. If the relationships between the dependent and independent variables are linear, standard multiple regression can effectively predict the relationship. Non-linear correlations occur frequently in the social sciences (e.g., anxiety), thus it's important to look at them. The findings of the regression analysis will underestimate the true relationship if the relationship between the independent factors and the dependent variable is not linear. This under-estimation has two consequences: it increases the likelihood of a Type II error for that independent variable and Type I errors (over-estimation) for other independent variables that share variance with those independent variables in multiple regression.

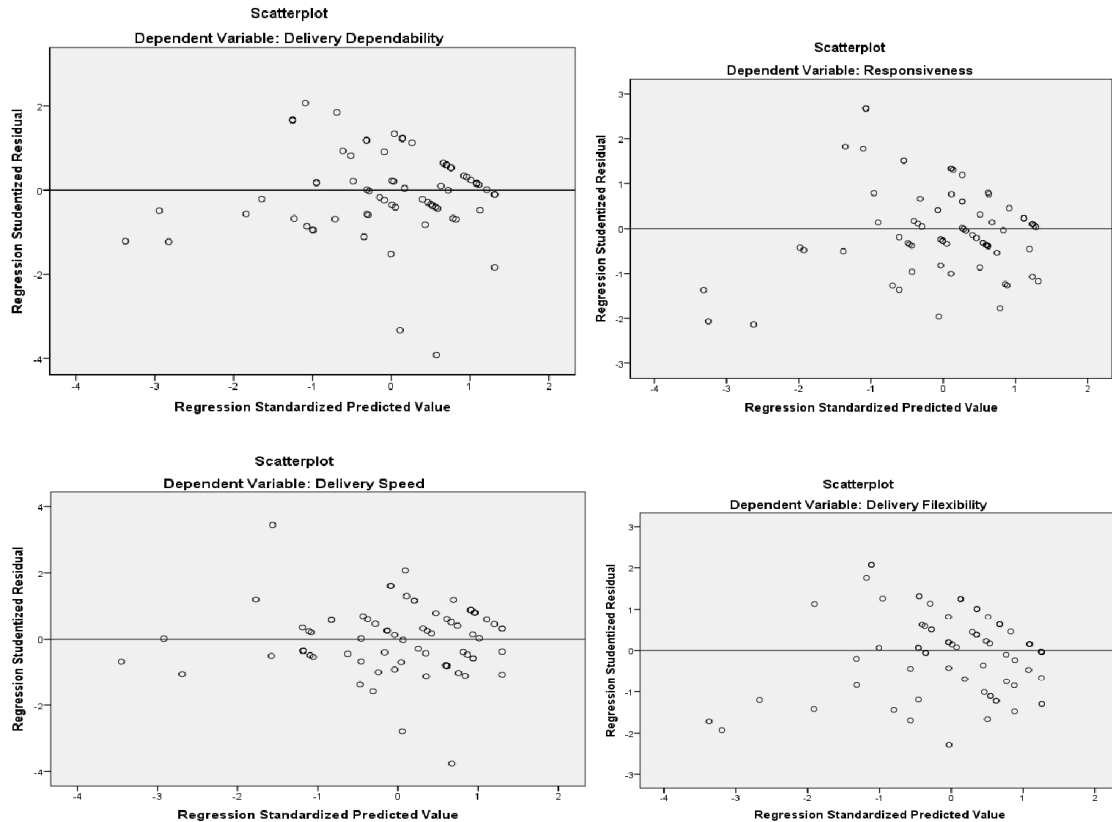


Figure 4.1: Graphs of Linearity

Source: Own Computation June 2021

4.4.2. Assessing Multicollinearity Assumption

The assumption of uncorrelated independent variables is known as multicollinearity. When collinearity is minimal, the researcher can interpret regression results as impacts of the independent factors on the dependent variables. This indicates we can assertively determine the causes and effects of variables. Once independent variables have a high level of correlation with one another, or when one independent variable is a near-linear combination of other independent variables, multicollinearity arises. Researchers are less able to distinguish the effects of factors when more variables overlap (correlate) (Keith, 2006). Autocorrelation emerges if this assumption is not fulfilled. Multicollinearity can lead to erroneous and atypical results, exaggerated standard errors, and decreased regression coefficient power, necessitating the use of larger sample sizes (Jaccard et al., 2006; Keith, 2006). Calculating the variance inflation factor (VIF) across all independent

variables is a commonly used approach for detecting multicollinearity. Keith (2006) the VIF is a measure of how much the variance of each regression coefficient increases when compared to those of uncorrelated independent variables. There is an existence of multicollinearity (Shieh, 2010) if there is a linear association among variables. As a principle, the VIF must be less than or equal to 3.3, so that it is suggested no multicollinearity in the model (Kock, 2013). In this study, as indicated in the below table 4.10 the VIF found 3.3 so that there is no multicollinearity problem for the data.

Table 4.11: Test for Multicollinearity

Variable	Tolerance	VIF
Product Return Practices	0.28	3.167
Inbound logistics Practices	0.396	2.525
Customer response Practices	0.229	3.272

Source: Own Computation June 2021

4.4.3. Multiple Linear Regression Analysis Result

Table 4.12: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson	Dependent Variable
1	.752 ^a	0.566	0.548	0.58679	1.265	Delivery Dependability
2	.746 ^a	0.556	0.538	0.57854	1.203	Responsiveness
3	.819 ^a	0.67	0.656	0.48422	1.499	Delivery Speed
4	.757 ^a	0.573	0.555	0.54113	1.228	Delivery Flexibility

Source: Own Computation June 2021

a. Predictors: (Constant), Product Return Practices, Inbound logistics Practices, Customer response Practices

As shown in table 4.11, all of the models are suited, as they have higher Adjusted R-squared values. The table shows the results of the model summary of the multiple linear regression analysis. Multiple linear regression analysis has been used to identify the effect of 3PL transporters' practice on company logistics performance. As can be seen from the table, the value of adjusted R-square in the different models is above 53%.

Table 4.13: ANOVA Summary

ANOVA ^a							
Model		Sum of Squares	df	Mean Square	F	Sig.	Dependent Variable
1	Regression	32.359	3	10.786	31.326	.000 ^b	Delivery Dependability
	Residual	24.792	72	0.344			
	Total	57.151	75				
2	Regression	30.233	3	10.078	30.109	.000 ^b	Responsiveness
	Residual	24.099	72	0.335			
	Total	54.332	75				
3	Regression	34.307	3	11.436	48.773	.000 ^b	Delivery Speed
	Residual	16.882	72	0.234			
	Total	51.188	75				
4	Regression	28.278	3	9.426	32.19	.000 ^b	Delivery Flexibility
	Residual	21.083	72	0.293			
	Total	49.361	75				

Source: Own Computation June 2021

The ANOVA table's p-value, designated as "Sig.", determines whether the independent variables are statistically significant in predicting the dependent variable. The model is statistically insignificant if the p-value is more than 0.05, but statistically significant if the p-value is less than 0.05. Hence the above ANOVA table 4.12 indicates the regression model is a good fit for the data. ($p=0.01$, which is < 0.05). Therefore, all independent variables are statistically significant as indicated in the table.

Table 4.14: Coefficients^a for Delivery Dependability

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	0.787	0.374		2.105	0.039		
	Product Return Practices	0.516	0.153	0.496	3.381	0.001	0.28	3.167
	Inbound Logistics Practices	0.262	0.131	0.247	2.002	0.049	0.396	2.525
	Customer Response Practices	0.076	0.182	0.067	0.415	0.679	0.229	3.272

a. Dependent Variable: Delivery Dependability

Source: Own Computation June 2021

From the analytical model developed show that product return ($\beta_1= 0.516$, $p= 0.001$), inbound logistics practices ($\beta_2= 0.262$, $p= 0.049$) have a positive relation and significance on logistics performance. Findings in the above table show that the major significant variables are product return practice ($P=.001$). This shows that increases in the dimensions of are product return practice determinants will cause increased delivery dependability. This positive relationship is in line with Stevenson, (2009) who states that robust and efficient transportation practices enable an organization to gain an organization a competitive advantage through superior customer service. Besides, except for a variable of customer response practices other variables are highly significant in the logistics performance.

Table 4.15: Coefficients^a for Responsiveness

Model		Coefficients ^a					Collinearity Statistics	
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Tolerance	VIF
		B	Std. Error	Beta				
2	(Constant)	0.92	0.369		2.496	0.015		
	Product Return Practices	0.435	0.151	0.429	2.892	0.005	0.28	3.167
	Inbound Logistics Practices	-0.068	0.129	-0.065	-0.523	0.603	0.396	2.525
	Customer Response Practices	0.437	0.18	0.399	2.433	0.017	0.229	3.272

a. Dependent Variable: Responsiveness

Source: Own Computation June 2021

Product return ($\beta_1=0.435$, $P= 0.005$) and customer response practices ($\beta_2=0.437$, $P= 0.017$) have a positive relationship and significant on logistics performance known as responsiveness, according to the analytical model established. As discussed by (Collins *et al.*, 2001; Wouters and Sportel, 2005) customer relationship management which might refer to the responsiveness toward customer demands, would contribute to changing customer portfolios. According to the findings in the table above, product return practice ($P=.005$) is the most significant variable. This shows that increases in the dimensions of are product return practice determinants will cause increased logistics performance. Besides, except for a variable of inbound logistics practices other variables are highly significant in the logistics performance.

Table 4.16: Coefficients^a for Delivery Speed

Model		Coefficients ^a						
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
3	(Constant)	0.318	0.309		1.031	0.306		
	Product Return Practices	0.244	0.126	0.248	1.937	0.047	0.28	3.167
	Inbound Logistics Practices	0.258	0.108	0.257	2.387	0.02	0.396	2.525
	Customer Response Practices	0.404	0.15	0.38	2.685	0.009	0.229	3.272

a. Dependent Variable: Delivery Speed

Source: Own Computation June 2021

The analytical model developed shows that product return ($\beta_1=0.244$, $P= 0.047$), inbound logistics practices ($\beta_2=0.258$, $P= 0.020$), and customer response ($\beta_3=0.404$, $P= 0.009$) have a positive relationship and significance on logistics performance called delivery speed. The major significance variables are customer response ($P=.009$), according to the findings in the above table. As discussed by Langley and Holcomb, (1992), under the effective part of logistics performance – delivery speed could be incorporate with demonstrating effectiveness as the capacity to meet customer requirements that are critical like availing stock on time. As indicated in the above table, delivery speed has a positive relationship with all independent variables.

Table 4.17: Coefficients^a for Delivery Flexibility

Model		Coefficients ^a						
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
4	(Constant)	1.053	0.345		3.054	0.003		
	Product Return Practices	0.389	0.141	0.402	2.762	0.007	0.28	3.167
	Inbound Logistics Practices	0.01	0.121	0.01	0.083	0.934	0.396	2.525
	Customer Response Practices	0.395	0.168	0.378	2.349	0.022	0.229	3.272

a. Dependent Variable: Delivery Flexibility

Source: Own Computation June 2021

Product return ($\beta_1=0.389$, $P= 0.007$) and customer reaction ($\beta_2=0.395$, $P= 0.022$) have a positive relationship and significant on logistics performance known as delivery flexibility, according to the analytical model established. The primary important factor is the product return ($P=.007$), according to the findings in the table above. This shows that increases in

the dimensions of product return practice determinants will cause increased logistics performance. Besides, except for a variable of inbound logistics practices other variables are highly significant in the delivery flexibility.

CHAPTER FIVE

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

5.1. INTRODUCTION

In this chapter, the summary of the research findings, conclusion, and recommendations of the study is presented. The chapter is based on the study objectives, which were to assess the 3PL transporters' practices among logistics performances at Habesha Brewery S.Co. and to determine the relationship between transportation practice and logistics performance at Habesha Brewery S.Co.

5.2. SUMMARY OF THE FINDINGS

The study was aimed to assess the 3PL transporters' practice on logistics performance of Habesha breweries S.co. The study adopted the descriptive and explanatory research design in obtaining information about the study topic. The study's population comprised of all stakeholders direct and indirect related to the transportation operation those are the brewery warehouse operation team, area sales managers, transportation teams, raw-materials procurement team, central order processing team. The data were collected using questionnaires and interviews & the data were analyzed using descriptive and inferential statistics. The findings obtained are summarized below as per the study's specific objectives.

5.2.1. 3PL transporters practices & logistics performance of Company.

1. The population of the study was employees working at Habesha Brewery S.Co. and ninety-six (96) respondents are taken as a population of the research.
2. The five-point Likert scale questionnaires were employed to gather primary data and quantitative data from 77 respondents as 80% was the response rate.
3. Most of the respondents agreed on a good performance of transporters' practices – inbound logistics practices, customer response, and product return.
4. There exists a significant positive correlation between the 3PL transporters' practices and logistics performance.

5. Delivery speed logistics performance parameter has significant positive with all of the independent variables, inbound logistics practices, customer response, and product return.
6. Inbound logistics practice is less significant on the dependent variable – delivery dependability than product return and customer response practices.
7. Delivery flexibility logistics performance parameter has significant positive correlations with product return and customer response practice of independent variables.

5.2.2. Challenges while working with 3rd party transporters.

One of the study's objectives was to identify the challenges that Habesha Breweries S.Co experienced while working with 3PL transportation service providers. The findings show that some challenges were experienced -

1. From the analysis, it is observed that the lack of adequate knowledge of the Food and Safety Management System has a high mean value – which is 3.60 and the standard deviation of 1.36 and followed by the incapability of availing the required number of trucks when there is a request.
2. The communication gap is considered to be less challenging considering its mean value and standard deviation. However, 29.7% of the respondents were agreed there is still an issue of communication gap.
3. Both challenges of documentation management by the transporters and the availability of trucks upon request have a similar mean value.

5.3. CONCLUSIONS

The assessment of the 3PL – transporters practices on logistics performance measures in the case of Habesha Breweries S. Co was the main objective of the research. Based on the finding, the following conclusions are drawn:

1. There exists a significant positive correlation between the 3PL transporters' practices and logistics performance.
2. The analytical model developed shows that product return and inbound logistics practices had a positive relation and significance on delivery dependability.
3. Product return and customer response practices had a positive relationship and significant on responsiveness, according to the analytical model established.
4. The analytical model developed shows that product return, inbound logistics practices, and customer response had a positive relationship and significance on delivery speed.
5. Product return and customer response had a positive relationship and significant on delivery flexibility, according to the analytical model established.
6. The lack of adequate knowledge of the Food and Safety Management System and the incapability of availing the required number of trucks were the major challenges while working with 3PL transportation service providers.

5.4. RECOMMENDATIONS

Based on the finding of the study the following recommendations are given.

1. Further improvement action on the 3PL – transporters practices on inbound logistics practice, product return, and customer response practices should be taken. This may improve the logistics performance for Habesha Breweries S.Co.
2. The company should arrange and enforce the transporters to take safe driving training and FSMS (Food Safety) for their respective drives. This was the major challenge that was experienced. Taking this training should be a precondition to working with Habesha Brewery.
3. The company should work with the transporters on the capacity building where the transporters would provide the necessary number of trucks at any point in time and subsequently, providing trucks upon request should abide by the transportation contract.
4. As indicated in chapter one the company incurred a lot of money due to empty running. Thus, it is recommended to work on efficiency.

5.5. SUGGESTION FOR FURTHER STUDY

As this study is confined to the limited practices of 3PL service provides specifically on transportation section as well as it is focused on beer industry so that a further study is recommended on making a research other business industry and with different logistic performance perspective.

REFERENCES

- Aghazadeh, S. M. (2003). How to Choose an Effective Third-Party Logistics Provider. *Management Research News*, 26(7), 50-58.
- Aguezzoul, A. (2012). Outsourcing of Supply Chain Operations and Logistics Services. In: *Overview on 3PL selection problem*, Editions IGI Global, (accepted).
- Ansari, A. and Modarress, B., (2010). Challenges of outsourcing logistics to third-party providers. *International Journal of Logistics Systems and Management*, 7(2), pp. 198-218.
- Alan Rushton, Phil Croucher, and Peter Baker (2014). *The handbook of logistics and distribution management*. 5th edition
- Bask, A. (2001). Relationships among TPL providers and members of supply chains – a strategic perspective. *Journal of Business and Industrial Marketing*, 16(6), 470-486.
- Bartolacci, M. R., Leblanc, L. J., Kayikci, Y., and Grossman, T. A., (2012). Optimization Modeling for Logistics: Options and Implementations. 33(2), 118–127
- Berglund, M., van Laarhoven, P., Sharman, G. and Wandel, S. (1999). Third-party logistics: is there a future. *The International Journal of Logistics Management*. Vol. 10, No. 1, pp. 59-68.
- Bevilacqua, M., Petroni, A., (2002). From traditional purchasing to supplier management: a fuzzy logic-based approach to supplier selection. *International Journal of Logistics: Research and Applications*, 5(3), pp. 235–255.
- Bowersox, D. J., Closs, D. J., and Cooper, M. B. (2010). *Supply Chain Logistics Management* (3rd Edi.). Boston, Mass.: McGraw-Hill. 62.
- Boyson, S., Corsi, T., Dresner, M., and Rabinovich, E. (1999). Managing effective third-party logistics relationships: What does it take? *Journal of Business Logistics*, 20(1), 73.

Chang, S.L., Wang, R.C., Wang, S.Y. (2006). Applying fuzzy linguistic quantifiers to select supply chain partners in different phases of the product life cycle. *International Journal of Production Economics*, (100), pp. 348–359.

Chen, M.C., Huang, C.L., Chen, K.Y. and Wu, H.P. (2005). Aggregation of orders in distribution centers using data mining. *Expert Systems with Applications*, 28(3), pp. 453–460.

Christopher, M. (2005). *Logistics and Supply Chain Management - Strategies for Reducing Cost and Improving Service* (3rd ed.). Financial Times/ Prentice Hall.

Collins, A., Henschion, M., and O'Reilly, P. (2001). Logistics customer service: performance of Irish food exporters. *International Journal of Retail & Distribution Management*, 29(1), pp. 6–15.

Daugherty, P. J., Chen H., Mattioda, D. D., and Grawe, S. J. (2009). Marketing/logistics relationships: influence on capabilities and performance. *Journal of Business Logistics*. 30(1), 1-18.

Demirtas, E.A., Üstün, Ö. (2008). An integrated multi-objective decision-making process for supplier selection and order allocation. *Omega*, 36 (1), pp. 76–90.

Di Benedetto, C.A. (1999). Identifying the key success factors in new product launches. *Journal of Product Innovation Management*, 16(6), pp. 530–544.

Donald J. Bowersox, David J. Closs, M. Bixby Cooper, 2002. *Supply Chain Logistics Management*: Michigan State University, McGraw-Hill Higher Education

Ellinger, A. E., Ketchen, D. J. Jr., Hult, G. T. M., Elmadağ, A. B., and Richey, R. G. Jr. (2008). Market orientation, employee development practices, and performance in logistics service provider firms. *Industrial Marketing Management*. 37, 353-366.

Esnermu (2015). *Logistics Management; A green supply chain perspective (with case applications in Ethiopia)*. Artistic P.E. 12539/2007. Pp. 106-135

- Fawcett, S. E., and Cooper, M. B. (1998). Logistics performance measurement and customer success. *Industrial Marketing Management*, 27, 341-357.
- Forslund, H. (2007). The impact of performance management on customers' expected logistics performance. *International Journal of Operations & Production Management*, 27(8), 901-991.
- Frazelle, E., (2002). *Supply Chain Strategy. The Logistics of Supply Chain Management*. McGraw-Hill.
- Fugate, B. S., Mentzer, J.T. and Stank T. P. (2010). Logistics Performance: Efficiency, Effectiveness, and Differentiation. *Journal of Business Logistics*, 31(1) 43-62
- Graeml, A. R. and Peinado, J. (2011). Measuring Logistics Performance: The Effectiveness of Mmog/Le as Perceived by Suppliers in the Automotive Industry. *Journal of Operations and Supply Chain Management*, 4(1), 1–12
- Green, F.B., Turner, W., Roberts, S., Nagendra, A. and Wininger, E., (2011). A practitioner's perspective on the role of a third-party logistics provider. *Journal of Business & Economics* 63, Research (JBER), 6(6).
- Green K. W. Jr, Whitten, D., and Inman, R. A. (2008). The impact of logistics performance on organizational performance in a supply-chain context. *Supply Chain Management: An International Journal*, 13(4), 317-327.
- Hsieh, K.H. and Tien,F.C. (2004). Self-organizing feature maps for solving location-allocation problems with rectilinear distances. *Computer & Operations Research*, 31 (7), pp. 1017–1031.
- Knemeyer, A.M. and Murphy, P.R. (2004). Promoting the value of logistics to future business leaders: an exploratory study using principles of marketing experience. *International Journal of Physical Distribution & Logistics Management*, 34 (10), pp. 775–792.

- Kumar, P. (2007). Global Logistics Outsourcing: Latest Trends in Selecting 3PL. Asia-Pacific. Journal of Management Research and Innovation, Vol. 3, No. 2, pp. 84-91
- Lambert, D.M., and Pholen. T, L (2001). Supply chain metrics. International Journal of logistics management Vol12No12pp119.
- Lau, K. H., and Zhang, J. (2006). Drivers and obstacles of outsourcing practices in China. International Journal of Physical Distribution and Logistics Management.
- Leung, S.C.H., Wu, Y., and Lai, K.K. (2002). An optimization model for a cross-border logistics problem: a case in Hong Kong. Computers and Industrial Engineering, 43 (1-2), pp.393–405.
- Liu, C., and Lyons, A. C. (2011). An analysis of third-party logistics performance and service provision. Transportation Research Part E, 47, 547-570.
- Li, L. (2011). Assessing the relational benefits of logistics services perceived by manufacturers in the supply chain. International Journal Production Economics, 132, 58-67.
- Lynch, C.F. (2000). Logistics Outsourcing: A Management Guide. Council of Logistics Management Publications, Illinois, USA.
- Mentzer, J.T., Konrad, B.P.(1991).An Efficiency/Effectiveness Approach to Logistics
- Mothilal, S., Gunasekaran, A., Nachiappan, S. P., and Jayaram, J. (2012). Key success factors and their performance implications in the Indian third-party logistics (3PL) industry. International Journal of Production Research, 50(9), 2407-2422.
- Neely, A.; Gregory, M. and Platts, K. (1995). Performance measurement systems design: a literature review and research agenda. International Journal of Operations & Production Management 15(4): 80–116.

- Park, Y., and Jeong, Y. (2016). An empirical analysis on the performance of the third-party logistics in the Korean exporter. *Journal of Korea Trade*, 20(1), 97-114.
- Payaro, A., and Papa, A. R. (2017). Logistics outsourcing: Why do not some Italian SMEs adopt externalization? *Asian Business Research*, 2(2), 46-53.
- Powell, W.B., Topaloglu, H. (2003). Stochastic programming in transportation and logistics. *Handbooks in Operations Research and Management Science*, 10, pp. 555–635.
- Razzaque, M.A. and Sheng, C.C. (1998). Outsourcing of logistics functions: a literature Survey. *International Journal of Physical Distribution & Logistics Management* 28 (2), pp. 89-107.
- Robertson, P.W., Gibson, P.R. and Flanagan, J.T. (2002). Strategic supply chain development by integration of key global logistical process linkages. *International Journal of Production Research*, 40 (16), pp. 4021–4040.
- Robeson, J.F., and Copacino, W.C., (Eds.). (1994). *The Logistics Handbook*. The Free Press
- Schramm-Klein, H., and Morschett, D. (2006). The relationship between marketing performance, logistics performance, and company performance for retail companies. *International Review of Retail, Distribution, and Consumer Research* 16(2), 277-96.
- Skjoett-Larson, T., Schary, P. B., Mikkola, J. H., and Kotzab, H. (2007). *Managing the Global Supply Chain*, (3rd ed.). Copenhagen: Business School Press.
- Shang, K.-C., and Marlow, P. B. (2005). Logistics capability and performance in Taiwan's major manufacturing firms. *Transportation Research Part E: Logistics and Transportation Review*, 41, 217-234.

- Shepherd, C. and Günter, H. (2012). Measuring supply chain performance: current research and future directions, in J. C. Fransoo (Eds.). Behavioral Operations in planning and scheduling. Berlin Heidelberg: Springer-Verlag.
- Simons, D., Mason, R. and Gardner, B., (2004). Overall vehicle effectiveness. *International Journal of Logistics Research and Applications*, 7(2), pp. 119–135.
- Sinkovics, R., R., and Roath, A., S. (2004). Strategic Orientation, Capabilities, and Performance in Manufacturer – 3PL Relationships. *Journal of Business Logistics*, 25(2), pp. 43.
- Skjott-Larsen, T., Schary, P. B., Mikkola, J. H., and Kotzab, H. (2007). *Managing the Global Supply Chain*, (3rd ed.). Copenhagen: Business School Press.
- Stank, T. P., Goldsby, T. J., Vickery, S. K., and Savitskie, K. (2003). Logistics service performance: Estimating its influence on market share. *Journal of Business Logistics*, 24(1), 27-55.
- Tarantilis, C.D., Kiranoudis, C.T. (2001). A meta-heuristic algorithm for the efficient distribution of perishable foods. *Journal of Food Engineering*, 50 (1), pp. 1–9.
- Tarantilis, C.D., Diakoulaki, D., Kiranoudis, C.T. (2004). Combination of geographical Transport Journal, Vol. 45, No. 2, P. 23-39.
- Tyan, J.C., Wang, F.K., Timon, C.D. (2003). An evaluation of freight consolidation policies in global third party logistics. *Omega*, 31, pp. 55–62.
- Töyli, J., Häkkinen, L., Ojala, L., and Naula T. (2008). Logistics and financial performance: An analysis of 424, Finnish small and medium-sized enterprises. *International Journal of Physical Distribution & Logistics Management*, 38(1), 57-80.

Van Norden,L.,VandeVelde,S. (2005).Multi-product lot-sizing with a transportation capacity reservation contract. *European Journal of Operational Research*, 165(1), pp. 127–138.

Vitasek, K. (Council of S. C. M. P. (2013). *Supply Chain Management Terms and Glossary*.

Waters, D. (2003). *Logistics: An Introduction to Supply Chain Management*. *Supply Chain Management an International Journal*, 364.

Wallenburg, C. M., Cahill, D. L., Goldsby, T. J., and Knemeyer, A. M. (2010). Logistics outsourcing performance and loyalty behavior: Comparisons between Germany and the United States. *International Journal of Physical Distribution & Logistics Management*, 40(7), 579-602.

Zailani, S., Shaharudin, M. R., Razmi, K., and Iranmanesh, M. (2017). Influential factors and performance of logistics outsourcing practices: evidence of Malaysian companies. *Review of Managerial Science*, 11,53-93.

Zhao, M., and Stank, T.P.(2003).Interactions between operational and relational capabilities in fast food service delivery. *Transportation Research Part E: Logistics and Transportation Review*, 39(2), pp. 161–173.

ANNEX I: QUESTIONARIES

Dear Respondents!

I, **Beteseb Kebede**, researching **ASSESSMENT OF 3PL PROVIDERS – TRANSPORTERS’ PRACTICES ON LOGISTICS PERFORMANCE in case of HABESHA BREWERIES S.CO.**

The research is a part of my partial fulfillment of the requirements for a Master of Arts in logistics and supply chain management. My greatest gratitude for your genuine and valid answer to the below research questions. The aim of the research questionnaire is **ONLY** for academic purposes and the confidentiality of the answer(s) will be fully retained.

General Directions:

1. No need of writing your name.
2. Please put a checkmark (✓), in the appropriate box/table.
3. Carefully read each question or statement.
4. If you have any questions or comments, contact me and I am available at your convenience at:
5. Cellphone = +251966216403/+251913459594
6. E-mail – famswt@gmail.com

Part I: DEMOGRAPHIC INFORMATION

Kindly fill in the below demographic information. Please check the box available

1	SEX	Male	<input type="checkbox"/>
		Female	<input type="checkbox"/>
2	AGE	20 - 30	<input type="checkbox"/>
		31 - 40	<input type="checkbox"/>
		41 - 50	<input type="checkbox"/>
		Above 50	<input type="checkbox"/>
3	JOB TITLE	Procurement Officer	<input type="checkbox"/>
		Clerk Supervisor	<input type="checkbox"/>
		Head of Section	<input type="checkbox"/>
		Head of Department	<input type="checkbox"/>
4	EDUCATIONAL LEVEL	Certification and below	<input type="checkbox"/>
		Diploma Level	<input type="checkbox"/>
		First Degree	<input type="checkbox"/>
		Second Degree and Above	<input type="checkbox"/>
5	WORK EXPERIENCE	1 - 3 Years	<input type="checkbox"/>
		3 - 5 Years	<input type="checkbox"/>
		Above 5 Year	<input type="checkbox"/>

PART II - The following questions will cover the contents of 3PL- Transporters' practices and select your agreement or disagreement on ticking \checkmark mark on the given box to show.

1 = **Strongly Disagree (SD)** 2 = **Disagree(D)** 3= **Neutral(N)** 4 = **Agree(A)** 5 = **Strongly Agree (SA)**.

S.No .	INBOUND LOGISTICS PRACTICES	Level of Agreement				
		SD	D	N	A	SA
DESCRIPTIONS		1	2	3	4	5
1	The transporter has to deliver the required raw material on time and at the exact amount.					
2	The vehicle used by the transporter to transport the raw materials is good enough to maintain the quality of the raw materials.					
3	The transporters and their respective driver are well-trained in FSMS and have adequate knowledge of it					
4	The transporters are a reliable partner on assurance of continuous supply of raw materials to the production					
S.No .	CUSTOMER RESPONSE PRACTICES	1	2	3	4	5
1	Product orders by customers are delivered as required and on time.					
2	The transportation practices and ways of working are carrying out in such a way to keep the quality of the product.					
3	The transporter and their respective driver understand the product availability is critical to the market.					
4	The transporters fulfill the proper dispatch documentation for every shipment					
S.No .	PRODUCT/EMPTY RETURN	1	2	3	4	5
1	The brewery production section is fully supported by the transportation through refilling of the empty crates to the production					
2	The empty crate and bottle collected from the transporter are adequate and proper to use for production.					
3	The drivers understand crate and bottles are the main raw materials and therefore, they transport it with due care.					

***FSMS – Food Safety Management System**

PART III - Logistics Performance of Habesha Breweries S.Co.

Please indicate to what extent the following measurement of logistics performance of Habesha Brewery has been demonstrated. Please indicate your level of agreement: -

1 = Strongly Disagree (SD) 2 = Disagree(D) 3= Neutral(N) 4 = Agree(A) 5 = Strongly Agree (SA).

S.No.	DELIVERY DEPENDABILITY DESCRIPTIONS	Level of Agreement				
		SD 1	D 2	N 3	A 4	SA 5
1	The company has a predefined route planning to deliver the product to its customer (agent)					
2	The company has well-defined order planning and shipment planning to deliver products to its customer (agent)					
3	The company's sales operation system is dependable enough where the customer would get the product on time and in full.					
	RESPONSIVENESS	1	2	3	4	5
1	Prompt response will be given to the customer's inquires and complaints regarding product availability.					
2	Prompt response will be given to the customer related to fulfillment of a necessary shipment documentation					
3	Multiple product destination requests by an agent have been treated by the company positively					
	DELIVERY FLEXIBILITY	1	2	3	4	5
1	The company delivered the product to a place where the customer (agent) requires having the product.					
2	The company delivered the product to the customer (agent) based on their quantity requirement					
3	The company delivered the product to the customer (agent) at the exact date and time when the customer was required to obtain it.					
	DELIVERY SPEED	1	2	3	4	5
1	The company use its Fleet Management System (FMS) effectively to manage the truck- turnaround time (TAT) of the transporter					
2	Products are delivered based on the predefined schedule					
3	The predefined truck- turnaround time (TAT) is continuously evaluated, assessed with the transporter to have a continuous improvement of speed of truck- turnaround time (TAT)					

PART IV CHALLENGES OF WORKING WITH THE 3PL- TRANSPORTER.

This section aims at determining the various challenges experienced while working with the 3PL transporter in the case of Habesha Breweries. Please indicate to what extent do you agree with the following challenge observed. Use the scale of

1 = Strongly Disagree (SD) 2 = Disagree(D) 3= Neutral(N) 4 = Agree(A) 5 = Strongly Agree (SA).

S.No.	CHALLENGES	Level of Agreement				
	DESCRIPTIONS	SD	D	N	A	SA
		1	2	3	4	5
1	The transporters are incapable of availing the required number of trucks upon request.					
2	The drivers have adequate knowledge of safe driving and awareness of the Food Safety Management System (FSMS)					
3	The communication gap is observed among the transporters and the transport sections of Habesha Breweries.					
4	Documentations issues are observed on providing of payment request by the transporter					