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SCHOOL OF COMMERCE

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Critical Assessment of the Third-Party Logistics (3PL) model: The Case of MACCFA Freight logistics

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A Thesis submitted to Addis Ababa University, School of Commerce in Partial fulfillment of the Requirement for the Award of Master of Arts in Logistics and Supply Chain Management

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Declaration

I certify that the thesis entitled "Critical Assessment of the third party Logistics (3Pl) Model: The case of MACCFA Freight Logistics" is my original work and has not been submitted for any other award degree in any University. It is offered for the award of the degree of Master of Arts in Logistics and Supply Chain Management. Whenever other authors' works are used, they have been properly acknowledged.

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This is to certify that the thesis prepared by Muluken Teka entitled "Critical Assesment of the third party Logistics (3Pl) Model: The case of MACCFA Freight Logistics" and Submitted in partial fulfillment of the requirement of Degree of Masters of Arts in Logistics and Supply Chain Management compiles with the regulations and standards of the University and meets accepted standards with respect to originality and quality.

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Abstract

Logistics performance is a strong determinant of national income. Reportedly, however, Ethiopia's logistics has repeatedly performed poor. It shows that proper improvement and effective management of logistics system and infrastructures could help to increase the overall performance of the Ethiopian logistics industry. It has been argued that the increase of third party logistics (3Pl) performance will indirectly contribute to the increase of Logistic Performance Index (LPI) score of the country. With a bigger intention of seeking a solution for the problems of the Ethiopian logistics, this thesis has attempted to critically assess the 3pl model by taking a case organization MACCFA freight logistics plc. 3pl are one of the constituent of logistics system of a country. The general objective of the study is to assess the value logic of the case organization/ MACCFA/ in terms of how it delivers logistics value. Three constructs namely logistics service quality, relationship management and organizational effectiveness are used to operational the 3pl business model concept. Valid and reliable measurement instruments for each of the constructs have been developed based on literature review. The questionnaire was dispatched to 83 randomly selected employees of the organization. All of the distributed questionnaire (with few missing values) had been collected back and used for data analysis. Deploying descriptive data analysis (frequency distribution, percentages, mean values and standard deviations), results of the study were drawn. Accordingly, it has been learnt that MACCFA plc creates values by delivering a diversified 3pl logistics having moderate quality level. Its has implemented also a relationship management characterized by a moderate trust and commitment. Likewise, its organizational effectiveness level is also moderate. It is recommended then that in order to become a world class 3pl service provider that can facilitate the logistics system of the country, MACCFA should plan a comprehensive improvement plan to transform all of the three issues from the current mediocre state to the world class levels.

Keywords: Third party Logistics(3PL), Logistics Service Quality, Organizational Effectiveness, Relationship Management and Value Creation

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

The logistics industry, which exhibited great development during recent years globally, is the lifeblood of economies. Logistics activities are extensively important for production and trade sectors. The International Transport Forum (ITF) No 158 on Logistics development strategies and performance measurement, emphasized that logistics performance is a strong determinant of national income (OECD/ITF, 2016).

At a micro level,the importance of logistics is evident. Manufacturing corporations procure raw materials, process these raw materials in the production operations and ship their products to the end users all thanks to logistic activities (Sezer and Abasiz, 2017). Logistics is crucial for fusing an organization's internal processes with its supply chain procedures in order to boost customer satisfaction. A logistical value proposition and logistics have a significant impact on customer satisfaction by leveraging order processing, inventory management, transportation, handling, and packaging, as well as facility network design. This is reported by all supply management processes that can affect logistics and customer satisfaction (Chiarini, 2015).

Logistics reflects the processes of the flow of information from the origin of the raw material to the end point where the product is consumed, planning and controlling this process both in a productive and low-cost manner via storage and inventory facilities. In this context, logistics includes several types of services. These fundamental services include transportation, customs clearance, storage, handling, insurance, packaging, stocks and inventory management, customer relations management and customer specific services. The aforementioned services increased the significance of the logistics industry and thus, the industry became the sector with the highest share in services in several countries (Sezer & Abasiz, 2017, p.12-14).

The logistics industry performs a number of services that facilitate the economic coordination of firms. One of the services that the logistics industry provides is third-party logistics (3PL), which helps firms of all sizes to fulfill their business performance and production. With the advancement in practice and theory of logistics administration, logistics outsourcing has become a vital process for many organizations, which might lessen logistics cost and enhance the service level of logistics for those organizations. The 3PL can provide numerous advantages to its clients such as; it is beneficial for organizations as it enables them to focus on

their core competencies, investment diminishment for assets, reduces costs of logistics services, improves their corporate image, and goodwill.

Emerged in 1990's, as stated by Wang, and Yuqiao (2018) third party logistics (3PL) is also called logistics outsourcing. It means that the company makes the outsources for some or all of its logistics-related activities to a third-party company or organization, and for them to take care (Etokudoh and Boolaky, 2017). With the intensification of market competition, companies are more aware of the importance of their core competence, so the outsourcing of logistic functions has gradually increased (Sahay and Ramneesh, 2006).

The situation in Ethiopia is not different. There is obviously a growing trend towards using 3pl and the number of 3pl service providers is increasing from time to time. The purpose of this thesis research is to understand the business model of 3pl in the country by focusing on the case organization, namely MACCFA 3pl. As stated by Velandia, Herrera, Sanchez, and Villalobos (2024) understanding business models has become an essential capability for organizations seeking to drive growth, revitalize a lagging core or defend against industry disruption. Citing literature for evidences, the authors further stated that firms that manage to understand their business model (BM) and adapt it quickly to the changing needs of their environment and customers have the potential to disrupt, dominate and lead their industries (citing Saqib and Satar, 2021; Wirtz and Daiser, 2017).

A business model describes "the value logic of an organization in terms of how it creates and captures customer value" (Fielt, 2011 p15). It also includes how the organization increases company's value (Palkina, 2022). In a study by Palkina (2022), business model has been defined as "a method for sustainable development of a logistics and transportation organization in order to ensure economic growth and increase company's value" (p2132). Every company has a business model, whether that model is explicitly articulated or not (Chesbrough, 2006; Teece, 2010). The IESE Insight magazine of IESE Business school of the University of Navara stated that business models describe how a company does business- the way all of their activities interact to create and deliver value (May 2,2019). Relatedly, Lambert (2012) defined business models as complex tools conceived to understand and communicate not only the ways of doing business but the structures and strategies that underlie those ways of doing business.

As stated above, to assess the business model of MACCFA/ 3PL service provider this thesis considered three variables that are service quality, organizational effectiveness and relationship management to empirically assess the business model of MACCFA plc. As stated in

its homepage (see https://www.maccfa.com/), MACCFA has been delivering logistics services in Ethiopia for nearly thirty years. MACCFA has a strong partnership with CMA CGM, a world leader in transport and logistics, and has entered into a joint venture agreement with CEVA Logistics, CMA CGM's third-party logistics branch, a top leading global logistics partner. MACCFA is an agent for Ethiopian Airlines and many other international carriers and shipping companies. MACCFA offices are located throughout Ethiopia in Addis Ababa, Dire Dawa, Kaity, Mojo, Moyale and Semera.

1.2 Statement of the problem

As the third party logistics (3PL) industry has continued to evolve, it has clearly become more global in nature. In responding to the needs of a customer base that is increasingly global in its sourcing, manufacturing, sales, and distribution, large 3PL service providers have been challenged to put global service networks in place. The providers have responded in a variety of ways that have included acquisitions in other countries, development of alliances with foreign providers, and initiating their own operations in new geographies. The task of designing, building, and effectively operating these broad networks around the globe is challenging, to say the least (Lieb, 2004). Therefore, companies should be aware of importance and benefits of 3PL. However, to fully tap these benefits, firms must manage the negative consequences of long supply chains; notably, the increased risk of disruptions from labor strikes, partner failures, natural disasters, wars, and terrorist attacks, among other events (Windle et al., 2018).

The challenges have had a direct impact on logistics companies, who are involved in the flow, storage, and transfer of commodities. Logistics companies enable trade and commerce and assist companies in getting their products to clients as an essential component of value chains both domestically and beyond international borders. Therefore, supply chain disruptions brought on by the pandemic could affect the sector's competitiveness, economic expansion, and job creation. Following a review of the literature, this study's research gaps include a critical evaluation of third party logistics at MACCFA freight logistics PLC. Although there are many studies on the practices of logistics, as the world begins to recover from the evaluation of third party logistics, there are few papers available, and even fewer that are specific to Ethiopia.

The actual realization of prospective advantages is significantly less well established, despite the vast amount of literature supporting outsourcing of logistics. This scenario resembles

that which has been seen with regard to outsourcing generally, where it is said that cost reductions and other benefits "tend to be taken for granted, but detailed analyses of actual outcomes and potential side effects are hard to find" (Bengtsson, 2014). This situation resembles what has been found with regard to outsourcing generally, where it is said that cost reductions and other benefits "tend to be taken for granted, but detailed analyses of actual outcomes and potential side effects are hard to find" (Bengtsson, 2014). According to their study, a sizable portion of respondents said they had to make substantial adjustments to the logistics plans and bring previously outsourced duties back in-house. The results of other research also point to serious issues, and it is stated that the majority of logistical alliances were broken up after three to five years. The Outsourcing Institute found similar results, concluding that more than half of third-party collaborations had failed.

According to Hajiesmaeili et al. (2016), logistics are a crucial component to increasing a company's profitability and competitive performance. Through the planning, execution, and control of processes connected to physical flows and the integration of processes along the supply chain, logistics has evolved into a fundamental factor for the generation of competitive advantages and the creation of value. On the one hand, cost reductions connected to the flow of goods through the supply chain, production costs, and physical distribution expenses, particularly storage, inventory, and transportation costs, are made possible by the effective management of critical and supporting logistical operations. On the other hand, the ability to deliver a product where and when there is a need, meeting the needs of the customers before its rivals can (Alarcon & Antun, 2013).

Logistics services and performances in Ethiopia are vividly poor. Evidences showed that the logistics business in Ethiopia has been constrained by numerous and deep rooted challenges. For example, as stated in the FDRE National Logistics Strategy (2018-2028; p18), measured by numerous global indicators such as the Logistics Performance Index (LPI), landlocked countries logistics performance indicators, and global competitiveness index, Ethiopia’s logistics has repeatedly scored very low performance levels. Similarily,Fekadu (2013) reported that the Ethiopia logistics system is characterized by poor logistics management system and lack of coordination of goods transport, low level of development of logistics infrastructure and inadequate fleets of freight vehicles in number and age, damage and quality deterioration of goods while handling, transporting and in storage.

Poor logistics services such as limited coordination among countries on border procedures; inefficiency of customs clearance process at the ports; fragmented and poor quality of transportation related infrastructure; costly and infrequent shipping (with long and indirect shipping routes) delays in tracking and tracing consignments; delays in terminal handling and clearance of goods, absence of cool storage facilities at ports; and the inability to certify product quality amongst others can cause significant hindrance to international trade (Ciuriak Dan and Preville, 2010).

By its very definition logistics is a system. Thus, the problem of logistics can have numerous causes. Its improvement also may demand contributions of numerous actors. This implies that a local problem at any of those constituents may disturb the entire national system. Because a system is as strong as its weakest part. Hence, this thesis has tried to investigate into the national problem by focusing on one of the constituents of the national system, namely 3pl services.

Though there are a number of researches on logistics outsourcing in Ethiopia as well, almost all of them had focused on the perspectives of companies that have outsourced the processes. But, to be complete and comprehensive it makes sense to critically investigate the performance of the business model of logistics outsourcing/ 3pl from the perspective of the service providers. Zhang and Okoroafo (2015) argued that the increase of 3PL performance will indirectly contribute to the increase of Logistic Performance Index (LPI) score of the country.

Furthermore, studies show that even performance measurement practices are rare in logistics organizations, let alone the their business model assessments and performance measurement. As stated by Hamdan and Rogers (2007) citing Keebler and Durtsche (2001), in the case of logistics performance measurement, five recent studies published by the Council of Supply Chain Management Professionals (CSCMP) indicate that most firms do not comprehensively measure logistics performance, let alone their business model performance and even the best-performing firms fail to realize their productivity and service potential available from logistics performance measurement.

Similarly, Aguezzoul (2007) stated that though 3Pl has become a common practice by many companies, the majority of research in this field is of exploratory type and is mainly focused on practices, reasons, benefits, and risks to work with the 3PL as well as the role of those in supply chain management based on the perspectives and experiences of the outsourcing companies.

Furthermore, Asthana and Singh (2015) indicated that literature on the logistics industry is in abundance in the form of survey-based empirical research and reviews of the existing literature from the user's perspective. However, there is not enough literature from the perspective of logistics service providers (LSP), as compared with the user's perspective. Hence, this thesis research presents, however, a critical assessment of 3PL model from the perspectives of the service providers.

Likewise, in Ethiopia studies on logistics service providers is scant. Particularly, logistics service performance researches that have considered the perspectives of the service providers is rare. Ofcourse, studies such as Tadesse, Kine, Gebresenbet, Tavasszy, and Ljungberg (2022) have studied key logistics performance indicators of the Ethiopian Import–Export Chain, including transport, dry ports, transhipment and warehouses. Similarly, Amentae and Gebresenbet (2015) have also undertaken a study on evaluation of performances of intermodal Import-Export Freight Transport System in Ethiopia. The study was undertaken based on the perspectives of a randomly selected customers and multimodal freight transport section employees of the Ethiopian Shipping and Logistics Service Enterprise.

Even though there is a study done by previous researchers on Ethiopian logistics practices, they are focused the transportation part of logistics alone and ignored logistics integral role in supporting commercial activities as well as its effect on international trade performance. Furthermore, Palkina (2022) stated that, there is a lack of works that study the peculiarities of the formation of logistics and transportation organizations' business models and their adaptation to changing environmental conditions, primarily, due to the changes in technological structure.

Therefore, the purpose of this thesis is to empirically asses the business model of third party logistics at the case organization MACCFA freight logistics.

1.3 Research Questions

This study has been initiated to seek answers for the following research questions:

1. What customer benefits are delivered by 3pl services as delivered by MACCFA plc?
2. How benefits are generated for the main supply chain partners of MACCFA 3pl company?
3. How effective is 3pl business as delivered by MACCFA plc in creating value?

1.4 Objective of the Study

1.4.1 General Objective

The general objective of the research is to assess the business model of the third party logistics (3PL) in the case of MACCFA freight logistics.

1.4.2 Specific Objectives

The specific objectives of the study are:

1. To empirically investigate the value creation interms of service quality of MACCFA /3PL service provider with respect to its supply chain partner organizations (upstream and downstream).
2. To study 3pl value proposition in-terms of the relationship framework of MACCFA service and its supply chain partners (upstream and downstream) investigating trust and commitment.
3. To assess the value economics of 3pl interms of the organizational effectiveness of the MACCFA/3PL service provider.

1.5 Significance of the Study

The study has a great significance for MACCFA freight logistics and other logistics service providers, policy makers and investors. It will helps them to easily understand the gap on their logistics practices and take corrective actions that can enhance their capacity to compete with best logistics service providers.

The study gives very important insights and ideas for the effective management of MACCFA 3pl organization. Particularly it helps the MACCFA to determine their employees opinion towards their service quality, identify areas for effective improvement plan formulation and practical insights to evaluate and develop solid foundations for service quality. As stated by Man (2006), the employment of the SERVQUAL scale (which is also used in this study) to evaluate and develop a solid foundation for 3PL service quality is innovative and significant.

Furthermore, Zhang and Okoroafo (2015) argued that the increase of 3PL performance will indirectly contribute to the increase of Logistic Performance Index (LPI) score of the country. Hence, the output of this thesis study has also a significance to improve the LPI of Ethiopia. Atleast the findings of this thesis gives insight to the policy makers pertaining to the current

situation and performance levels of one of the important actors (namely the 3pl) of the logistics sector of the country.

As stated by Fielt (2011), one of the prominent topics in business service management is business models for services. Business models are useful for service management and engineering as they provide a broader and more holistic perspective on services. Business models are particularly relevant for service innovation as this requires paying attention to the business models that make new services viable and business model innovation can drive the innovation of new and established services. Hence, in addition to creating awareness about the relevance of business model for effective management of logistics services in Ethiopia, the output of this thesis research can also be used for service innovations in the sector.

In general, the finding and the recommendation of the study helps in decision making of different logistics aspects by understanding the existing problem to improve or fill their gap.

1.6 Scope of the study

The geographical location of the study is delimited to Addis Ababa, Ethiopia. Specifically the study is done taking the experiences and practices of MACCFA freight logistics services provider. As stated by Cabanelas, Parkhurst, Thomopoulos, and Lampon, (2023), in order to analyse business models, it is necessary to identify how value is created, delivered and captured. Accordingly, the conceptual scope of the thesis is related to the three constructs namely value creation(logistics service quality), value proposition (relationship management), and value capture/ economics (organizational effectiveness). The time scope of the study is April-December 2022.

1.7 Limitation of the Study

Since the research has focused on the selected activity of a single logistics company it is difficult to generalize the finding of the study to all other logistics activities that are described by different researchers and authors. So to improve generalizability of the findings, the study should be replicated for other logistics activities.

Another apparently weakness of the data is related to the nature of the results reported in the thesis. As you note from the finding section of the thesis, all the mean values of the three constructs of the study are near to the midpoint of the scale. All of the mean values of the present

findings are in between 4.0 to 4.44. Such a very closer response rate to a midpoint may relate to the dangaer of using midpoints in scales. As stated by Subedi (2016) in some cases midpoints may be viewed by the respondents as a "dumping ground" for unsure or non-applicable responses as well (citing Kulas, Stachowski & Haynes, 2008).

1.8. Operational Definition of Concepts and Terms

1) **Business Model**: describes the value logic of the 3pl firm/organization in terms of how it creates and captures customer(Fielt, 2011), company, supply chain and national economic value (Palkina, 2022).
2) **Performance measurement** is a metric that is used to quantify performance.
3) **Performance measurement system:** PMS can be defined as the employment of a set of metrics to quantify both the efficiency and effectiveness of actions (Neely et al., 1996 cited in Man, 2006).
4) **Performance** refers to the nature and quality of an action that an organization carries out to accomplish its principal missions and functions for the generation of profit (Sink, 1991 cited in Man, 2006).
5) **Third party logistics (3PL)** is defined as the outsourcing of logistics activities to other companies, such as transportation, warehousing, inventory management, distribution, and other value-added services (Lau, 1999).
6) **3PL service providers** are companies that provide a range of logistics services to outsourcing companies to co-ordinate the transfer of goods from one place to another (Field, 1998).

1.8. Organization of the study

The study report is organized as follows: Chapter One: Introduction- it gives the major highlights of the study. It will contains the background of the study, statement of the problem, research objectives, research questions, delimitation, significance of the study and organization of the study. Chapter Two: Literature review- gives detail literature review from published books, journals, the internet sources. Chapter Three: Research methodology- has addressed about the study design, population and sampling design as well as data and and data collection issues. Chapter Four: Results and Discussions contains presentation of research findings, analysis and

interpretation of data and discussion of the results. The final chapter, Chapter Five addresses Summary. conclusion , recommendations and suggestions for future studies.

CHAPTER TWO
REVIEW OF RELATED LITERATURE

This part of the study address relevant conceptual issues, theoretical framework and empirical review related to the topic of the study. It includes definition and concept such as logistics, meaning of third party logistics, pros and cons of third party logistics and measuring third party logistics organizational performance. Overview of the concept business model, and evaluation or measurement issues are included in the chapter to give readers with general background theoretical background information. Furthermore, review of empirical studies as well as the framework of the study are presented in this chapter.

2.1 Theoretical Literature

2.1.1. Concepts and Nature of Logistics and Logistics Service Delivery

To clearly capture the picture of 3pl, having brief background information on the concept of logistics and the evolution of logistics service providers are presented below.

Logistics is defined in the Council of Supply Chain Management Professionals' Supply Chain Management Terms and Glossary (2010, 114) as a process of planning, implementing, and controlling procedures for the efficient and effective transportation and storage of goods including services, and related information from the point of origin to the point of consumption for the purpose of conforming to customer requirements. Logistic is a supply chain activity that has great impact on competitive advantage of business company. Therefore, it is important to have effective and efficient logistics performance to be successful in business (McGrath, 1992).

Some businesses deal with logistics on their own, other use providers through outsourcing. More and more entities are now rendering such services, and their organization may vary; yet there are five different models of logistics services (https://navata.com/cms/1pl-2pl-3pl-4pl-5pl/) . Likewise, Makmor, Saludin and Saad (2019) categorized the modes of logistics service providers into five different categories as highlighted in Table below (citing Tieman,2015).

Table 2.1 Basic characteristics of the five different models of logistics

Types	Characteristics
1PL	The first party logistics (1PL) is the shipper, a vendor or supplier of goods, who does not outsource its logistics activities to third parties. All logistics activities are perform in-house and under own control. Some examples can be found in the oil & gas and army sector.
2PL	Second party logistics (2PL) the shipper hires a transporter or a warehouse operator (the 2PL) for clearly defined operational activities. The transporter or warehouse operator is a sub-contractor and works under direct control of the shipper. Examples in Malaysia can be found in the cement distribution and chemical and industrial supply chains. The shipper can also outsource a complete package of activities to a third party logistics (3PL) service provider.
3PL	The third party logistics (3PL) organizes all the activities and works with selected subcontractors, transporters and warehouse operators. The 3PL manages the relationship with the customer of the shipper and becomes an actual link in the supply chain.
4PL	The fourth party logistics (4PL) where the logistics service provider not only organizes, but also controls the logistics activities. The 4PL controls the entire supply chain, both sourcing as well as distribution. In the most pure form, a 4PL is independent; non-asset based and subcontracts the physical transportation and warehousing activities to the best logistics service provider for the job. A 4PL is involved in the interface management and orchestrates a complete logistics concept. They have been used in consumer electronics and automotive supply chains.
5PL	The fifth party logistics (5PL) manages networks of supply chains with an extensive ebusiness focus across all logistic operations. The 5PL model supports a circular economy, an industrial economy that is based on zero waste and its energy, including logistics, from renewable resources.

Source: (Makmor, Saludin & Saad , 2019; p399)

Outsourcing of the logistics business process (either partly or entirely) marked the birth of the 3pl businesses. Third party logistics involves the use of external companies to perform some or all of the firm's logistics activities. A key rationale for such outsourcing is that with intensified global competition, firms are concentrating their energies on core activities that are critical to survival, and leaving the rest to specialist firms (Bhatnagar et al, 1999 cited in Jaafar & Rafiq, 2005)). It is called third- party because the logistics provider does not own the products but participates in the supply chain at points between the manufacturer and the user of a given product (Setthakaset, and Basnet, 2005 cited in Kotzab, Seuring,Muller, and Reiner (2005)).

Then, the advent of information and communication technologies and other recent phenomena have contributed to the birth of the new generations of 3pl including the 4pl and 5pl. Since, this thesis deals with assessment of 3pl model, the focus of this chapter is also on the issues of 3pl.

2.1.2 Third Party Logistics /3pl

There are several perspectives on the 3Pl conceptualizations and definitions. Even there are related terms that are sometimes used interchangeably to 3pl. For example, as indicated by Seyed-Alagheband (2011) terms such as logistics outsourcing, logistics alliances, third-party logistics, contract logistics, and contract distribution have been used to describe the organizational practice of contracting out part of or all logistics activities that were previously performed in-house.

Similarly, the definitions of 3pl are numerous. As stated by Selviaridis et al (2008) a variety of definitions exists in the literature; different definitions tend to emphasize different aspects of logistics outsourcing arrangements such as the service offering, nature and duration of relationships, performance outcomes, extent of third-party responsibility over the logistics process, and position/ role in the supply chain. Similarly, Seyed-Alagheband (2011) stated that no single consistent definition for the 3PL concept can be found in the 3PL literature. The authors stated that in some cases, 3PL is used as a label for outsourcing of transportation or warehousing; in other cases, the term is used to account for the outsourcing of a wider logistics process. Accordingly, the authors have classified the definitions into narrow and broad based on the number and types of activities addressed by the definition.

Selviaridis et al (2008) summarized these definitions of 3PL by categorizing into five depending on orientation as service offering, nature/duration of 3PL relations, performance

outcomes, extent of 3PL responsibility and position in the supply chain. In the following paragraphs of this subsection, sample definitions of the 3pl are presented.

As stated by Lezapouri and Kardar (2011), one of the earlier 3PL definitions is provided by Andersson and Sjöholm (1992, cited in Skjott-Larsen, Halldorsson, Andersson, Dreyer, Virum & Ojala, 2003). They defined 3PL as a situation where a third party takes responsibility for primary transport and warehousing activities, but also related services such as consolidation, order administration and simple assembly.

As presented in Makmor, Saludin, and Saad (2015) the CSCMP Glossary defines third Party Logistics (3Pl) services as outsourcing all or much of a company's logistics operations to a specialized company. Rushton and Walker (2007) defined third-party logistics as the management of outsourced logistics, transportation and distribution activities. 3PL is commonly used as the term to describe an external provider who manages outsourced activities on behalf of the shippers or customers whose business processes they support.

Soodyall and Singh,(2014) having conducted a theoretical review on outsourcing the logistics function, articulated that third-party logistics (3PL) are supplied by outsourced service providers (OSPs), which can be defined as organizations that provide multiple logistics services that were previously provided in-house for use by customers (citing Gattorna, 2010).

In a nutshell, as presented by Seyed-Alagheband (2011) third-party logistics can be described as these activities carried out by a logistics service provider performing at least management and execution of transportation and warehousing. In addition, other activities like inventory management, information related activities, value added activities, or supply chain management can be managed by the logistics service provider. The contract is also required to include management, analytical or design details, and the length of the cooperation should be at least one year. Thus, a distinction should be made between 3PL and the traditional outsourcing of logistics functions, that the conceptualization of 3pl should incorporate uniquely the provision of a broader range of services, a long-term duration, the customization of the logistics solution, and a fair sharing of benefits and risks (Marasco, 2008).

2.1.3. Historical Perspectives and Developments

As stated by Makmor, Saludin, and Saad (2015) the term third party logistics was first used in the early 1970s to refer to intermodal transportation marketing companies. On the other hand

Farahani, Lezapouri and Kardar (2011) stated that the term 3pl actively began to appear in academic literature year 1989 (citing Maloni & Carter, 2006).

Pertaining to the come off and evolution of 3pl, Farahani, Lezapouri and Kardar (2011)identify three phases based on a survey conducted by Berglund et al. in 1999 , that has reported three waves of entrants into the 3PL market. The first wave dates back to the 1980s or even earlier with the emergence of what are called traditional LSPs. The second wave dates from the early 1990s when a number of network players, mainly parcel and express companies such as DHL, TNT, and UPS, started their 3PL activities. Usually, the 3PL activities of these companies are based on their worldwide air-express networks and their experience with expedited freight. The third wave dates from the late 1990s. Whereas the first and second wave entrants base their strength on traditional logistics activities such as transportation, warehousing, or running a scheduled network, these new players build on very different skills such as IT, consultancy, or financial expertise. In other words, there is a gradual shift from asset-based players to skill- or systems-based players .

Li (2014) on the other hand specified different phases of 3pl evolution process. They evolution phases are differ from one another based on according to the services they provided. The first phase refers to single service 3PL companies that provide only transportation or warehousing services. Phase two refers to separated services 3PL companies that were providing either transportation or warehousing services. Thirdly, phase three includes integrated services 3PL companies. They provide a combined transportation and warehousing services. The final two phases (phase 4 and phase 5) refer to combined services 3PL companies and complex combined services 3pl companies respectively. While phase four 3pls provide extra services on top of the transportation and warehousing functions such as planning services; the phase five (complex combined services 3PL companies) provide a network of different services, such as delivery services, technology services, distribution services, and after sale services (citing Novick, 1993).

In general, therefore, the evolution and growth of 3pl shows that the main task in the beginning of 3PL development period is providing the basic logistics service for customers, such as warehousing, distribution and delivery Whereas, the new generation of 3pl handles the entire logistics works and more.value adding services. Besides, 3pl is obviously a young practice and field of study. Yet, its growth and developments are fast. The factors for such rapid development are attributed to the dynamism of the 21st century (1990s). As stated by

Man(2006), the need to develop a sustainable competitive advantage, the growing emphasis on providing quality customer service, and the strategic value of a focus on core business and re-engineering (citing Hill, 1994; Lieb, 1992; Sheffi, 1990) results in the evolution of contract logistics, in contrast to traditional logistics.

2.1.4. Activities/ functions of 3pl

As stated in the preceding section of the chapter, the conceptualization of 3pl can be broad or narrow based on the number and types of activities addressed by the definition. This implies that there are again different perspectives towards the activities of 3pl.

As stated by Seyed-Alagheband (2011), 3Pls services can be limited or comprise a fully integrated set of logistics activities. A 3PL activities include transportation, warehousing, freight consolidation and distribution, product marking, labeling and packaging, inventory management, traffic management and fleet operations, freight forwarder, payments and auditing, cross docking, product returns, order management, packaging, reverse logistics, carrier selection, rate negotiation, and logistics information systems (Vaidyanathan, 2005 cited in Seyed-Alagheband, 2011).

In addition to the aforementioned generic activities of 3pl, Man (2006) has specified other value-added services such as, e.g., pick-and–pack, assembly, repairs, and re-conditioning. Furthermore, most authors have indicated that the 3pl services are usually integrated or bundled together by the service provider.

2.1.4. Types of third-party logistics

Third-party logistics suppliers incorporate cargo forwarders and dispatch organizations and also provide different organizations' coordination's, offering subcontracted coordination and transportation administrations(Shi, Waseem & Shahid, 2020). Seyed-Alagheband (2011) specified two classification typologies of 3pl. The author stated that 3pl can be classified interms of customer adaptation into Standard 3PL providers, Service developers, Customer adapters as well as customer developers. Secondly, the author stated that third-party logistics providers can be classified to asset-based and non asset based 3PLs. Asset-based 3PLs own some assets, especially transport-related assets such as trucks and warehouses; however, non-asset based 3PLs

do not own assets, and they usually work with subcontractors. This type of 3PL may possess only desks, computers, and freight industry expertise.

Very closely related to this, Susanne and Monica (2005), has specified four types of 3Pl suppliers as: standard 3pl supplier, administration designer,the client connector and the client designer. Accordingly, the standard 3PL supplier perform exercises, for example, pick and pack, warehousing, and conveyance (business) the most fundamental elements of coordination. The administration designer 3PL suppliers, on the other hand, offer their clients propelled esteem included administrations, for example, cross-docking, particular bundling, or giving an extraordinary security framework. The third type, the client connector 3PL supplier, comes in line with the client and basically assumes finish control of the organization's coordination exercises. The 3PL supplier enhances the coordination drastically yet does not build up another administration. The last category, the client designer 3pl suppliers, do undertake coordinating itself with the client and assumes control over their whole coordination work. These suppliers perform broad and challenging assignments for their clients.

2.1.5. Pros and Cons of 3pl services

Lau et al. (2006) summarized some common key factors that motivate organizations to use 3PL companies. These factors were broadly categorized as economic, strategic, and environmental perspectives. Solakivi et al. (2011) claimed that outsourcing logistics activities to 3PL companies can make the cost reduction, cost saving and capital investment reduction. According to those factors, it can improve profitability, efficiency, return on assets and add value to product. Brewer et al. (2013) state, for strategic factors, it 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 organization's own productive capacity, increase responsiveness to market change and reduce risks. For environmental factors, it refers to IT development, globalization and capability of supplier. The IT development can meet increasing demand and manage resources more efficiently and economically (Christopher, 1993). The globalization can help companies gain global competitive advantage.

The capability of supplier enables partnering to improve service quality and customer service. However, there have some problems for outsourcing logistics to 3PL companies during

it provide convenience for organizations. Lau et al. (2006) also summarized the drivers against 3PL usage. Kumar et al (2012) agree there are many potential problems of using 3PL companies. The loss of control made the companies loss core competencies and alienating customers. The loss of critical skills made organizations loss of competitive advantage and increased number of competitors. The low capabilities of 3PL providers made organizations loss of market share. The loss of flexibility reduced responsiveness for the fast changing market. Failure to realize hidden costs of contract increased operating cost. Indecisiveness on which activities to outsource and less support from organization increased chances of failure. The fear of job loss increased resistance to change and lower staff morale. To sum up, the advantages of using 3PL companies are to gain service improvement cost saving and operation efficiency. The disadvantages are there are risks of loss of control, loss of critical skills, loss of flexibility and less support from organization which increased the operating cost, increased chances of failure and loss of competitive advantage. However, it does not mean 3PL is negative. Outsource logistics activities to 3PL providers have more advantages than disadvantages. Choose an outstanding partner reasonably and successfully will help organization achieve competitive advantages.

Asthana (2013) indicated that a study by Sahay and Mohan, (2006), has cited substantial growth in various financial indicators using services of 3PL, for instance, various improvements in sales revenue by 13.5%, working capital by 12.3%, returns on assets by 10%, capital assets reduction by 10%, production cost reduction by 10.5%, labor cost reduction by 10.0%, and logistics cost reduction by 15%. 3PL users depend on 3PL service providers to secure capacity and gain agility (Hannon, 2005 cited). 3PL services help to achieve the strategic objectives by concentrating more on core competency of the main business.

While there are several reasons for companies to embrace a 3PL, there is also another side to that coin. Despite the potential rewards, using third-party logistics companies can come with its own set of risks. As indicated in the knowledge base blog of 3pl, Bendor-Samuel and Lynch, (2000) mentioned that using 3pl is fraught with potential problems such as: inadequately scoped work, inadequate control systems over how certain services are delivered, which in turn may raise the company's liability exposures; hidden costs and risks; inadequate high level management support or lack thereof; poor organizational communication; cross-functional political problems; unclear expectations; uncertainties associated with the stability of the service companies; and issues of confidentiality, security, timing, and lack of flexibility (as cited Waugh & Luke, 2011).

2.2. Measurement of Logistics Services

Measurements are evaluations of indicators of constructs, meaning what you measure is not the thing you measure. Measurement of services is especially challenging due to the often intangible and experiential nature of the operation. It is important to use a variety of measures to improve their validity.

Tadesse, Kine, Gebresenbet, Tavasszy, and Ljungberg(2022) stated that the measurement of logistics performance is a critical step in logistics management. Logistics performance has been evaluated by many researchers at both a national and international levels (e.g., Amentae, & Gebresenbet, 2015; Ojala, & Çelebi, 2005; and RFC Rhine-Alpine, 2015 as cited in Tadesse, et al,. 2022). The World Bank has also been measuring and ranking the logistics performance of nations since 2007. This ranking is based on the logistics performance index (LPI), which comprises customs, infrastructures, ease of arranging shipments, quality of logistics services, timeliness, and tracking and tracing. A report by Arvis et al.(2018) revealed that, based on the World Bank's LPI, the top logistics performers were from high-income countries, whereas low-income countries were the least effective performers.

Karrapan, Sishange, Swanepoel, & Kilbourn, (2017) stated that there exist a number of major international ranking indexes of 3PLs, including those provided by Gartner (2013) and Armstrong and Associates (2015). These indexes are based on a broad range of criteria. The ranking index report provided by Armstrong and Associates (2014) includes information on various attributes and services of 3PLs, namely: turnover, service area, assets, information systems, services and key customers. These ranking indexes could provide valuable assistance to potential logistics outsourcing clients as well as existing 3PLs in bench-marking themselves against competitors.

Setthakaset, and Basnet (2005) (citing Beamon, 1999) presented a framework for measuring performance of a supply chain that included measures of resource usage, supply chain outcomes, and flexibility. However, this framework was geared not particularly towards logistics service measurement, but towards general supply chain performance. Lai et al. (2002) devised a construct for measuring transport logistics performance, which included service effectiveness measures for the shippers and the consignees as well as performance efficiency measures for the transport providers. The first two service measures were derived from the reliability and

responsibility dimensions of the SERVQUAL instrument of Parasuraman et al. (1988). These two dimensions can be used to measure 3PL services. However, the measures in Lai et al. (2002) are concerned with perceptions of the service, rather than with the expectation-perception gap as suggested in Parasuraman et al. (1988). Whereas Parasuraman et al. (1988) measure the expectation-perception gap on predefined attributes of service, Mentzer et al. (1997) advocate starting from the logistics service values desired by the logistics customers and identifying the logistics service attributes directly through the customers.

As summarized by Man (2006), the models of performance measurement in 3pl service sectors are 1) Strategic Measurement Analysis and Reporting Technique System (SMART), 2) Performance Measurement Questionnaire (PMQ); 3) The Balanced Scorecard; 4) Strategic Performance Measurement System; 5) Integrated Dynamic Performance Measurement System (IDPMS), and Holistic Process Performance Measurement System (PPMS).

Man (2006), however, developed performance measurement framework for 3pl service that has three dimensions namely, service quality, organizational effectiveness and relationship management. Similarly, Asthana,and Singh (2015), based on a comprehensive cross national literature review on Third party Logistics (3PL) performance frameworks, that have reviewed 125 research papers and other documents, have reported that the three variables namely Service Quality, Organisational Effectiveness, and Relationship Management that are the dominantly used measures of 3PL performances by the empirical studies.

The performance measurement framework developed by Man(2006) has been rooted in Organizational theory, The Organizational theory cites context – structure – output relationship as the major corporate function that achieves organizational success. It reveals both conceptual and empirical association between 3PL service providers, supply chain partners, and 3PL organizational performance measurement and explores the links between the determinants of the logistics outsourcing service quality of supply chain partners (suppliers or customers) and the identification in terms of organizational structure of the inter-firm relationship between 3PL providers and customers, which in turn is linked to tangible and intangible outcomes of organizational performance.

2.3. Business Model

2.3.1. **The Concept**

As stated by Fielt (2014), while people agree on the importance of business model to the success of an organization, the concept is still fuzzy and vague, and lacks consensus on its definition and compositional elements (citing Al-Debei & Avison, 2010; Morris et al., 2005; Shafer et al., 2005). The author indicated that there is a divergence of understanding among people, in particular between those who are business-oriented and those who are technology-oriented (Osterwalder et al., 2005).

As described by Salfore, Ensrmu and Kinde (2023) there is no single widely accepted definition of a business model because the literature develops in silos based on the interests of respective researchers (Chesbrough, 2007). Amit and Zott (2001) define the business model as "the content, structure, and governance of transactions designed so as to create value through the exploitation of business opportunities." Chesbrough and Rosenbloom (2002) describe the same as "the heuristic logic that connects technical potential with the realization of economic value." While the concept and definition of a business model differ, various scholars have conceptualized it based on its basic dimensions and agree that its main purpose is to create and deliver value to customers and enterprises themselves (Osterwalder, & Pigneur, 20)10. Similarly, Teece(2010) defined a business model as "the design or architecture of the value creation, delivery, and capture mechanisms of an organization."

Fielt (2014) described that with the growing importance of services for economies and organizations and information technology as driver and enabler of service innovation, there is a need for the holistic management of services in an organization to ensure alignment between the needs of the customer and the objectives of the organization. Business Service Management (Rosemann, Fielt, Kohlborn, & Korthaus, 2009) is a management discipline that view services from a business perspective and deals with the service orientation of the organization and the provisioning and use of business services. One of the prominent topics in Business Service Management is business models for services. Business models are useful for service management and engineering as they provide a broader and more holistic perspective on services. Business models are particularly relevant for service innovation as this requires paying attention to the business models that make new services viable and business model innovation can drive the innovation of new and established services.

Companies should carefully consider how to adapt their business models to maximize the opportunities of digital transformation (Rachinger et al. 2018) and minimize the threats (Volberda et al. 2021).

As stated by Fielt(2011) literature also shows that there are different business model frameworks, such as the Business Model Canvas (Osterwalder & Pigneur), the FourBox Business Model (Johnson) and Business Model Schematics (Weill & Vitale). Business model frameworks make it possible to specify a business model by a number of elements in a systematic way.

Business model describes the value logic of an organization in terms of creating and capturing customer value. The business model offers an integrated approach to value with a focus on customer value and value creation is stressed. It constitute value proposition, value architecture and value economics (Fielt, 2011).

While defining the business model concept has been among the first tasks of early researchers in the area (Osterwalder et al., 2005), the definitions themselves have been subject to much debate (Pateli & Giaglis, 2004) and a general accepted definition has not yet emerged (Morris et al., 2005).

Based on thorough review of discussions and varied insights, and attempting to align with many of the more recent definitions (in particular, Chesbrough, 2006; Johnson, 2010; Osterwalder & Pigneur, 2010). Fielt (2011) has defined business model as a system that describes the value logic of an organization in terms of how it creates and captures customer value. The business model defines the value logic or rationale of a business. It is a holistic approach integrating different value concepts (use value, exchange value, added value), perspectives (customer value, business value) and approaches (creating value, capturing value).

As stated by Fielt (2011), the concept of business models has attracted significant attention in various research fields, including information systems, technology management, e-business, and strategic management (DaSilva & Trkman, 2014; Massa et al., 2016; Zott et al., 2011). However, this wide-ranging interest has also led to various definitions, conceptualizations, and representations (Zott et al., 2011). From a broader perspective, a business model describes how an organization functions and how its goals are achieved (Massa et al., 2016). It represents the logic of how a (networked of) organization(s) creates and captures value (Osterwalder, 2004; Turetken & Grefen, 2017; Zott & Amit, 2010), describes the resources, capabilities, and competencies needed to enable these value mechanisms (Roelens & Poels, 2015; Zott & Amit, 2010), addresses the revenue model (Magretta, 2002; Osterwalder et al., 2005; Timmers, 1998), relates to or reflects the business strategy that the organization pursues (Casadesus-Masanell &

Ricart, 2010; Shafer et al., 2005), and shows how it can be supported by IT (Al-Debei & Avison, 2010; Veit et al., 2014).

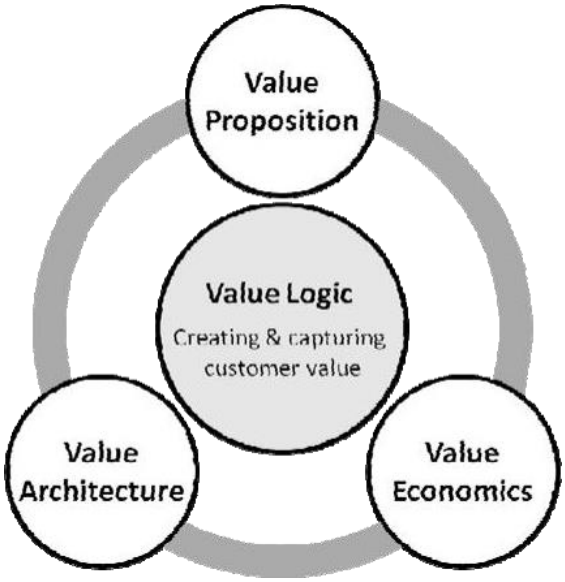
Palkina (2022), in the study on transformation of business models of logistics and transportation companies in digital economy, has defined business model as how the company earns money, who are its customers, what value the company creates for its clients and how the company earns from it. The author also distinguished, based on a review of previous experiences and researches, three components of a business model: 1) value proposition, that is, what benefits customers will receive from using this product; 2) value-added architecture, that is, how benefits are generated for the main groups of stakeholders of the company; 3) estimation of creating value, sustainability of the business model (citing Ilinskaya, et al., 2019).

Likewise, Fielt (2011) formulated a business model framework. The author stated that the higher order elements should at least cover the following dimensions; value proposition, value architecture and value economics**.** As described by the framework, the value proposition addresses the customer problem that the business initiative is trying to solve, often in relation to target customers, and the solution that is offered to deal with that problem. The second element of the framework which is the value architecture describes how the value proposition can be effectuated by the different actors and their capabilities, in particular the focal organization, but also other organizations (e.g. partners, suppliers, distributors, complementors, etc.) and customers (within an organizational network). Thirdly, the value economics addresses the economic considerations (possibly including non-financial ones) related to the value proposition and architecture and is often focused on how the focal organization can make money.

Figure below presents business model conceptualization based on the three dimensions. The value dimensions address the basic questions in relation to the business model definition with value creation being primarily addressed by the value proposition (focusing on an integrated who-why-what question) and architecture (focusing on an integrated who-what-how question) and value capture being primarily addressed by the value economics (focusing on an integrated who-for what-how much question).

In a study on transformation of logistics and transportation companies business model for digital transformation undertaken by Palkina (2022), business model has been defined as a "method for sustainable development of a logistics and transportation organization in order to ensure economic growth and increase company's value" (p2132).

Figure 2.1: Conceptualization of a business model



Source (Fielt, 2011)

2.3.2. Business Model and and other Related Concepts and its Formation

Obviously, there is a confusion between business model and strategy. As stated clearly by Casadesus-Masanell, and , Ricart, (2010), on the surface, this notion appears to be similar to that of strategy. Yet, the authors have formulated a conceptual framework to separate and relate the concepts of strategy and business model: a business model is a reflection of the firm's realized strategy. As they reported, in simple competitive situations there is a one-to-one mapping between strategy and business model, which makes it difficult to separate the two notions. Likewise, the authors indicated that concepts of strategy and business model differ when there are important contingencies on which a well-designed strategy must be based.

The authors have beautifully summarized the contention as Business Model refers to the logic of the firm, the way it operates and how it creates value for its stakeholders; and Strategy refers to the choice of business model through which the firm will compete in the marketplace; while tactics refers to the residual choices open to a firm by virtue of the business model it chooses to employ.

Similarly, as stated by Turienzo, and Blanco, Lampon, and Muñoz-Dueñas (2023) the business models of companies are the result of the strategies adopted and decisions made by managers and stakeholders.

2.3.3. Does Business Model Matter?

As stated on a website of University of Navara, Business School IESE Insight debate continues in management literature on whether, or how much, the business model matters, in comparison with other factors such as product, industry or network. IESE's Govert Vroom, working with Timo Sohl and Markus A. Fitza, decided to put business models to the test. They studied 917 retail companies, from Aldi to Ikea, to see how firm performance varied according to business model. They conducted interviews and analyzed data, covering 29 countries and 23 industries over 11 years, from 2005 to 2016, comparing business model effects with other factors like business unit idiosyncrasies, industry, country, corporate parent and the general economic conditions at the time. The results were decisive. The business model had a significant effect on company success. It accounted for 5.1 percent of a firm's return on assets (ROA), on average. To put this into perspective, that means the choice of business model (i.e., what firms using the same model had in common) is about as important a factor as industry, although it is less important than some other factors — namely, the idiosyncratic resources and capabilities of the individual business units (called "the business unit effect" in the study). Furthermore, distinct business models also contribute to differences in market share - and those differences hold up independent of where a firm operates, in terms of industry and in terms of geography.

2.4. Logistics Services in Ethiopian Context

The global third-party logistics (3PL) market size was valued at $1.3 trillion in 2021, and is projected to reach $2.8 trillion by 2031, growing at a CAGR of 8.8% from 2022 to 2031(https://www.alliedmarketresearch.com/3PL-market).

Ethiopia's 3PL market is witnessing a surge in demand for integrated supply chain solutions to support its growing economy. The Third Party Logistics (3PL) market in Ethiopia (https://www.statista.com/outlook/mmo/third-party-logistics-3pl/ethiopia#analyst-opinion) is experiencing significant growth and development in recent years. Customer preferences, trends in the market, local special circumstances, and underlying macroeconomic factors are all

contributing to this positive trajectory. Customer preferences in the Ethiopian 3PL market are shifting towards outsourcing logistics services to specialized third-party providers. This is primarily driven by the desire for cost savings and improved operational efficiency. Many businesses in Ethiopia are realizing the benefits of focusing on their core competencies while entrusting their logistics needs to experienced 3PL providers. Additionally, the increasing complexity of supply chains and the need for advanced technology solutions are also driving the demand for 3PL services.

In Ethiopia there are three types of freight-forwarding service providers namely a) Forwarding and shipping agency service providers, b) Forwarding service providers and c) Customs clearing agents. Foreign participation in the sector is not permitted under the investment law. Forwarding and shipping agency service providers. The state-owned Ethiopian Shipping and Logistics Services Enterprise (ESLSE) provide freight forwarding and clearing, shipping, as well as trucking and stevedore services. ESLSE provides Multi-modal and Uni-modal transport operations. About 8% of these services are provided by the private sector. Forwarding service providers represent 17% of the service providers and the majority lacks strong financial bases and faces some problems in management and organization. Customs clearing agents consists of informal operators and represent about 75% of the services providers and focus on individual consignments in which they provide cheaper services based on personal contacts. The majority lacks strong financial backing, management and organization. (UNDP, 2017).

In short per the 2023 report of Statista (https://www.statista.com/outlook/mmo/third-party-logistics-3pl/Ethiopia), 3PL in Ethiopia is summarized as:

- Revenue in the Third Party Logistics (3PL) market is projected to reach US$1.05bn in 2024.
- Revenue is expected to show an annual growth rate (CAGR 2024-2028) of 4.66%, resulting in a projected market volume of US$1.26bn by 2028.
- The logistics costs of Third Party Logistics (3PL) market is expected to amount to US$16.10bn in 2028, potentially depicting how much the 3PL market can grow.
- Logistics costs is expected to show an annual growth rate (CAGR 2024-2028) of 4.66%, resulting in a projected growth of US$16.10bn by 2028.

2.5. Review of Empirical Studies

Man(2006) stated that studies on 3PL are relatively new. As undertaken by Man 92006), the summary of the research into 3PL since 1999 appears that although there have been some studies into the integration of relationship marketing and 3Pl research has not exclusively focused on the impact of relational activities on organizational performance and on relationship management between 3PL providers and their clients.

The role of logistics in facilitating international trade and development shows that a link between export performance and transport and logistics improvements can be traced back to the 1990s (Wiederer, forthcoming). The logistics performance of a country contributes to its productivity, attractiveness to foreign investment, and ability to participate in global trade (Hausman et al., 2013). To connect with international customers, exporting firms need the spatial connectivity and infrastructure that a country's logistics environment provides (Banomyong et al., 2015). Many studies see customs as an important factor in logistics and transport efficiency, and, especially in relatively less developed countries, small measures in customs can increase the efficiency of the total logistics system (Ekici et al., 2016; Yang and Chen, 2016; Heaver, 1992; Devlin and Yee, 2005).

In the transport and trade literature, customs are seen as an important factor for trade facilitation (Hausman et al., 2013). In fact, according to the FTA (Freight Transport Association), in 2014, many companies rely on transport and logistics to keep their business strong. Today, companies have good infrastructure and record keeping, which continues to improve through advancements in technology. As time has progressed, so has the importance of logistics, in fact this rise has brought factors such as warehousing and other facilities closer to large towns and cities. Logistics is affecting businesses within towns and cities, bringing more jobs into these locations.

The study by Fekadu (2013) on the logistics practices of Ethiopian found that the density and quality of transport infrastructure is very low, the main freight transport companies lack capacity in terms of skilled human resource, management skills and number of fleets of vehicles, the main/big companies are government owned that will result in inefficiency, the efficiency of customs authority is very low and this causes a lot of delays at check points, and the number of days required to get foreign currency from national bank is also very long.

As stated by Seyed-Alagheband (2011), a survey conducted in 2003, users in 2000 relied most heavily on third parties for warehousing management (56%), transportation services (49%), and shipment consolidation (43%). The use of traditional logistics services offered by 3Pls has

remained relatively stable in recent years; however, there is an emerging interest from manufacturers for nontraditional applications of 3Pls (citing Aghazadeh, 2003).

As stated by Setthakaset, and Basnet (2005) many authors have investigated the use of 3PL services in particular regions around the world and made comparisons across the regions. Lieb (1992) studied the use of 3PL services in the USA. Respondents in this research were asked to indicate the level of satisfaction they felt with 3PL's performance, and generally reported positive experiences. He concluded that third party participation in this region had been accepted because many manufacturers are increasingly focusing on reducing logistics costs, fostering productivity increases and improving service quality. Lieb et al. (1993) have compared practices and experiences of long term users of third party logistics services across the USA and Western Europe. Results showed that European manufacturers are more committed to the use of third party providers than their counterparts in the US. There are three main differences between the continents. First, European manufacturers use 3PL for both domestic and international transactions. Second, European companies allocate more of their total logistics budget to these firms and use more services than large US manufacturers. Third, European manufacturers will make long-term contracts with the third party which improves the working relationship. Dapiran et al. (1996) researched 3PL usage by large Australian firms. Millen et al. (1997) compared Australian 3PL usage against American and Western European practices. Randall (1991) reported on 3PL in Europe.

Researchers have also examined the use of 3PL in developing countries. Goh & Pinaikul (1998) reported on the general state of affairs regarding logistics management in Thailand. They reported deficiencies in information systems, road infrastructure, and logistics expertise. Similarly, Kim (1996) has reported on logistics management in Korea. Sohail & Sohal (2003) conducted an empirical research study about the usage of 3PL providers in Malaysia. Results indicated that logistics service providers play an important role in Malaysian industry. It shows that many Malaysian firms are utilizing the services of contract logistics providers, and have been doing so for quite a few years. These companies do not rely solely on one contract logistics provider. However, they prefer to use many logistics providers to enhance their services. Bhatnagar et al. (1999) conducted similar research on Singapore firms. They found that Singapore companies are satisfied with 3PL providers' performance and believe that 3PL have been a positive development within their organizations. Major benefits realized by user firms were cost reductions and improved quality of service.

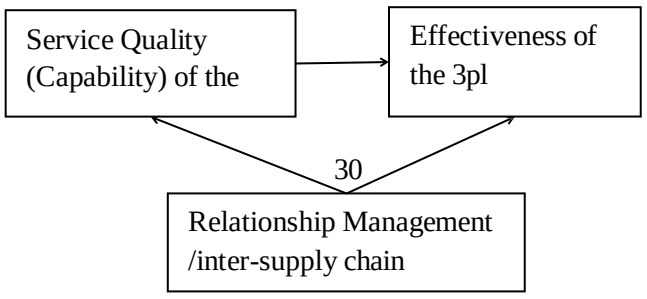
2.6. Framework of the study

Evidently, there is a scarcity of literature on operationalization of business model of 3pl services. The only exceptions are Clauss(2017) who have developed business model innovation scale and proved its relevance to organizational performance, in a very generic context. We found that this model serves the purpose of the present thesis, yet partially, Because the 3pl has its own unique characteristics and features that should be considered while developing a measurement framework. Similar experiences exist in the tradition. For example, the architectonics of the business model for a logistics and transportation organization presented in the article authored by Palkina (2022) was developed based on the basic characteristics of this service sector so as to take into account the specifics of activities of logistics and transportation companies in strategic management.

Inline with the purpose of the present study, an appropriate model should have a potential to take into account that the basic characteristics of 3pl services in an integrated national logistics system sometimes also known as supply chain logistics. Put in another words, the present study can be described as firm level study within the context of a broader environment of the national logistics system in an integrated ways.

Likewise, in the 3pl context the comprehensive study undertaken by Man (2006) can be used as, atleast, a proxy substitute for the purpose complementing the generic business model measurement described above. The author has identified, examined, proposed and validated/ confirmed a research model to investigate the criteria that enhances 3PL service success using the structural model test. The model was rooted in organizational (performance) theory, specifically service management theory. The theory basically addresses context, structure and output. Accordingly, the results of the structural model test show that the criteria that are most strongly related to 3PL organizational performance can be grouped into three constructs: 3PL service quality, 3PL organizational effectiveness, and relationship management as depicted in figure below.

Figure 2.2: 3Pl Business Model Operationalized in an Integrated Logistics



Source : (Adapted from Man,2006, and Clauss, 2017).

The process of customizing the two frameworks has been described as follow. In Clauss (2017) framework, value creation has been measured in terms four sub-constructs among which "capabilities" is one. The present study has adapted this sub-construct to operationalized value creation. Capability of 3pl to create value for its customers has been measured using service quality indicator. Service quality of 3pl has been used as an indicator of the relationship between the supply chain partners (suppliers and customers) as well the 3pl service providers per the model developed by Man(2006).

As stated in Ramya, Kowsalya, and Dharanipriya (2019), the term 'service quality' is harder to define and judge. Number of authors tried to define it and give definitions in different point of views. Philip Kotler and Gary Armstrong defined the term 'service quality' as it is the ability of a service firm to hang on to its customer. That is, in their opinion customer retention is the best measure of service quality. As cited by the aforementioned authors, Parasuraman, Valarie, Zeitham1 and Berry (1985) defined service quality as "the delivery of excellent or superior service relative to customer expectation." Based on their literature review, the authors have formulated their own definition of Service quality as "the ability of a service provider to satisfy customer in an efficient manner through which he can better the performance of business" (p18).

Second, Clauss(2017) framework has operationalized value proposition dimension of the business model in terms customer relationship among others. The present study has adapted this sub-dimension to operationalized the value proposition dimension of the business model. The relationship management is also one of the three component of Man(2006) model. The present study has measured the customer relationship management dimension of the business model using trust and commitment indicators.

Finally, the value capture dimension of the generic business model as stated by Clauss (2017) was only recently discussed in the literature, there was scarcity of comprehensive scales to adapt for the purpose. Yet, he measured it by developing a new scale based on the revenue and cost models from Osterwalder and Pigneur (2010). Man (2006) on the other hand measured

it in-terms of organizational effectiveness. We have adapted the later approach in this thesis study. As described by Fielt (2011), the value capture dimension was also known as value economics. The value economics addresses the economic considerations (possibly including non-financial ones) related to the value proposition and creation and is often focused on how the focal organization in relations to upstream and downstream actors of a supply chain. Thus, using a revenue model alone may not suffice for the scope of this dimension is broader (both financial and non-financial outcomes). The measures of organizational effectiveness of 3pl, however, as developed by Man(2006) addresses both aspects of this element of the business model.

A detailed treatment of these three elements of the thesis are described below.

2.6.1. Logistics Service Quality

The LSQ is defined as a set of performance factors, measured by the ability to distribute products in accordance with customer requirements (Yang et al., 2010). Service quality is one of the performance measurement variables or indicators for 3PL service providing firms. Service quality is generally defined as the compatibility of a customer's experience of receiving a certain service with his or her prior expectations (Canciglieri Junior et al., 2019; Parasuraman et al., 1994, 1988 as cited by Asthana, 2013).

Some researchers have extended the concept of service quality into the area of logistics service quality (Bienstock et al., 1997; Mentzer et al., 1989).Compared to the consumer approach, logistics service is composed of both technical (or outcome) and process dimensions, such as those that are emphasized by the service quality literature (Bienstock et al., 1997; Jiang et al., 2000; Kuei et al., 2002; Robinson and Malhotra, 2005; Narasimhan and Nair, 2005). Technical quality isdefined as whether a service delivers core benefits (punctual delivery and product availability), and functional quality addresses the process of service delivery (interfacing with customer service personnel).

Inline with Man (2006), the SERVQUAL scale is arranged to measure the extent of quality of the 3pl services in five dimensions (Parasuraman et al., 1988), which are as follows.

1. Tangibles – The appearance and quality of physical facilities, equipment, and personnel.
2. Reliability – The service provider's ability to fulfill service commitments dependably and accurately.

3. Responsiveness – The service provider's willingness to help customers and provide a prompt service.
4. Assurance – The knowledge and courtesy of service provider employees and their
5. ability to convey trust and confidence.
6. Empathy – The service provider's caring and attentive response to individual customers.

Slightly customized by Man(2006), the following are the five features that pertain to 3PL services quality:

1) The appearance and quality of physical facilities, equipment, and personnel (Tangibles).

2) The ability to fulfill service commitments dependably and accurately (Reliability).

3) The willingness to help supply chain partners (suppliers or customers) and provide prompt service (Responsiveness).

4) The knowledge and courtesy of their ability to convey trust and confidence (Assurance).

5) Caring and individualized attention to customers (Empathy).

2.6.2. Organizational effectiveness

Wadongo and Abdel-Kader (2014) stated that organizational effectiveness as a measure of organizational success has attracted scholarly attention for decades (Mausolff & Spence, 2008; Lecy et al., 2012). However, there is little agreement on how to define and measure what constitutes organizational effectiveness. Several authors have operationalized the effectiveness construct (Sowa et al., 2004; Lecy et al., 2012). For example, Beamon and Balcik (2008) define effectiveness as the extent to which clients' needs are being met while defining efficiency as being how effectiveness is achieved in relation to resources used. Organizational effectiveness is the extent to which an organization accomplishes its mission and meets its objectives and goals (Benjamin and Misra, 2006). This thesis focuses on organizational effectiveness as it represents the achievement of the 3pl's intentions, missions, visions and objectives. Theories on effectiveness measurement have been summarized into four measurement approaches, namely goal attainment, systems resource approach, reputational approach and multidimensional approach.

This thesis adapts the goal attainment approach which emphasized that organizational effectiveness could only be measured by progress towards achieving goals. This practice of measuring 3pl organizational effectiveness has also been deployed by Man(2006) as well. As per the approach developed by Man (2006), measures of organizational effectiveness of 3pl (in an integrated logistics systems) are indicators of structure-output relationship that can be used to identify the relationship between 3PL service providers and their supply chain partners. The approach was developed based on organizational theory that states a good organizational structure achieves organizational effectiveness (Man, 2006 citing Elmuti, 2002).

According to the Zhou, Min,Xu and Cao(2008) 3pl business model, this element of the current thesis research model is similar to the so called value economics construct. As stated by the aforementioned authors of , value economics component of the 3pl business model addresses the economic considerations (including non-financial ones) related to the value proposition and architecture and is often focused on how the focal organization can make money.

2.6.3. Relationship Management

Man (2006) emphasized that in addition to the context-structure-output framework relationship management, an external factor also affects the organizational performance of the 3PL service providers. Most of the previous studies have focused on outsourcing and have therefore taken customers' perspective on 3PL relationships (Lieb and Kendrick, 2002).

Man (2006) who elaborated that a good relationship management such as one that involves trust and commitment among supply chain partners enhances 3PL organizational performance (citing Elmuti, 2002). Ferrer, Santa, Hyland (2010) in their study have identified three factors that have significant influence on relationships: sharing, power and interdependency. These three factors have been defined as: Sharing is the willingness of the organization to share resources with other members of the supply chain; Power relates to exercising control based on experience, knowledge and position in the supply chain; and, interdependency is the relative levels of dependency along the supply chain.

In the present study as adapted from Nadarajah(nd) define trust as the "willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform

a particular action important to the trustor, irrespective of the ability to monitor or control that other party" (p18).

As stated by Fielt (2011) this element of the current thesis research model refers to value architecture. As clearly stated by the author, value architecture refers to how the value proposition can be effectuated by the different actors and their capabilities, in particular the focal organization, but also other organizations (e.g. partners, suppliers, distributors, complementors, etc.) and customers (within an organizational network).

2.7. Research Gaps

Logistics firms, which are involved in the movement, storage, and flow of goods, have been directly affected by the Challenges. As an integral part of value chains, both within and across international borders, logistics firms facilitate trade and commerce and help businesses get their products to customers. Supply chain disruptions to the sector caused by the pandemic could, therefore, impact competitiveness, economic growth, and job creation. After reviewing the literature, the research gaps identified by this study are the critical assessment of third party logistics at MACCFA freight logistics PLC. While there are numerous studies available on the Practices of Logistics, there are few papers available as the world starts to recover from assessment of third party logistics and even fewer that pertain to Ethiopia.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1. Description of the Study Area

MACCFA freight logistics is an Ethiopian firm established and based in Addis Ababa. The company has its specialized expertise in Packing, Moving, and Freight Forwarding activities on which it has over twenty five years accumulated experience (www.maccfa.com).

The company that specializes in air freight, ocean freight, ground transport and warehousing services. MACCFA freight logistics prides itself on providing customized logistics solutions to its clients, which range from small businesses to large corporations. The company has a broad network of partners and carriers, enabling it to provide seamless transportation and distribution services.

MACCFA has15 trucks, one big warehouse rental from Modjo port and one container handling crane for consolidation ocean freight service. MACCFA is a joint venture of CEVA logistics which is working all over the world. The agent of CMA-CGM (shipping line company) in Ethiopia. The company handles containerized shipment, brake bulks, OOG shipment (projected cargo). The company currently has about 95 permanent and temporary employees. The estimated global revenue of MACCFA was estimated at $3 million USD in 2022 (https://www.statista.com/companies/c/18109428/maccfa-freight-logistics-plc).

3.2. Research Approach

In this study, the researcher has used a quantitative approach to draw meaningful results from a large body of data that was collected through a survey of the perception and experiences of the respondents. Quantitative approach basically provides facts and figures about phenomena and involves statistical analysis (Ticehurst & Veal, 2000). In this case the researcher use the principle of replication, adhered to standardized methodological procedures, measured with numbers and then analyzed the data with statistics (Lincoln & Guba, 1985). Under the quantitative research method of data collection, standard questionnaire were used to collect data for this study.

3.3 Study Design

Research based on what it intends to do can be classified as exploratory, descriptive and explanatory (Saunders, Lewis and Thornhill, 2007). This study has tried to asses third party logistics business model performance in the case of MACCFA freight logistics company. Therefore, a descriptive research design has been used.

3.4. Population and Sample of the Study

The target population of the study constitute MACCFA freight logistics employees and other accessible stakeholders. The list of target population was collected from Human resource department of each selected logistics service providers where there are about 95 employees and managers.

According to Kathari (2004), as a general rule, sample size must be of an optimum which should be neither excessively large nor too small. Regarding sample size, Corbetta (2003) also discussed that sample size is directly proportional to the desired confidence level of the estimate (z) and to the variability of the phenomenon being investigated, and it is inversely proportional to the error that the researcher is prepared to accept (Corbetta, 2003).

Regarding the sample size, the researcher has used Kothari (2004) sample size calculation formula in which the size of population is known or has defined size at 95% confidence level.

$$\text{sample size} = \frac{\text{Population size}}{1 + \text{Populatioin size}(e)2}$$

Sample size = 95/1+95(0.05)2

Sample size = 76

By adding a 10% contingency of 8(eight) respondents, 83 questionnaire was distributed to collect sufficient and representative data from the source population.

3.5. Data Sources

To achieve the stated objectives, the study was conducted with both primary and secondary data sources. The primary sources are employees and managers. Secondary sources are minutes, reports and other documents relevant to the study.

3.6. Data Collection Instrument

The major data collection instrument used was questionnaire. Questionnaires can be applied in instances where a respondent could easily read and understand without assistance. Similarly, all respondents of the study were professionals and literate. The questionnaire was adopted from Man (2006). The author has developed organizational performance measurement scale for 3PL providers for his PhD thesis titled as "Performance Measurement and Management of Third Party Logistics: An Organizational Theory Approach".

The first part of the question consists of demographic items. Part II consists of 22 measurement items that examine the service quality of 3PL using the SERVQUAL scale. The respondents were asked to evaluate the extent to which they agreed or disagreed with statements that addressed the service quality in targeted 3PL providers on a seven-point Likert scale that ranges from "1" (strongly disagree) to "7" (strongly agree). Part III outlines the 42 measurement items of 3PL organizational effectiveness in five dimensions: productivity, financial performance and market share, cycle time, goodwill and reputation and relationship (trust and commitment). Productivity is measured by 9 items, financial performance and market share are measured by 9 items, cycle time is measured by 9 items, and goodwill and reputation are measured by 5 items as well as relationship (trust and commitment) is measured by 10 items. All of the measurement items, except for financial performance and market share, are evaluated in a seven-point Likert scale where "1" represents strong disagreement and "7" represents strong agreement. The 9 measurement items of financial performance and market share are also measured on a seven-point Likert scale, where "1" represents a 1-5% growth rate and "7" represents a 30% or above growth rate. Part IV outlines the 10 measurement items of 3PL relationship management in two dimensions: trust, and commitment. Trust is measured by 5 items, and commitment is measured by 5 items. The respondents were asked to evaluate the extent to which they agreed or disagreed with statements that describe the relationship and business links between 3PL providers and their customers on a seven-point Likert scale that ranges from "1" (strongly disagree) to "7" (strongly agree).

Given the high number of measures by constructs, the preliminary questionnaire was submitted to pre-tests in the period from March 15-20/2022 to improve the content and understanding of the measures. A total of 12 customers from the 3PL market in Addis Aabba, participated in these pre-tests. After the inclusion of suggestions from the participants in the pre-test phase, the final questionnaire was developed as attached herewith the thesis report.

To minimize the threat of Common Method Bias, two procedures were deployed based on the suggestions of Kock, Berbekova, and Assaf (2021); namely using clear instructions and making responses anonymous. An effective and easy to implement suggestion for improving the accuracy of responses is to develop clear questionnaire instructions for respondents, such as communicating that there are no correct answers and that all responses will be kept anonymous.

3.7. Methods of Data Analysis

The data preparation involves editing, coding and entry the data in computer and the data analysis will be done by using both qualitative and quantitative analysis. Descriptive statistics will be used to analyze the basic features of the data in the study for the quantitative analysis. In this study, SPSS software was used to analyze and interpret the data. The data also will be tabulate and summarize using percentages and frequency distribution tables.

Mean and standard deviation for each item, uni-dimensional variables, and aggregated for multidimensional variables/ constructs have been calculated by assigning numerical values to the responses, ranging from 1 to 7, where 1 represents "Strongly disagree" and 7 represents "Strongly agree."

As stated by Subedi (2016), we have noted that Likert items generate the ordinal scale data and; the Likert scale in turn generates interval data. Hence, we have used frequency distribution percentage and mode to interpret single item responses. Thus, while interpreting item-wise responses, mean value were not considered. While interpreting likert-scale (a group of more than four items, mean values and standard deviations were used.

Additionally, concerning midpoints issue, methodologically there is not any difference either using or not using midpoints in Likert type measurement. However, epistemologicaly it is better to use midpoints defining its meaning. In all of the scales used in this thesis, we have used a midpoint represented by “Neutral” coded as no 4.

In terms of interpretation, a higher mean score (this literally refers to any value score greater than 4 as per the description of the midpoint given above,) suggests a more positive or agreement-oriented response, while a lower mean score (literally less than 4) indicates a more negative or disagreement-oriented response. However, it's important to consider that the specific interpretation of these scores may vary depending on the nature of the items and the population being surveyed. Hence, a great deal of care was taken in the interpretation of the responses in the present thesis report.

The standard deviation measures the dispersion or variability of the responses around the mean. A larger standard deviation suggests a wider range of responses, indicating greater diversity or disagreement among the respondents. On the other hand, a smaller standard deviation suggests more consistency or agreement among the responses.

3.8. Validity and reliability

3.8.1. Validity

According to Kothari (2006), validity refers to the measure or extent that the rest used in research measures what is supposed to be measured. It seeks to find out whether the study truly and accurately measured what is required to measure or test, that a systematic assessment and alignment of the research question, and the design and data collection methods and data analysis as well structured developing evident results.

Content validity of the measurement has been maintained following the procedure as suggested by Man(2006, As stated in Man(2006), content validity represents the comprehensive and reliable measurement of all of the dimensions of a construct by an instrument (Kidder and Judd, 1986). Flynn et al. (1995) claimed that content validity tests are subjective and biased, whereas Nunnally (1978) claimed that the standard of content validity is based on two questions: "Does an instrument contain a representative set of items?" and "Were sensible methods of scale construction used?"

This study has 11 factors that are divided into three constructs to assess 3PL business model. The three constructs are 3PL service quality, 3PL organizational effectiveness, and relationship management. In 3PL service quality, five SERVQUAL dimensions – tangibles, reliability, responsiveness, assurance, and empathy – are identified. Four factors –Productivity, Financial and market performances, cycle time, and reputation and goodwill – are also identified in the measurement of 3PL organizational effectiveness. In the measurement of relationship management, trust,and commitment are identified.

All of the measurement items of each construct were adapted from the literature. The survey instruments were authorized by a practitioner in the pilot study to ensure the suitability of the items and the lack of ambiguity in the interpretation of the instrument items. This justifies the content validity of the instrument.

3.8.2. Reliability

Reliability refers to the accuracy and preciseness of measurement procedures, which in turn leads to consistent results. The reliability of the questionnaire for this research was statistically calculated using Cronbach's Alpha.

Consequently, In terms of internal consistency reliability, the values obtained, Cronbach's α coefficients were greater than 0.72 for all constructs. These values indicate the internal consistency of the model constructs, whose minimum acceptable values are 0.70 for exploratory studies (Hair et al., 2009 cited in Daniel, Roberto, & Valdir Antonio, 2018).

Per the recommendation of Mentzer et al. (1999 cited in Research Methodologies in Supply Chain Management Book authored by Kotzab, Seuring,Muller, and Reiner (2005), the number of scale responses was increased to 7-point scale to allow wider discrimination of the responses. A larger number of scale points leads to larger variances, resulting in increased reliability.

3.9. Ethical Considerations

The researcher must address ethical considerations of confidentiality and privacy. The respondents participate in response of an questionnaire were asked to express their full consent to participate in this study and they informed that they are not required write their name on questionnaire, they were also notified to keep their response confidential and used for only academic purpose. The response that the participants give are analyzed without any change by the researcher. In addition the reference works of other researchers and authors are cited appropriately.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.1. Participants profile

In order to have general overview of study participants profile, relevant information on their demographic characteristics is collected focusing on sex, age group, educational qualification, and work experience as depicted in the table below.

Table 4.1: Socio-demographic Profile of the Respondents

Variable	Category	Frequency	Percentage
Sex	Male	52	62.7
	Female	31	37.3
	Total	83	100
Age	Under 25	8	9.6
	25-30	15	18
	31-35	40	48
	36-40	8	10
	40 and Above	12	14.4
	Total	83	100
Educational qualification	Certificate	11	13.3
	Diploma	18	21.7
	BSc/BA	38	45.8
	MSc /MA	12	14.5
	PhD	4	4.8
	Total	83	100
Work Experience	Less or equals to 5	21	25.3
	5-10	19	22.9
	10-15	21	25.3
	Above 15	22	26.5
	Total	83	100

Source, (Survey, 2023)

The frequency table shows the distribution of sex in the sample show that there are 52 male (62.7%) and 31 females (37.3%) respondents. This indicates that the sample is predominantly male. It is important for companies to recognize and value the unique perspectives and contributions that employees of all genders can bring to the table. Gender diversity can help ensure that the company is able to adapt to new challenges and remain competitive in the long term.

Similarly, the frequency table above shows the distribution of age groups in a sample of 83 individual respondents. Clearly, the most common age group is 31-35 years old, which represents 48% of the sample. The next most common age group is 40 and above, which represents 14.4% of the sample. The remaining age groups are Under 25 (9.6%), 25-30 (18%), and 36-40 (10%). Overall, we can conclude that the sample is relatively evenly distributed among the age groups, with the exception of the 31-35 age group being the most common. This information could be useful for a company looking to target specific age groups in their marketing or recruitment efforts. It is worth noting that younger employees (Under 25 and 25-30) may bring fresh perspectives and innovative ideas to the company. Middle-aged employees (31-35 and 36-40) are often experienced and productive, and they may provide valuable insights and guidance to younger employees. Older employees (40 and above) are often stable and reliable, and they may have a wealth of experience to draw upon.

The frequency table shows the distribution of educational qualifications among a sample of 83 respondents. The most common educational qualification is BSc/BA, which represents 45.8% of the sample. The next most common qualifications are Diploma (21.7%), MSc/MA (14.5%), Certificate (13.3%), and PhD (4.8%). We can conclude that the majority of the sample has at least a Bachelor's degree or equivalent, with a significant number having a Diploma as well. This suggests that the sample includes individuals with a relatively high level of education. This information could be useful for a company looking to target individuals with specific educational backgrounds in their recruitment efforts.

As depicted in the table above, distribution of the respondents in-terms of length of their work experiences in years show that the most common number of years of work experience is more than 15 years, which represents 26.5 % of the sample. The next most common group are both 10-15 years as well as less than or equals to five (5) years representing each 25.3%. The percentage of respondents having five to ten years work experience is 22.9%. The difference

among all these four groups is not so big; which literally implies that the data is collected from respondents with a diverse mix of work experiences hence it is not skewed to the responses of a specific group of respondents. Overall, it is important for a company to strike a balance between employees with different levels of work experience. While experienced employees can provide valuable insights and guidance, newer employees can bring fresh perspectives and ideas to the company. A diverse mix of experience levels can help ensure that the company is able to adapt to new challenges and remain competitive in the long term.

4.2 3PL Service Types and Demand Extent of MACCFA 3pl

3pl logistics services are numerous and may vary from the service provider to another. As stated by Man (2006), 3PL service providers supply various value-added services, such as manufacturing and upstream or downstream partnerships (between suppliers and customers) within supply chains (cited Kajita and Ohta, 2001).

To understand about the type of 3pl services of the case company along with their demand pattern, data has been collected from the case company as depicted in the table below.

Table 4.2: Types of Services Provided by MACCFA 3pl

Service Type	**Users Distribution**	
	Frequency	Percent
Custom clearing services	9	10.8
Packing services	7	8.4
Transportation services	13	15.7
Import	11	13.3
Export (Door to door)	13	15.7
Export (Door to port)	11	13.3
Local move (Packing & transportation)	6	7.2
Storage (Warehousing)	6	7.2
Forklift and crane services	7	8.4
Total	83	100

Source (Survey, 2023)

As depicted in the table, transportation services have the highest number of users with 15.7% of the total users, followed by export (door to door) and import services with 15.7% and 13.3% of the total users, respectively. Custom clearing services have the lowest number of users with only 10.8% of the total users.

Therefore, the company should focus on maintaining and improving its transportation services, as it has the highest number of users. Additionally, the company can consider expanding its services related to export and import, as they also have a significant number of users.

As stated in the website of the company (see https://www.maccfa.com/), MACCFA offers end-to-end logistics services locally, regionally and globally in conjunction with advanced technology and tracking systems used by tier-one logistics providers. The specific services listed in the website/homepage of the company includes ground and rail transport services, air and ocean freights, project and contract logistics are the main services; while additional services such as a Consolidated Freight Station (CFS) operations, Packing, Labeling, Container stuffing, Handling and Temporary storage solutions. Besides, it undertakes management services of all aspects of shipping dangerous goods as well as consultations services.

As stated by Selviaridis et al (2008) findings from studies in USA indicate the prominence of transport, warehouse and administration-related (eg freight payment and customs brokerage) services with hugher and growing demands in the 3pl services outsourcing (cited Ashenbaum et al, 2005; Lieb and Bentz, 2005).

Accordingly, it is clear that MACCFA services are numerous and their demand pattern is also different. These practices are important as it can also attract customers for the company. As stated by Fernandes, Moori, and Filho, (2018) when selecting from the potential of the logistics service provider, consumers evaluate the quality of service, but also the cost of service, technological solutions and the set of services delivered by the provider.

4.3. Evaluation of 3pl Business Model Performance of MACCFA freight logistics Plc

Similar to previous research studies (e.g., Man, 2006, & Smriti, 2013)**,** to study the 3pl business model performance MACCFA 3PL service provider, the constructs discussed in this

study are logistics service quality, organizational effectiveness and relationship management. Hence, this study explores service quality, organizational effectiveness, and relationship management between 3PL service providers and their supply chain partners.

4.3.1. Logistics Service Quality of MACCFA freight plc

The LSQ is defined as a set of performance factors, measured by the ability to distribute products in accordance with customer requirements (Yang et al., 2010).Service quality is generally defined as the compatibility of a customer's experience of receiving a certain service with his or her prior expectations (Canciglieri Junior et al., 2019; Parasuraman et al., 1994, 1988 as cited by Asthana, 2013). Service quality is one of the performance measurement variables or indicators for 3PL service providing firms. As a result, the logistics service quality of MACCFA 3pl has been assessed in this thesis as presented below.

As described in Chapter 3 earlier in this thesis report, the survey instrument distributed to collect relevant data had consisted of 22 measurement items that examine the service quality of MACCFA Freight Forwarding plc using the SERVQUAL scale. The respondents were asked to evaluate the extent to which they agreed or disagreed with statements that addressed the service quality of MACCFA on a seven-point Likert scale that ranges from "1" (strongly disagree) to "7" (strongly agree). The scale was developed just to assess the MACCFA 3pl service quality in relation to the supply chain partners. As stated by Man(2006), in the context and structure part, the SERVQUAL scale measures the relationship between the service quality of 3PL service providers and supply chain partners.

4.3.1.1. Overview of logistics service quality performance of MACCFA

As presented and described below, a general description of the responses on each items of the SERQUAL is presented first just to capture the performance level of the case organization at a very specific and detail level.

Table 4.3 below depicted the frequency distribution /percentage values of the responses collected from the respondents for each items of service quality measurement scale.

Table 4.3: Service quality of MACCFA 3pl

No.	*Item*	*Strongly agree(%)*	*Agree(%)*	*Moderately agree(%)*	*Neutral/ Percent*	*Moderately disagree(%)*	*Disagree(%)*	*Strongly disagree(%)*	*Total (%)*
1	Has "up to date" equipment	11 (13.3)	11 (13.3)	13 (15.7)	16 (19.3)	13 (15.7)	10 (12.1)	9 (10.8)	83 (100)
2	Has attractive facilities	15 (18.1)	12 (14.5)	11 (13.3)	15 (18.1)	4 (4.8)	10 (12.1)	16 (19.3)	83 (100)
3	Has presentable (neatly dressed) employees	15 (18.1)	21 (25.3)	8 (9.6)	14 (16.9)	7 (8.4)	9 (10.8)	9 (10.8)	83 (100)
4	Has written documents (literature) on the available services	13 (15.7)	12 (14.5)	15 (18.1)	9 (10.8)	18 (21.7)	9 (10.8)	7 (8.4)	83 (100)
5	Fulfills promises	18 (21.7)	15 (18.1)	16 (19.3)	16 (19.3)	7 (8.4)	8 (9.6)	3 (3.6)	83 (100)
6	Express sincerity in problem solving	12 (14.5)	16 (19.3)	18 (21.7)	9 (10.8)	5 (6.0)	9 (10.8)	14 (16.9)	83 (100)
7	Provides efficient and consistent service	17 (20.5)	16 (19.3)	13 (15.7)	10 (12.1)	8 (9.6)	10 (12.1)	9 (10.8)	83 (100)
8	Is punctual with service commitments	15 (18.1)	13 (15.7)	20 (24.1)	9 (10.8)	3 (3.6)	11 (13.3)	12 (14.5)	83 (100)
9	Provides error-free service (target) assistance	15 (18.1)	14 (16.9)	11 (13.3)	17 (20.5)	9 (10.8)	10 (12.1)	7 (8.4)	83 (100)
10	Provides consistent punctual service	16 (19.3)	13 (15.7)	14 (16.9)	9 (10.8)	7 (8.4)	11 (13.3)	13 (15.7)	83 (100)
11	Provides prompt service	17 (20.5)	8 (9.6)	17 (20.5)	11 (13.3)	9 (10.8)	12 (14.5)	9 (10.8)	83 (100)
12	Expresses a consistent willingness to help	10 (12.1)	8 (9.6)	18 (21.7)	13 (15.7)	15 (18.1)	11 (13.3)	8 (9.6)	83 (100)
13	Is responsive to requests	17 (20.5)	12 (14.5)	11 (13.3)	16 (19.3)	8 (9.6)	11 (13.3)	8 (9.6)	83 (100)
14	Engenders corporate confidence	19 (22.9)	11 (13.3)	10 (12.1)	15 (18.1)	11 (13.3)	9 (10.8)	8 (9.6)	83 (100)

15	Provides transaction security (e.g. ensures minimal loss)	13 (15.7)	18 (21.7)	14 (16.9)	9 (10.8)	13 (15.7)	9 (10.8)	7 (8.4)	83 (100)
16	Is consistently courteous	15 (18.1)	13 (15.7)	14 (16.9)	10 (12.1)	11 (13.3)	9 (10.8)	11 (13.3)	83 (100)
17	Displays knowledge during inquiries	12 (14.5)	18 (21.7)	16 (19.3)	12 (14.5)	7 (8.4)	12 (14.5)	6 (7.2)	83 (100)
18	Provides tailor-made customer service	14 (16.9)	14 (16.9)	17 (20.5)	16 (19.3)	7 (8.4)	11 (13.3)	4 (4.8)	83 (100)
19	Has convenient office hours	14 (16.9)	17 (20.5)	17 (20.5)	11 (13.3)	9 (10.8)	11 (13.3)	4 (4.8)	83 (100)
20	Is perceptive of customer needs and problems	14 (16.9)	10 (12.1)	12 (14.5)	14 (16.9)	10 (12.1)	9 (10.8)	14 (16.9)	83 (100)
21	Has customer’s interest at heart	12 (14.5)	18 (21.7)	13 (15.7)	18 (21.7)	9 (10.8)	8 (9.6)	5 (6.0)	83 (100)
22	Is understanding of specific needs	15 (18.1)	9 (10.8)	13 (15.7)	16 (19.3)	10 (12.1)	10 (12.1)	10 (12.1)	83 (100)

Source (Survey, 2023)

The table above presents the results of a survey measuring respondents perception of service quality as delivered by MACCFA organization. The survey assessed the extent to which respondents agreed or disagreed with 22 statements about the organization's service quality. Responses were provided on a Likert scale ranging from strongly agree to strongly disagree.

The table shows the results of a survey regarding the quality of a company's customer service. The respondents were asked to rate their agreement with certain statements about the company's customer service using a Likert scale ranging from "Strongly Agree" to "Strongly Disagree". The total number of respondents was 83.

Overall, the respondents were mostly positive about the company's customer service, with most of the statements receiving agreement from at least half of the respondents. The statement that received the most agreement were "MACCFA 3pl engenders corporate confidence" (22.89%), followed closely by the item that states "MACCFA 3pl fulfills promises" (21.69%) and thirdly the item that states "MACCFA 33pl provides efficient and consistent service" (20.48%).

On the other hand, the statement that received the most disagreement were items that state "MACCFA 3pl has written documents (literature) on the available services" (10.84%), seconded by the statement "MACCFA 3pl has presentable (neatly dressed) employees" (10.84%) and "MACCFA 3pl provides prompt service" (10.84%).

Overall, the results show that respondents have mixed perceptions of the organization's service quality. On some items, such as providing transaction security and being punctual with service commitments, the respondents rated the organization relatively higher, with over half of the respondents atleast moderately agreeing with these statements. However, on other items , such as having up-to-date equipment and providing tailor-made customer service, respondents were less positive in their perceptions, with only less than half of them agreeing or strongly agreeing with these statements.

These findings suggest that providing tailor-made customer service and fulfilling promises are perceived positively by customers. On the other hand, expressing consistent willingness to help and understanding customers needs and problems might be areas where improvements could be made. Additionally, attention should be given to qualities with higher variability in ratings, such as fulfilling promises and having well dressed employees to ensure a more consistent and positive service delivery experience.

4.3.1.2. Logistics Service Quality of MACCFA 3pl in-terms of the Five Dimensions of SERQUAL

As repeatedly stated in the preceding sections of the thesis, per the SERVQUAL model, the logistics service quality has five dimensions. As stated by Man (2006), from the SERVQUAL scale (Parasuraman et al., 1988), the the five features that pertain to 3pl services are tangibles, reliability, responsiveness, assurance and empathy.

We can then analyse the service quality of MACCFA 3pl in-terms of these five dimensions as presented below. Data has been collected to assess the service quality performance of MACCFA 3pl in-terms of the five dimensions of SERVQUAL. The questionnaire distributed contained , item 1 through 4 measuring Tangibles; item 5 through 9 have measuring Reliability; item 10 through 13 measuring Responsiveness; item 14 through 17 assessing Assurance; and item 18 through 22 indicating the Empathy dimensions of SERQUAL. Thus, the data collected from the respondents has been summarized as depicted in table below.

Table 4.4: MACCFA 3pl Service Quality in-terms of the SERVQUAL Dimensions

Dimension	Mean	SDV
Tangibles	4.2	0.2
Reliability	4.5	0.2
Responsiveness	4.2	0.2
Assurance	4.4	0.1
Empathy	4.4	0.3
SERVQUAL Agg.	4.4	0.2

Source (Survey, 2023)

The table above depicts the service quality of MACCFA measured in-terms of mean values of the five dimensions of SERQUAL as assessed based on the perceptions and experiences of the respondents. Accordingly, all of the dimensions namely the tangibles (mean=4.2, sd=0.2), reliability(mean 4.5, sd=0.2), responsiveness (mean=4.2, sd=0.2), assurance (mean=4.4, sd=0.1) and empathy (mean=4.4, sd=0.2) are rated greater than 4 on a 7 scale measurement. The company performance on these specific dimensions can be ranked (from top to least) as reliability, assurance, empathy, tangibles and responsiveness.

The aggregate mean value (Mean=4.4, sd=.2) of the responses to the SERQUAL scale entirely indicates the overall service quality organizational performance of MACCFA 3pl freight logistics is also more than the midpoint 4.0 of the measurement scale. Hence, the logistics service quality of MACCFA freight logistics company is above average or closer to moderate performance level. Put another way, the respondents rated the service quality of MACCFA in between neutral and moderately agree scale. This finding of the study is not sigificantly different from the previously reported resaerch findings. For eaxmple, in Journal Article composed by (Park & Mike, 2006) indicate the annual logistics survey conducted by global consulting firm Accenture, in conjunction with Northeastern University, approximately 40 percent of all 3PL customers give neutral or negative ratings to their 3PL providers for customer service.

As can be observed from the table above, the case company's performance is the highest on the reliability dimension (Mean=4.5, sd=0.2). This implies that MACCFA 3pl performs the best at fulfilling service commitments dependably and accurately. On the other hand, responsiveness and tangibles dimensions of MACCFA service quality are the least rated dimensions (with mean=4.2 each).

Contrary to this finding, in an empirical case study on four companies providing 3PL services in Korea to determine the relative weights of the five service quality dimensions to

select the best 3PL service provider, responsiveness came out as most important dimension in the perception of 3PL customers (Asthana, Bhat and Singh, nd).

In a nutshell, the service quality of MACCFA 3pl is rated slightly above the midpoint/ average value of 4.0 (neutral) of the scale. Thus, a comprehensive improvement should be sought to increase the service quality of the company. To begin with, responsiveness and tangibles can be important areas that MACCFA should target for future improvement as they are these two least rated dimensions of the service quality assessment study. Yet, overall improvement through comprehensive initiatives should be undertaken because the overall service quality performance of the company is also rated not more than the moderate level.

The company should also appreciate that an improvement in service quality of 3pl providers enhances the competitiveness and other outcomes of the organization. Meiduté-Kavaliausjeiné et al. (2014) pointed out that Logistics Service Quality increases the competitive advantage of the service provider, since it leads to consumer loyalty, in turn reducing the number of competitors and developing conditions favorable to the development of economies of scale. Various empirical studies have shown a relationship with company performance and service quality, such as those of Mentzer et al. (1999, 2001), Panayides and So (2005) and Saura et al. (2008) as cited in Meiduté-Kavaliausjeiné et al. (2014).

Likewise, as stated by Farahani, Rezapouri and Kardar (2011) the importance of customer service has grown recently, and everyday more organizations understand the significance of satisfying their customers through delivering good services. Considering how influential customer service can be to any organization's profitability, taking it into account has become a must today. Customer service should not be considered just a tactical method, but a strategic value. This requires changes in an organization's beliefs and culture because organizations and particularly finance departments usually view customer service as a costly function that wastes resources, whereas the strategic view of customer service considers it a competitive tool for gaining market share and differentiation.

Hence, the service quality improvement initiative should not be underestimated by the MACCFA for the benefits of doing so are critical and numerous.

4.3.2. Organizational Effectiveness of Third Party Logistics (3PL) MACCFA

Wadongo and Abdel-Kader (2014) stated there is little agreement on how to define and measure what constitutes organizational effectiveness and there are several authors who have operationalized the effectiveness construct (citing Sowa et al., 2004; Lecy et al., 2012). This thesis focuses on organizational effectiveness as it represents the achievement of the 3Pl's intentions, missions, visions and objectives. Wadongo and Abdel-Kader (2014) summarized the theories on effectiveness measurement into four measurement approaches, namely goal attainment, systems resource approach, reputation approach and multidimensional approach (citing Lecy et al., 2012). This thesis adapts the goal attainment approach which emphasized that organizational effectiveness could only be measured by progress towards achieving goals. This practice of measuring 3pl organizational effectiveness has also been deployed by Man(2006). Accordingly, the organizational effectiveness of MACCFA Freight logistics has been assessed inline with these four elements (namely productivity, financial and market performance, cycle time as well as reputations and goodwill) and presented as below.

4.3.2.1. Productivity of MCCAFE Freight Logistics /3PL

As stated by Frazel (2002), the productivity of a specified resource(s) is generically measured as the ratio of the output of the resource(s) to the consumption of the resource(s).The productivity of service providers in business processes is enhanced through incremental improvements in the quality of 3PL services (Man, 2006).

This thesis research has assessed the relevance of MACCFA's 3pl service to enhance productivity of the service giver based on the perceptions of selected respondents. The data collected and its analysis results are as described and discussed below.

Table 4.5: Productivity measure of MACCFA 3pl

No	Item	Strongly agree/ (%)	Agree(%)	Moderately agree/(%)	Neutral(%)	Moderately disagree/ (%)	Disagree(%)	Strongly disagree(%)	Total(%)
1	MACCFA 3pl business services minimizes service failure probabilities	16 (19.3)	16 (19.3)	15 (18.1)	13 (15.7)	9 (10.8)	10 (12.1)	4 (4.8)	83(100)
2	Provides logistics business operational consultancy services effectively	17 (20.5)	19 (22.9)	18 (21.7)	11 (13.3)	5 (6.0)	7 (8.4)	6 (7.2)	83(100)
3	Maximizes product replacement frequency	16 (19.3)	10 (12.1)	11 (13.3)	17 (20.5)	11 (13.3)	8 (9.6)	10 (12.1)	83(100)
4	Provides competition enhancement service	22 (26.5)	13 (15.7)	11 (13.3)	14 (16.87)	9 (10.8)	5 (6.0)	0 (0.00)	83(100)
5	Provides quality efficient services	8 (9.6)	15 (18.1)	11 (13.3)	14 (16.9)	12 (14.5)	9 (10.8)	14 (16.9)	83(100)
6	Provides a high order rate service	11 (13.3)	9 (10.8)	14 (16.87)	15 (18.07)	7 (8.4)	18 (21.7)	9 (10.8)	83(100)
7	Has efficient and reliable warehouse operations	19 (22.9)	13 (15.7)	9 (10.8)	14 (16.9)	11 (13.3)	10 (12.1)	7 (8.4)	83(100)
8	Provides efficient and reliable transportation service	13 (15.7)	14 (16.9)	11 (13.3)	15 (18.1)	9 (10.8)	12 (14.5)	9 (10.8)	83(100)
9	Maintains a high level of productivity	18 (21.7)	10 (12.1)	14 (16.9)	9 (10.8)	15 (18.1)	9 (10.8)	8 (9.6)	83(100)
	Aggregate Mean (sd) of the scale= 4.4(1.94)								

(Source, Survey 2023)

The table above depicted the frequency distribution and mean / average values of responses collected on the productivity measurement of MACCFA. The data and provide insights on the customers' perception of various productivity measures offered by the company. Productivity of the company has been assessed using nine (9) items.

Accordingly, majority of the respondents strongly agree or agree that the company minimizes service failure probabilities (38.56%). Likewise, The effectiveness of MACCFA'S logistics business operational consultancy service is perceived positively by the customers, with 43.37% agreeing or strongly agreeing with the statement.

The respondents are not entirely convinced that MACCFA freight logistics is performing good in-terms of maximizing product replacement frequency productivity measure, as only 31.33% agree or strongly agree with the statement. This implies that MACCFA Freight logistics

performs slightly well in-terms of maximizing product replacement frequency productivity performance indicator.

In-terms of its competition enhancement, the 3PL service as rendered by MACCFA is viewed positively by the customers, with 40.14% strongly agreeing or agreeing with the statement.

The productivity of MACCFA'S 3PL service provider in-terms of quality efficient services, high order rate services, efficient and reliable warehouse and transportation services indicators is reported to receive a favourable rating from 38.6% and 32.6% respectively. Likewise, ,the performance of MACCFA is assessed that it maintains high level of productivity that 33.73% of the respondents have strongly agreed and 21.69% of them have simply agreed with the statement.

Based on the survey responses, it can be observed that the factors which received higher levels of agreement were: "Provides competition enhancement service," "Has efficient and reliable warehouse operations," and "Provides business operational consultancy service." These factors seem to have a positive impact on productivity according to the respondents, Overall, the survey results indicate that 3pl businesses should focus on providing efficient and reliable services, as well as enhancing their competitiveness in the market. Warehousing operations and transportation services are also crucial factors to consider for productivity.

Overall, the aggregate mean value (x=4.4, sd=1.94) for the entire scale shows that the performance of MACCFA freight logistics measured in terms of productivity is again slightly greater than the midpoint value and hence can be described as moderate level achievement. Hence, productivity of MACCFA freight logistics company requires a significant improvement.

4.3.2.2. Financial and Market performance

The second element of organizational effectiveness measure of 3PL organizational performance is financial and market performances. MACCFA's organizational effectiveness /performance in-terms of financial and market performance sub-component is measured as discussed below.

Table 4.6: Market and financial performance of MACCFA 3pl

S.No.	MCCFA logistics has	30+	26-30	21-25	16-20	11-15	6-10	1-5	Frequency Total Total %
1	Has a_% net profit margin from services	11(13.3)	11 (13.3)	13 (15.7)	16 (19.3)	13 (15.7)	10 (12.05)	9 (10.8)	83 100.00
2	Has a _% return on investment from logistics services	15 (18.07)	12 (14.46)	11 (13.25)	15 (18.07)	4 (4.82)	10 (12.05)	16 (19.28)	83 100.00
3	Has a _% growth of share values	15 (18.1)	21 (25.3)	8 (9.6)	14 (16.9)	7 (8.43)	9 (10.8)	9 (10.8)	83 100
4	Has a_% return on net assets from logistics services	13 (15.7)	12 (14.5)	15 (18.1)	9 (10.8)	18 (21.69)	9 (10.8)	7 (8.4)	83 100
5	Increases market value by__% per year	8 (9.64)	15 (18.1)	11 (13.3)	14 (16.9)	12 (14.46)	9 (10.8)	14 (16.9)	83 100
6	Has a____ % growth rate of financial position in logistics industry	11 (13.3)	9 (10.8)	14 (16.9)	15 (18.1)	7 (8.4)	18 (21.7)	9 (10.8)	83 100
7	Has a % market share in the logistics industry	19 (22.9)	13 (15.7)	9 (10.8)	14 (16.9)	11 (13.3)	10 (12.1)	7 (8.4)	83 100
8	Has a % transaction volume in the logistics industry	13 (15.7)	14 (16.9)	11 (13.3)	15 (18.1)	9 (10.8)	12 (14.5)	9 (10.8)	83 100
9	Has a market growth rate of %	18 (21.7)	10 (12.1)	14 (16.9)	9 (10.8)	15 (18.1)	9 (10.8)	8 (9.6)	83 100
	Aggregate Mean (sd) of the scale=4.2(1.82)								

Source(Survey, 2023)

According to the survey, the participants were asked to rate their agreement to the nine (09) finance and market performance indicators of the 3pl logistics company. The indicators are net profit margin, return on investment, growth of share values, return on net assets, increment in market value, growth rate of financial position, extent of market share, transaction volume, and market growth rate achievement.

Consequently, the financial and market performance of MACCFA 3Pl is reported to be in between 16-20%. Specifically, except the on the increment in values and growth rate in financial

position indicators, all of of the remaining seven indicators of financial and Market performance of 3pl service provider organizations. The results suggest that the company is performing well in terms of market share and service value, but there may be room for improvement in areas related to profitability and financial performance.

Overall, the aggregate mean value (x=4.2; sd=1.84) of the responses shows that the performance of MACCFA freight logistics measured in terms of Financial and market performance is greater than moderate. Hence, financial and market performance of MACCFA freight logistics company is only slightly above the midpoint or average which 4.0.

4.3.2.3. Cycle Time Performance of MACCFA Freight Logistics /3pl

According to Man(2006), the minimization of time to market – or cycle time – is necessary for a number of reasons (Kessler and Chakrabarti, 1996; Stalk and Hunt, 1990). Companies with short cycle times in 3PL can continually upgrade their products and incorporate state-of-the-art technology when it becomes available. This enables them to better serve consumer needs, outrun their slower competitors, and generate brand loyalty. It also enables them to offer a wider range of new products to better serve market niches (Schilling and Hill, 1998).

According to Frazelle (2002), the total logistics cycle time includes order entry time, order processing time, purchase order cycle time, if the product is not available from stock), warehouse order cycle time, and intransit time. As stated by Frazalle (2002),our society is fascinated with time management. The logistics and transportation industry are no different. Time is literally money in the transportation industry. Quicker transit, loading, and unloading times translate into greater asset utilization, which translates into greater leveraging of the corporation's capital. Cycle time metrics are the most natural indicators of transportation performance. Some of the most popular cycle time indicators for transportation include In-transit time (ITT), In-transit time variability , Vehicle load/unload time, Detention time, and Delayed in traffic time.

An assessment of the efficacy of 3pl model to reduce the cycle time of an integrated logistics system has been undertaken with a particular reference to MACCFA freight logistics company. The results are as presented in the table below.

Table 4.7: Cycle time performance of MACCFA 3pl

S. No.	Cycle Time Key Scale	Strongly agree/ Percent	Agree/ Percent	Moderately agree/ Percent	Neutral/ Percent	Moderately disagree/ Percent	Disagree/ Percent	Strongly disagree/ Percent	Frequency Total Total %
1	Has a shorter cycle time than the industrial average	11 (13.3)	15 (18.1)	16 (19.3)	13 (15.7)	7 (8.4)	16 (19.3)	5 (6.1)	83 100
2	Has a good equipment safety record	16 (19.3)	15 (18.1)	11 (13.3)	14 (16.9)	11 (13.3)	6 (7.2)	10 (12.1)	83 100
3	Has minimal stock-out levels	14 (16.9)	19 (22.9)	11 (13.3)	12 (14.5)	6 (7.2)	11 (13.3)	10 (12.1)	83 100
4	Has minimal back orders	7 (8.4)	10 (12.1)	4 (4.8)	19 (22.9)	14 (16.9)	13 (15.7)	16 (19.3)	83 100
5	Provides consistent delivery service	11 (13.3)	13 (15.7)	13 (15.7)	12 (14.5)	12 (14.5)	8 (9.6)	14 (16.9)	83 100
6	Has stock rotation control capability and record management (e.g., makes stock adjustments on-hand and re-orders)	8 (9.6)	24 (28.9)	11 (13.3)	17 (20.5)	7 (8.4)	10 (12.1)	6 (7.2)	83 100
7	Has order acceptance and a processing system	13 (15.7)	20 (24.1)	11 (13.3)	12 (14.5)	11 (13.3)	7 (8.4)	9 (10.8)	83 100
8	Has pick and pack operations	17 (20.5)	11 (13.3)	20 (24.1)	12 (14.5)	15 (18.1)	6 (7.3)	2 (2.4)	83 100
9	Fulfills order commitment service	10 (12.1)	14 (16.9)	10 (12.1)	13 (15.7)	11 (13.3)	14 (16.9)	11 (13.3)	83 100
Aggregate Mean (sd) of the scale=4.3(1.9)									

(Source, Survey 2023)

Based on the information collected as depicted in the table above, let's analyze the responses regarding various aspects of the cycle time as indicator of operational performance of the 3pl MACCFA freight logistics.

Pertaining to the length of cycle time as compared to the industry average, 13.25% of the respondents have replied strongly agree, 18.07% agree, and 19.28% of them have replied moderately agree that the cycle time of MACCFA 3pl is shorter than the industrial average. In total, 50.6% of the respondents have atleast moderately agreed that MACCFA's cycle time is shorter than the industry average.

With regard to the MACCFA's equipment safety record, 19.28% of the respondents have replied strongly agree, 18.07% agree, and 13.25% moderately agree that the organization has a

good equipment safety record. In total similar to the above statement , 50.6% of the respondents have atleast moderately agreed that MACCFA 3pl has achieved better equipment safety record while service delivery.

Pertaining to the minimum experiences of the company with regard to stock out and back-orders, 53.01% and 43.37% of the respondents have at least moderately agreed, respectively. These show that the respondents opined that MACCFA undertakes its operations facing back orders.

On the the consistent delivery of services, stock rotation control and record management system implementation, and the order acceptance and processing system implementation, 44.57%,51.81% and 53.01% of the respondents have replied that they at least moderately agree with this statements respectively.

With respect to MACCFA's pick and pack operations performance and order commitment services fulfillment, 57.83% and 41.57% of the respondents have replied moderately agree responses respectively. The opinion of the respondents show that MACCFA is performing low on fulfilling order commitment services.

In conclusion, the data suggests that the organization generally performs well across various operational aspects, such as shorter cycle time, equipment safety, stock-out levels, consistency of delivery service, stock rotation control, order acceptance and processing, and pick and pack operations.

But, its operation in fulfilling order commitment service is not perceived good by majority of the respondents. Likewise, MACCFA delivery its services facing back orders frequently. These two areas are, thus, identified by the respondents of the study, as the weaknesses of the case company hence should be targeted for future improvement plans.

Mean value of the responses for the scale indicates that cycle time of the MACCFA operations is rated 4.3 (1.9) which is slightly greater than the midpoint value 4.0. This implies that MACCFA should work hard to improve the its performance in-terms of facilitating reduction cycle time for its supply chain partners.

4.3.2.4. Goodwill and Reputation

The goodwill and reputation of an organization are intangible assets that enhance the organizational effectiveness of 3PL service providers. The goodwill and reputation performance of MACCFA 3pl has been assessed and the collected data is presented and analyzed below.

Table 4.8: Goodwill and reputation measure of MACCFA 3pl

No.	Statement	Strongly agree/ Percent	Agree/ Percent	Moderately agree/ Percent	Neutral/ Percent	Moderately disagree/ Percent	Disagree/ Percent	Strongly disagree/ Percent	Frequency Total
1	Engenders a positive or favorable image	14 (16.9)	13 (15.7)	14 (16.87)	19 (22.9)	8 (9.6)	7 (8.4)	8 (9.6)	83 100
2	Correlates expertise with strategic missions	16 (19.3)	14 (16.9)	13 (15.7)	17 (20.5)	14 (16.9)	3 (3.6)	6 (7.2)	83 100
3	Is reputable within the logistics industry	15 (18.1)	21 (25.3)	8 (9.6)	14 (16.9)	7 (8.4)	9 (10.8)	9 (10.8)	83 100
4	Has relevant experience	21 (25.3)	15 (18.1)	8 (9.6)	13 (15.7)	5 (6.0)	11 (13.3)	10 (12.1)	83 100
5	Has a good track recording customer service	10 (12.1)	12 (14.5)	15 (18.1)	19 (22.9)	11 (13.3)	6 (7.2)	10 (12.1)	83 100
Aggregate mean (sd) of the scale= 4.5(2.12)									

Source, (Survey, 2023)

As the table above depicted, all of the respondents have replied to the item stating that "MACCFA 3pl engenders a positive or favorable image" . Accordingly, majority of respondents (16.87%) have strongly agreed, followed by 15.66% of the respondents who have agreed moderately to the item just mentioned. However, the significant percentage (22.89%) of respondents have remained neutral.

Likewise, towards the item that states "MACCFA 3pl service correlates expertise with strategic missions"; 19.28% of the participants have strongly agreed, and 16.87% of them have agreed moderately. However, 20.48% of the respondents have remained neutral.

On the other hand a substantial percentage (25.30%) of the respondents have strongly agreed, and similarly 25.30% of them have agreed moderately to the statement "MACCFA 3pl is reputable within the logistics industry'; the two groups represent slightly more than half of the total respondents. On the other hand, a 21.7 proportion of the respondents, however, have disagreed or strongly disagreed each (10.84%).

Pertaining to the item that states “MACCFA 3pl has relevant experience”, the largest percentage (25.30%) of the respondents have strongly agreed, However, there is a relatively high percentage (13.25%) of the respondents who have disagreed or strongly disagreed.

Last, but not the least, the distribution of responses towards the statement “MACCFA 3pl has a good track record in customer service” is quite varied. While 18.07% agree moderately and 22.89% strongly agree, there is also a considerable proportion (13.25%) who disagree or strongly disagree. This indicates a mixed perception of the MACCFA track record in customer service.

Overall evaluation of the respondents pertaining to the reputation and goodwill of MACCFA 3pl shows that the performance level is above average/mid/ point of 4. (neutral response). As depicted in the last row of the above table, the overall mean value is 4.5 which is above the midpoint or average performance, and fairly near to moderate performance level.

In summary, the survey results have a generally positive image, expertise correlated with strategic missions, and a reputable standing within the logistics industry. However, in addition to the comprehensive plan to improve the overall performance of MACCFA 3pl pertaining to its reputation and goodwill enhancement, there are specific areas where improvements can be made, such as addressing concerns on achieving good track recording customer service in the industry; and secondly redesigning its services to enhance its relevance to the strategic missions of the service users/ customers.

Besides, MACCFA should also endeavour to enhance its reputation and goodwill by implementing appropriate stakeholder management policy and sharing accurate and timely information with these stakeholders. As stated by Nadarajah (nd.) (citing Fombrun& Shanley, 1990) reputation is the outcome of information that stakeholders accumulate about a firm through different signals: market signals (with respect to market performance and dividend policy); accounting signals (accounting profitability and risk); institutional signals (institutional ownership, social responsibility, media visibility, and firm size) and strategy signals (differentiation and diversification).

4.3.2.5. Organizational Effectiveness of MACCFA 3pl: Summarized

Based on the mean values of the four elements of the organizational effectiveness construct.

Table 4.9: Organizational effectiveness sub-dimension Measures

Sn	Subscale	Mean Value	Std Dev
1.	Productivity	4.4	1.94
2.	Financial and Market share	4.2(16-20%)	1.82
3.	Cycle time	4.3	1.91
4.	Goodwill and reputation	4.5	2.12

Source (Survey, 2023)

As it ca be observed from the table above, the performance of MACCFA 3pl on all indicators of organizational effectiveness range from 4.0 to 4.5. Each performance indicators show that the case company is performing above average and closer to the moderate performance level.

The other point worth mentioning at this juncture is that the efficacy of 3pl model to enhancing the achievement of these four organizational goals. The average mean values (all greater than the midpoint/ of the seven point scale show that a positive contribution of the 3pl model towards the respective goal realizations/ achievements. This finding is consistent with previous study such as Man(2006). In measuring organizational effectiveness of 3pl, Man(2006) had first surveyed 3pl organizations to identify organizational goals focusing on these which are achieved as a result of supply chain management. The identified goals include productivity, financial performance and market share, cycle time, and reputation and goodwill (citing Beamon, 1999; Thomas, 1999; Mentzer et al., 2000; Carr and Person, 1999; Elmuti, 2002; Lai et al., 2004; Reiner, 2005).

4.3.3. Relationship Management Performance of MACFFA 3Pl

Man (2006) emphasized that in addition to the context-structure-output framework relationship management, an external factor also affects the organizational performance of the 3PL service providers. As stated by Man (2006) a good relationship management, such as one that involves trust and commitment among supply chain partners, enhances 3PL organizational performance (citing Elmuti, 2002). Hence, this thesis research has also assessed the relationship management of MACCFA 3pl based on the evaluation responses of the selected respondents using a structured questionnaire.

The questionnaire dispatched consisted 10 items measuring the relationship management performance of the 3Pl /MACFFA logistics service provider in-terms of two dimensions: Trust and commitment. Trust is measured by 5 items, and commitment is also

measured by 5 items. The respondents were asked to evaluate the extent to which they agreed or disagreed with statements that describe the relationship and business links between MACCFA 3PL provider and its customers on a seven-point Likert scale that ranges from "1" (strongly disagree) to "7" (strongly agree). Table 4.10 below shows frequency distribution of the responses and mean values of 3PL relationship management and its specific items.

Table 4.10: The Relationship Management measure of MACCFA 3pl

S.No.	Item	Strongly agree/ Percent	Agree/ Percent	Moderately agree/ Percent	Neutral/ Percent	Moderately disagree/ Percent	Disagree/ Percent	Strongly disagree/ Percent	Frequency Total Total %
1	Has a "down to earth" approach to business	11 (13.3)	11 (13.3)	13 (15.7)	16 (19.3)	13 (15.7)	10 (12.1)	9 (10.8)	83 100
2	Adheres to a moral social principle	15 (18.1)	12 (14.5)	11 (13.3)	15 (18.1)	4 (4.8)	10 (12.1)	16 (19.3)	83 100
3	Has integrity	10 (12.1)	12 (14.5)	15 (18.1)	19 (22.9)	11 (13.3)	6 (7.2)	10 (12.1)	83 100
4	Adheres to a principle of ethical service	11 (13.3)	22 (26.5)	11 (13.3)	12 (14.5)	6 (7.23)	14 (16.87)	6 (7.23)	82 98.8
5	Adheres to a service principle of respect and acceptance	10 (12.1)	11 (13.3)	15 (18.1)	17 (20.5)	9 (10.8)	8 (9.6)	13 (15.7)	83 100
6	Demonstrates commitment	17 (20.5)	15 (18.1)	9 (10.8)	15 (18.1)	9 (10.8)	10 (12.1)	8 (9.6)	83 100
7	Demonstrates a willingness to honor commitments	14 (16.9)	18 (21.7)	13 (15.7)	13 (15.7)	11 (13.3)	9 (10.8)	5 (6.0)	83 100
8	Provides optimal attentiveness	12 (14.5)	14 (16.9)	10 (12.1)	16 (19.3)	7 (8.4)	17 (20.5)	7 (8.4)	83 100
9	Demonstrates loyalty	13 (15.7)	24 (28.9)	10 (12.1)	9 (10.8)	11 (13.3)	8 (9.6)	8 (9.6)	83 100
10	Is patient	13 (15.7)	18 (21.7)	13 (15.7)	9 (10.8)	8 (9.6)	15 (18.1)	7 (8.4)	83 100
Aggregate Mean (sd) of the scale		= 4.3(1.92)							

Source (Survey, 2023)

As depicted in the table above, the frequency distribution of the responses indicating the relationship management of MACCFA 3pl is described below.

The first item of the scale has assessed whether MACCFA 3pl has a 'down to earth' approach to business or not. The data collected reveals that majority of respondents (51.76%) either agree or strongly agree with this statement, indicating that they perceive the individual in question to possess a grounded and practical approach to business.

The second item of the scale addressed about the consideration of MACCFA to a moral social principle in its 3pl operations. The data collected show that the responses are quite evenly distributed across the scale. However, the highest percentage (18.07%) falls under the category of strongly agreeing, suggesting that a significant number of respondents believe that the person in question upholds moral social principles.

Similarly, the other item has attempted to indicate the integrity level of MACCFA 3pl services. As depicted in the table above, the responses are relatively balanced, with the highest percentage (22.89%) falling under the category of moderately agreeing. This indicates that while a significant portion of respondents believe the individual possesses integrity, there is also a notable number who hold a neutral stance.

Alignment of MACCFA 3pl service operations to a principle of ethical service was also assessed. The data collected from the respondents shows that the responses are diverse, but the largest proportion (26.51%) falls under the category of agreeing. This suggests that many respondents perceive the person in question to prioritize ethical service, although a notable percentage hold differing opinions.

Likewise, the respondents were requested to opine whether the MACCFA's service adheres to a service principle of respect and acceptance or not (ref item no 5above). Similar to the previous factor, the responses are spread across the scale. However, the highest percentage (20.48%) falls under the category of moderately agreeing, indicating that a considerable number of respondents believe that the person adheres to the principles of respect and acceptance in their service.

Respondents were also requested to evaluate MACCFA in-terms of the demonstrated commitment while its logistics service delivery: The data collected shows that the responses show a relatively even distribution across the scale. However, the highest percentage (20.48%) falls under the category of strongly agreeing, suggesting that a significant number of respondents perceive the individual to be highly committed.

Closely related to the above indicator, MACCFA was rated in-terms of the demonstrated willingness to honor commitments: The responses are quite balanced, with the highest percentage (21.69%) falling under the category of agreeing. This indicates that a substantial portion of respondents believe the person in question displays a willingness to honor their commitments.

In-terms of the attentiveness of MACCFA, the responses show some variation, but the highest percentage (20.48%) falls under the category of strongly agreeing. This suggests that a notable number of respondents perceive the company to provide optimal attentiveness in their interactions.

Demonstration of loyalty was another indicator used to evaluate the relationship management of MACCFA as a 3pl service provider. The data collected show that the largest proportion (28.92%) of the respondents opined agreeing to the statement. This indicates that a significant number of respondents believe the MACCFA demonstrates loyalty.

Finally, an item stating "MACCFA is patient" was dispatched to learn how the respondents react to the statement. As depicted in the table above, the responses show a balanced distribution across the scale, with the highest percentage (21.69%) falling under the category of agreeing. This suggests that many respondents perceive the person to possess patience.

In conclusion, based on the data provided, it can be observed that the respondents' perceptions vary across different relationship management factors. While some factors received higher agreement percentages, others had more mixed responses.

To get further insights, mean values and standard deviations are also calculated for the entire scale representing overall/aggregate mean value (as depicted in the table above). Based on the data provided, the aggregate mean of the scale is reported as 4.3. Clearly all values are above a midpoint (i.e., 4.0) on our seven point scale.

This aggregate mean (4.3) which is used to evaluate the relationship management of MACCFA comprehensively, calls for attention that the performance of MACCFA on relationship management is far and beyond. Hence a comprehensive initiative targeting all encompassing improvement of relationship management should be undertaken by MACCFA.

Relationship dynamics are extremely important in Ethiopian business setting (ICCMSMS, 2014). This is evidenced by the fact that most small-scales businesses are established based on friendship, trust, and family ties rather than laws. In most cases, the relationship endures more than the business. So, it is very important to establish personal relationships with colleagues or clients so as to establish and run business smoothly and successfully in the country. The best way to establish a good relationship is to win their trust, show respect, listen to what they say, and try to understand things from their point of view. The stronger the friendship, the easier it is for

them to develop trust. Moving straight into business related discussions without making proper introductions and small talk would be considered rude (Biruhe & Thomas 2012).

As a take away for the case organization, we need to note that studies have reported that the main reason for cancellation of 3pl contract is ineffective relationship management. Logistics industry analyst Eye for transport estimates that approximately 50 percent of all 3PL contracts are canceled within three years. The reasons 3PL relationships fail or underperform fall into three categories: Careless 3PL selection, Poor 3PL implementation and Ineffective relationship management and performance evaluation.

4.4. Summary of the Chapter

This chapter of the thesis has reported the results of the research and discussed them briefly. As noted above thus, assessment of the 3pl model in Ethiopia context based on a selected logistics service provider headquartered in the capital of the country, namely MACCFA freight logistics plc, has been undertaken based on three constructs such as Logistics Service Quality, Relationship management and Organizational effectiveness.

To sum up, the major findings of the study along with the aforementioned constructs are as depicted below based on their respective mean values reflecting how the respondents have rated the value creation, value architecture and value economics of the 3pl model with particular reference to MACCFA plc.

Table 4.11.: Summary of the 3Pl Model assessment results

SNo	Construct	Mean Value (sd)	Rank
1	Logistics Service Quality	4.4 (.2)	1
2	Relationship Management	4.3 (1.92)	3
3	Organizational Effectiveness	4.35 (1.95)	2

Source (Compiled from the Survey, 2023)

As it can be noted from the table above, MACCFA's 3pl model is relatively best for delivery of service quality, followed by organizational effectiveness. The model is not giving priority for relationship management; as the ranks of the three elements of a 3pl business model performance shows.

Similarly, it is clear therefore that the all the achieved mean values are only slightly greater than a midpoint of the scales which is 4.0 represented by "neutral" response. Thus to become a world class 3pl service provider, MACCFA is expected to plan for significant and continuous improvements.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This final chapter of the thesis presents summary of major findings, conclusions, recommendations and directions for future researches on similar topic of 3pl services in Ethiopia.

5.1. Summary of Major Findings

This study of 3pl model critical assessment has explored the logistics business model interms of service quality, organizational effectiveness, and relationship management between 3pl service providers and their supply chain partners in Ethiopia based on the performances of a case service provider namely MACCFA plc. The assessment has been undertaken based on the responses of 83 employees of the company using a structured seven point Likert scaled questionnaire.

Descriptive data analysis has been conducted using SPSS v24 hence, frequency distribution, percentages, mean values as well as standard deviation values have been used to interpret the outputs of the data analyses process.

The major findings of the study along with the aforementioned constructs are summarized below based on their respective mean values reflecting how the respondents have rated the value creation, value architecture and value economics of the 3pl model with particular reference to MACCFA plc.

1. On average, respondents rated MACCFA plc's logistics service quality as 4.4 (.2) which shows that the 3pl service provider performs a little more than an average performance level interms of its capability on delivering quality logistics services. This implies that the value

logic of MACCFA prioritizes service quality to the relationship management as well as organizational effectiveness.

2. Secondly, MACCFA value logic is rated 4.35 (1.95) in-terms of its achievements on organizational effectiveness measure. The value is again slightly greater than the midpoint (i.e., 4.0) of the measurement scale deployed . The value indicates that the business method deployed by 3pl in the country (based on the case finding) emphasizes organizational effectiveness or value economics second.

3. The value added architecture (value deliveryion) as operationalized in terms of the relationship management framework of MACCFA 3pl service provider is rated a mean score of 4.3 (sd=1.92). The mean score is again greater than the midpoint of the measurement scale (4.0) yet narrowly. The rank of the construct is a third place as compared with the other two constructs of business model elements. It is therefore evident that the value logic of 3pl service providers prioritize the importance of relationship management the least as compared to the other two constructs described above.

5.2. Recommendations

The findings of study on 3pl business model as well as performance measurement and assessment, and provides practical guidelines for practitioners to improve their 3Pl business model and performance, specifically to the management of MACCFA Freight logistics plc.

Hence, the performance of MACCFA shows that the company is not giving priority for relationship management; as the ranks of the three elements of a 3pl business model performance shows. Acknowledging the importance of relationship management in today's business environment, MACCFA should work out on how to improve its relationship with relevant stakeholders in the logistics supply chain.

5.3. Direction for future researches

Considering future research, the wide scope of the research undertaken is particularly suitable for achieving a broad understanding of the business dynamics of 3pl as well as logistics.the geographic scope could be expanded, since it would be interesting to conduct similar research

out of the capital city as the other parts of the country may have a different business tradition, practices and norms.

As stated by Man(2006), the SERVQUAL scale has had an undeniably lasting impact on corporate and academic communities. Likewise, it has enabled us in this study to identify important improvement areas for MACCFA 3pl service in particular and 3pl services of the country in general. Yet, the process of identifying the important areas of improvements would be more practical and rigorous if the survey findings are supported, substantiated and validated by focus group discussions. Hence, future researches should plan to address this limitation of the present thesis research and thus extend its corporate relevance to development of the improvement plans.

Some authors have reported that that 3PL providers and customers have different corporate perceptions and expectations of service quality. Hence, future researches should be undertaken that the study participant be selected from different actors of the supply chain network.

To solve the problem sustainably, future studies thus are suggested to investigate into the root causes or the factors that may affect the performances of the logistics service providers including the 3pl.

Similarly, future studies may target at designing effective and practicable trade off methods that can be implemented by the actors of the Ethiopian logistics system should be addressed. Various actors of the system may not be contributing to the success of the macro logistics system of the country for traditionally most firms may think that doing so may compromise organizational self interest. To overcome such challenges, researchers or policy makers should illustrate the otherwise by making available readily usable frameworks, methodologies and techniques for the logistics system actors.

As stated by Fielt(2011), the value logic is articulated by these three dimensions and, most importantly, how they relate to each other and fit together. More than the sum of its parts, the model captures the essence of how the business system will be focused. This is in line with suggestions that the business model is a system with complex interdependencies between its elements and that there should be a blend or balance between the different dimensions. Thus,

future studies are suggested to investigate about how the three elements of business model could effectively, relate and fit together so as to create synergies.

Similarly, at a firm level the synergistic effects and factors among the constituents of a 3pl business model is not yet thoroughly investigated. Hence, based on the Organizational theory that cites the context – structure – output relationship as the major corporate function to achieve organizational success, the issues can be researched at 3pl service provider firm. Hence, future researches may investigate the relationship among these three elements by considering a number of actors from each nodes of the supply chain, not case organization unlike the present study.

Finally, there are numerous business model frameworks as presented in the literature that can be used by 3pl services in particular and logistics in general. This thesis research adapted the integrated/ supply chain logistics business model framework aligning with the three dimensional generic business model. Future studies, however, can go for evaluating other frameworks and decide which one is best suited to the Ethiopian logistics in general and the 3pl services in particular.

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Appendix I

Addis Ababa University

College of Business and Economics, School of Commerce

Logistics and Supply Chain Management Department

Graduate program

Questionnaire to Collect Data for MA thesis

Dear Respondent,

My name is Muluken Teka. I am a Master/ graduate student at Addis Ababa University. I am currently doing a thesis research titled as "Assessment on Organizational Performance of Third Party Logistics Service providers in Ethiopia: The case of MACCFA freight logistics Plc". The purpose of this study is to fulfill a thesis requirement for the fulfillment of the Requirements of the Award of Master of Art Degree in Logistics and Supply Chain Management.

As part of the thesis research, I am collecting necessary data using this questionnaire survey. This survey explores the actual third party logistics service provider's organizational performance in the case of your company/ MACCFA Freight Logistics. In recognition of the relevance of your experiences, I hereby kindly request you to fill the enclosed questionnaire.

All of the information provided will be kept **CONFIDENTIAL** and used for academic purposes only. Your cooperation in the completion of the survey is highly appreciated.

Thank you for your participation.

Muluken Teka

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SECTION I: Demographic and basic company Information

1. Sex a. Male b. Female
2. Age a. Under 25 b. 25- 30 c. 30 - 35 d. 35 - 40 e. above 40
3. Educational Qualification a. Certificate b. Diploma c. BSc/BA d. MSc /MA e. PhD
4. Number of total work experience in this company (in years) a. less than or equals to 5 b, between 5 to 10 c. in between 10 to 15 d. Above 15

5. Which of the following services has more users? You can mark more than one
   A. Custom clearing services
   B. Packing services
   C. Transportation services
   D. Import
   E. Export (Door to door)
   F. Export (Door to port)
   G. Local move (Packing & transportation)
   H. Storage (Warehousing)
   I. Forklift and crane services

SECTION II: MACCFA Freight Logistics Performance Assessment

Please assess the following criteria by putting a √ in the box that best represents your opinions on the actual practices of your company (MACCFA freight logistics).

Part I: Quality

Key of scale:

7	6	5	4	3	2	1
Strongly	Agree	Moderately	Neutral	Moderately	Disagree	Strongly

agree		agree		disagree		disagree

Sn	***MACCFA freight logistics:***	***7***	6	5	4	3	2	1
1.	Has "up to date" equipment							
2.	Has attractive facilities							
3.	Has presentable (neatly dressed) employees							
4.	Has written documents (literature) on available services							
5.	Fulfills promises							
6.	Express sincerity in problem solving							
7.	Provides efficient and consistent service							
8.	Is punctual with service commitments							
9.	Provides error-free service (target) assistance							
10.	Provides consistent punctual service							
11.	Provides prompt service							
12.	Expresses a consistent willingness to help							
13.	Is responsive to requests							
14.	Engenders corporate confidence							
15.	Provides transaction security (e.g., ensures minimal loss)							
16.	Is consistently courteous							
17.	Displays knowledge during inquiries							
18.	Provides tailor-made customer service							
19.	Has convenient office hours							
20.	Is perceptive of customer needs and problems							
21.	Has customer's interest at heart							
22.	Is understanding of specific needs							

Part II: Productivity

Key of scale:

7	6	5	4	3	2	1
Strongly agree	Agree	Moderately agree	Neutral	Moderately disagree	Disagree	Strongly disagree

Sn	**MACCFA freight logistics**	7	6	5	4	3	2	1
1.	Minimizes service failure probabilities							
2.	Provides logistics business operational consultancy service effectively							

3.	Maximizes product replacement frequency							
4.	Provides competition enhancement service							
5.	Provides quality efficient service							
6.	Provides a high order rate service							
7.	Has efficient and reliable warehouse operations							
8.	Provides efficient and reliable transportation service							
9.	Maintains a high level of productivity							

Part III: Finance and market performance

Sn	**MACCFA freight logistics**	30+	26-30	21-25	16-20	11-15	6-10	1-5
1.	Has a _____ % net profit margin from logistics services							
2.	Has a _____% return on investment from logistics services							
3.	Has a _____% growth of share values							
4.	Has a _____% return on net assets from logistics services							
5.	Increases service value by _____% per year to us							
6.	Has a _____% growth rate of financial position in the logistics industry							
7.	Has a _____ % market share in the logistics industry							
8.	Has a _____% transaction volume in the logistics industry							
9.	Has a market growth rate of _____%							

Party IV: Cycle Time

Key Scale

7	6	5	4	3	2	1
Strongly agree	Agree	Moderately agree	Neutral	Moderately disagree	Disagree	Strongly disagree

Sn	**MACCFA freight logistics**	7	6	5	4	3	2	1
1.	Has a shorter cycle time than the industrial average							
2.	Has a good equipment safety record							

3.	Has minimal stock-out levels							
4.	Has minimal back orders							
5.	Provides consistent delivery service							
6.	Has stock rotation control capability and record management (e.g., makes stock adjustments on-hand and re-orders)							
7.	Has order acceptance and a processing system							
8.	Has pick and pack operations							
9.	Fulfills order commitment service							

Part V: Goodwill and Reputation

Key Scale

7	6	5	4	3	2	1
Strongly agree	Agree	Moderately agree	Neutral	Moderately disagree	Disagree	Strongly disagree

Sn	**MACCFA freight logistics:**	7	6	5	4	3	2	1
1.	Engenders a positive or favorable image							
2.	Correlates expertise with strategic missions							
3.	Is reputable within the logistics industry							
4.	Has relevant experience							
5.	Has a good track record in customer service							

Part VI: Relationship (Trust and commitment)

Key Scale

7	6	5	4	3	2	1
Strongly agree	Agree	Moderately agree	Neutral	Moderately disagree	Disagree	Strongly disagree

Sn	**MACCFA freight logistics:**	7	6	5	4	3	2	1
1.	Has a “down to earth” approach to business							
2.	Adheres to a moral social principle							
3.	Has integrity							
4.	Adheres to a principle of ethical service							
5.	Adheres to a service principle of respect and acceptance							
6.	Demonstrates commitment							

7.	Demonstrates a willingness to honor commitments							
8.	Provides optimal attentiveness							
9.	Demonstrates loyalty							
10.	Is patient							

Thank you for your cooperation