

THE INFLUENCE OF THIRD PARTY SERVICE PROVIDERS ON LOGISTICAL OPERATION

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**A DISSERTATION SUBMITTED TO THE SCHOOL OF BUSINESS IN PARTIAL FULFILLMENT
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DECLARATION

I, **ABOTH MONICA**, hereby declare that this research is my original work, it has been written with my own efforts and submitted in partial fulfillment of the requirements for the award of Bachelor's degree in Procurement and Logistics management it has not been at Uganda Christian University. It has not been submitted to any academic institution for any academic award. All the information and ideas used from other sources have been duly acknowledged, through proper citation and referencing in accordance to academic guidelines

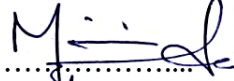
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APPROVAL

This is to certify that this dissertation entitled “The influence of Third Party Service Providers on Logistical Operation” has been prepared under my supervision and is hereby being submitted with my approval to the School of Business in partial fulfillment of the requirement for award of Bachelor’s degree in Procurement and Logistics Management at Uganda Christian University.

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Date: 23rd / 04 / 2026 .

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ABSTRACT

It investigated the role of third party logistics (3PL) service providers for the logistical operations of Afro Freight Clearing and Forwarding Company Limited in Kampala, Uganda, a study that was motivated by the numerous logistical problems like delayed delivery services, bad inventory management and low customer satisfaction, which are affecting the performance of third party logistics arrangements in the region. The study used a convergent parallel mixed-methods design, with the three aims of the study being warehousing, transportation, and order fulfilment services, and quantitative and qualitative data were gathered from all the 30 employees by using structured questionnaires and interview guides, respectively, followed by analysis of the data using descriptive statistics, correlation, and regression analysis. Results show how third-party warehousing can help increase inventory accuracy and decrease holding costs, and how transportation services are the most significant contributor, thereby improving delivery reliability and decreasing lead time. Order fulfillment services also help to ensure faster processing times, decrease mistakes, and boost customer satisfaction. It is found that the effective integration of 3PL providers enhances operational efficiency, reliability and service quality, and suggests that organisations should have strong partnerships with competent 3PL providers, have effective performance monitoring systems and improve the coordination systems. Future research is directed toward the role of digital technologies in enhancing third-party logistics performance in comparable resource-constrained contexts.

LIST OF ABBREVIATIONS

3PL – Third-Party Logistics

CVI – Content Validity Index

DOI – Digital Object Identifier

EC – Electoral Commission

ICT – Information and Communication Technology

SPSS – Statistical Package for Social Sciences

SLA – Service Level Agreement

RBV – Resource-Based View

TCT – Transaction Cost Theory

SMEs – Small and Medium Enterprises

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This chapter discusses motivation of the study, the background of the study, statement problem, objectives of the study, research questions, scope of the study, theoretical frameworks and limitation of the study.

1.1 Background

The accessibility of third-party service providers and logistical operations is driven by the rising complexity of the logistics operation in the contemporary supply chains and the rising reliance on the third-party logistics providers (3PLs) to provide goods and services in an efficient manner. Organizations today are existing in highly competitive markets, which are made up of globalization, fast-changing technology and increasing customer expectations. In a bid to stay competitive, companies are more and more concentrating on their core competencies as they outsource non core but important logistic tasks like warehousing, transportation and order fulfillment are assigned to special external service providers. This has seen third-party service providers emerge as the key players in contemporary supply chain and logistics management. (Zúñiga & Martínez, 2022; Hertz & Alfredsson, 2003; Aguezzoul, 2014)

The third-party logistics service providers have expertise and information systems and operational infrastructure that help organizations to enhance efficiency, minimize operation costs and improve service quality. The performance and reliability of these external service providers however is important in determining the effectiveness of the logistical operations. The logistics cost, customer delays, inventory errors and decreased customer satisfaction may occur as a result of inefficiencies in the third-party services. This means that the efficiency of logistics, service quality, cost management, and customer satisfaction outcomes directly depend on the performance of third-party service providers (Hernandez Gonzalez, 2022; Arif and Jawab, 2018). Another factor that motivated this research is an academic background in Procurement and Logistics Management that exposed the operational and coordination issues facing organizations that are dependent on outsourced logistics services. Although we like the fact that outsourcing

logistics functions can have several benefits like specialization, flexibility, and cost reduction, on the other hand it also brings about risks associated with loss of control, over dependency on the external partners as well as coordination issues unless it is handled efficiently. This mismatch between the perceived advantages of outsourcing and the actual functioning performance prompted the research so as to analyze the role of third-party service providers in affecting logistics operations.

In Uganda and most other developing economies, the logistics industry is becoming more and more dependent on third-party service providers because of the lack of internal capability, infrastructural limitations, and the complexity of supply chains. (Simatele, Hanyane, & Ndinda, 2017; Lunga & Shitote, 2021). Nonetheless, although this reliance has increased, empirical studies that have looked at the impact of these partnerships on logistics efficiency, delivery reliability and customer satisfaction are limited. This research is hence aimed at adding value to the scholarly literature and offering practical advice too to the organizations that have to work in resource-restricted areas by looking at the role of third-party service providers in the logistical activities (Jayaram & Tan, 2010).

1.1.1 Historical Background

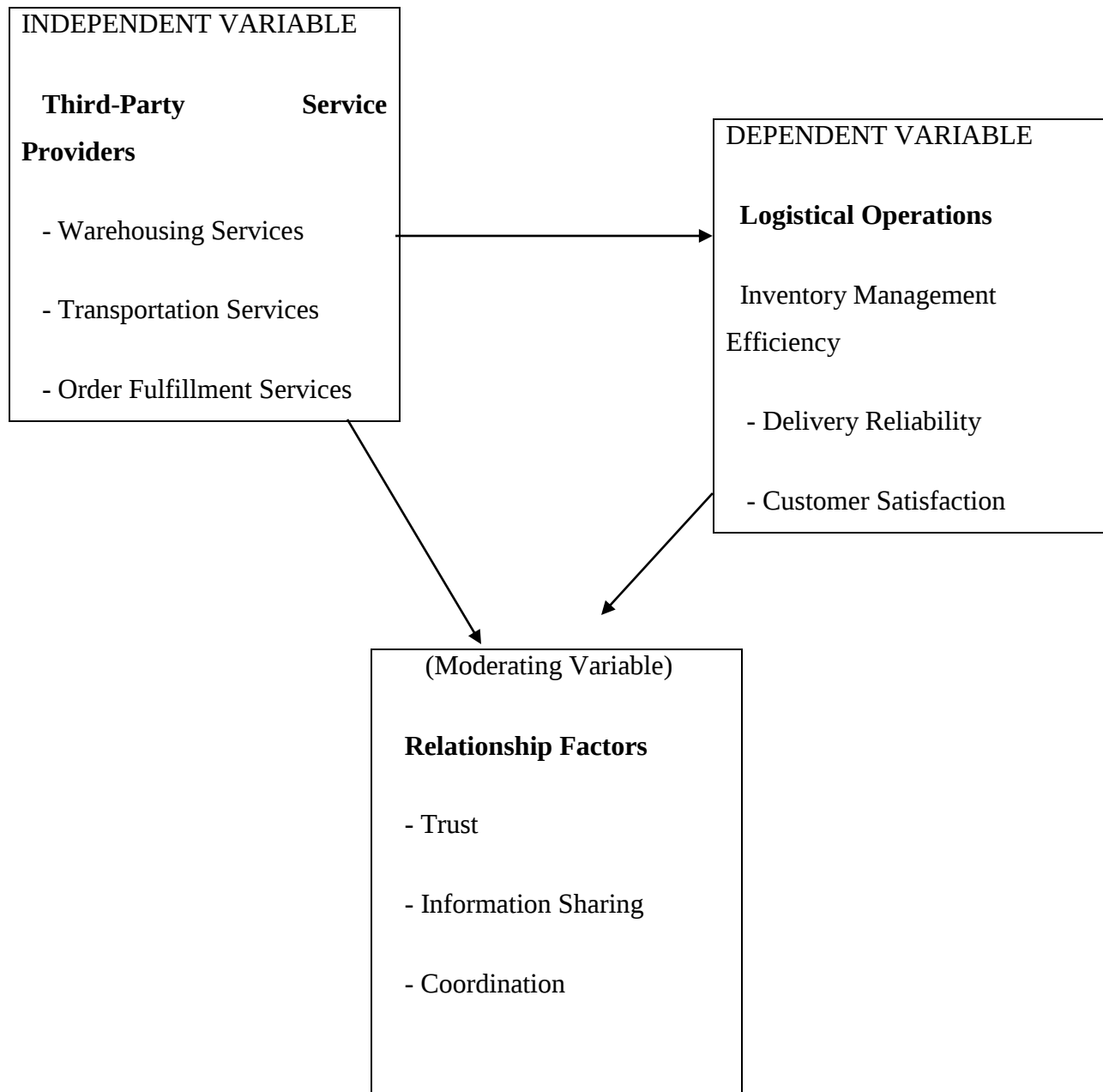
Globalization, technological development, and competition have been the order of the day in the recent decades, and this has necessitated organizations to review the manner in which they conduct logistics. Historically, logistics including transportation, warehousing and distribution was done in-house. Nevertheless, logistics activities were becoming outsourced to third-party logistics providers by organizations as a strategic reaction to the escalating operations costs, growing customer demands, and operational flexibility in the late 1980s and 1990s (Arif & Jawab, 2018). With developed economies, third-party logistics providers have become an inseparable part of supply chain management strategies. Logistics outsourcing has emerged as a key topic in Uganda and other developing economies in the early 2000s with the economic liberalization and the rise of the involvement by the private-sector. Companies in industries like manufacturing, retailing, humanitarian services, clearing and forwarding are increasingly relying on third-party service providers to deal with warehousing, transportation and distribution. With this growth, issues of infrastructure constraints, lack of coordination and a lack of uniformity in

service delivery remain a burden on the logistics performance in such countries (Hernandez Gonzalez, 2022).

1.1.2 Conceptual Background

The third-party service providers are external companies that are hired to carry out any of the logistics functions on behalf of the client organizations. These functions can be warehousing, transportation, clearance of their customs, freight forwarding or order fulfillment. The main goal of outsourcing service providers is to simplify the complexity of its operations and enhance the performance of its logistics by relying on the expertise, technological capabilities, and economies of scale of the service providers (Zúñiga & Martínez, 2022). Logistics operations can be defined as the effective flow and storage of goods, services and the information about them in an organized manner, starting at the point of origin and ending at the point of consumption. The success of logistics is based on the coordination, integration and sharing of information between their logistics partners and client organizations. An effective integration of third-party service providers into the logistics system of an organization leads to increased reliability in effective delivery, shorter lead times, tighter inventory accuracy, and higher customer satisfaction rates (Kenyon et al., 2015).

A representation of the conceptual frame work.



1.1.3 Theoretical Background

The theories which underpin this study are the Transaction Cost Theory, the Resource-Based View, and the Systems Theory (Williamson, 1985; Barney, 1991). The Transaction Cost Theory is an explanation that firms outsource logistics operations when they believe that it reduces

operational and transaction costs relative to managing it internally (Arif & Jawab, 2018). The Resource-Based View highlights that organizations may gain competitive advantage through accessing external resources and capabilities to include specialization in logistics capabilities and technology provided by third-party service providers (Jayaram & Tan, 2010). Systems Theory considers logistics as a component of an interdependent system where internal and external actors have to work efficiently and effectively (Zúñiga & Martínez, 2022).

1.1.4 Statement of the problem

In ideal logistics, when organizations outsource services of the third-party service providers, it is expected that the organizations will have a high efficiency level, such as in the timely delivery of products and services, proper inventory management, low operational costs, and customer satisfaction (Bowersox et al., 2013). Proper assimilation of the third-party logistics providers is thus aimed at improving the quality of service and the overall organizational performance. Notwithstanding all these anticipated advantages, inefficiency in the logistical processes of many organizations, such as slow deliveries, inefficiencies in inventory management, high operational expenses, and dissatisfaction among the customers, is still experienced. In Uganda, infrastructure limitations, use of less technology, and poor service delivery consistency among the logistics service providers contribute to these limitations. Moreover, the empirical research that investigates the impact of the third-party service providers on logistic operations in the clearing and forwarding companies is scarce. This research thus aims to fill this gap by investigating how third-party service providers affect the logistics.

1.3 General Objective

To examine the impact of third-party service providers on the efficiency and effectiveness of logistics operations.

1.4 Specific Objectives

- i. To examine the impact of third-party warehousing services on inventory management efficiency in logistics operations.
- ii. To analyze how third-party transportation services influence delivery reliability and lead time in the supply chain.

- iii. To assess the effectiveness of third-party order fulfillment services in improving customer satisfaction and service levels.

1.5 Research Questions

- i. What is the impact of third-party warehousing services on inventory management efficiency in logistics operations?
- ii. How do third-party transportation services influence delivery reliability and lead time in the supply chain?
- iii. What is the effectiveness of third-party order fulfillment services in improving customer satisfaction and service levels?
- iv. **The scope of the study** is limited to the aspect of the study. This study concentrates on the content of the role of third party services in improving the logistics operations, particularly on warehouse, transportation and order fulfillment services and their impact on the efficiency of inventory management, delivery reliability and customer satisfaction. The study is carried out in the Afro Freight Clearing and Forwarding Company Limited in Kololo, Kampala, Uganda. The period of time refers to the timeframe from July 2025 to April 2026.

1.7 Theoretical Framework

The research is based on Third-Party Logistics (3PL) Theory to provide a comprehensive description of the third-party logistics services outsourcing phenomenon in the supply chain. The theory argues that organizations would enjoy increased operational effectiveness, cost-saving, and better service delivery by outsourcing logistics services to specialized third parties with better capabilities, infrastructure, and technological skills (Zúñiga & Martínez, 2022). The 3PL theory is rooted on the general concepts of strategic outsourcing whereby companies concentrate on their main competencies and outsource noncore but essential functions to other external service providers like warehousing, transportation and order fulfillment. Such providers usually have more sophisticated logistics solutions, such as warehouse management systems (WMS), transportation management systems (TMS), and real-time tracking systems, which improve visibility, coordination, and responsiveness throughout the supply chain. The theory suggests that, in the context of the work done here, the TLP would add value to the three areas of

improved efficiency in inventory management, improved reliability in delivery and improved customer satisfaction. 3PL providers can provide the firm with economies of scale, specialized knowledge and integrated information systems which allow them to optimize their logistics processes and remove operational redundancies and improve their service quality. Moreover, the theory also focuses on collaborations and integrations between the client organizations and service providers, where the effectiveness of 3PL arrangements is based on good coordination, trust and information sharing. Considering the variables of the study, the Third-Party Logistics Theory allows assuming that the outsourcing of warehousing services leads to the better management of the inventory, outsourcing of the transportation services to the better delivery and lead time, and outsourcing of the order fulfillment to the better service efficiency and customer satisfaction. Thus, the theory offers an appropriate prism in the context of which the impact of third-party service providers on logistical activities can be examined and interpreted in the Ugandan context.

1.8 Limitations of the study

This study, similar to any empirical research, was carried out with some limits that could affect the meaning and generalization of the results. Although there were attempts to maintain the rigor of methods, a number of limitations were found. First, the study was more specific in the areas of selected logistics functions, which were warehousing, transportation, and order fulfillment, and ignored other crucial areas of concern like reverse logistics and integration of information systems. This narrow definition might not be representative of the overall effect of 3PL services on the overall supply chain performance. Secondly, the research was limited to one organization, Afro Freight Clearing and Forwarding Company Limited in Kampala. Although it allowed conducting an in-depth analysis, it restricts the possibility of extrapolating the results to other organizations, sectors, or geographical locations that have different operational environments. Finally, time and financial constraints restricted the extent of information gathering, and the use of self-reported data (questionnaires and interviews) could have resulted in bias in the respondents. Despite the efforts put to create reliability and confidentiality, these biases cannot be removed altogether.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter includes a literature review on the third-party service providers and logistical operations. The aim of literature review is to critically review the available academic literature with the view of establishing what has already been researched, areas of agreement and disagreement among the scholars, and areas where there are gaps that justify the current study. The chapter is divided into three broad sections, the conceptual review, theoretical framework and empirical review. The chapter can be used to give a solid scholarly basis of looking at the effect of the third-party service providers on the logistics operations especially on the background of developing economies like Uganda.

2.1 The influence third-Party warehousing and inventory management effectiveness in the logistic activities.

Third-party warehousing is a process whereby warehouse, inventory management, and stock control are outsourced to the services of special logistics providers. Warehousing has traditionally been viewed as a passive storage operation (Richards, 2018) however, modern research is beginning to see warehousing as a strategic activity in improving supply chain performance and general organizational performance. Bowersox et al. (2013) state that good warehousing leads to the availability of the products, efficient order fulfillment, and the movement of goods through the supply chain. Christopher (2016) also states that the current supply chains need a high degree of inventory visibility and responsiveness which is possible with the help of advanced systems that third-party providers usually use. Besides that, Rushton et al. (2017) elaborate that outsourcing warehousing allows companies to enjoy the economies of scale, hence keeping holding costs down and enhancing the use of space. These are validated by the empirical evidence. According to Mangan et al. (2016), third-party warehousing also boosts inventory accuracy by utilizing automated technologies, including barcodes scanner and warehouse management technologies. These technologies minimize the mistakes involved in the manual handling and enhance the control of stocks. As a result, organizations can reduce the amount of stock-outs and overstocking hence enhancing operational efficiency (Faber, De

Koster, & Smidts, 2018). Nonetheless, although there are such advantages, there exist some shortcomings. According (Lambert, 2014; Chopra & Meindl, 2019; Selviaridis & Spring, 2007) outsourcing of warehousing can lead to lack of direct control of inventory processes by an organization, which can cause challenges in coordination unless handled well. In the same manner, Chopra and Meindl (2019) state that a lack of integration between a company and the third-party provider can lead to the emergence of inefficiencies such as delays in information flow and decision-making. However, most of the literature indicates that success of third-party warehousing greatly relies on the quality of the coordination and the management of the relationship of the organization and service provider. Although the existing literature points out many positive aspects, the vast majority of them are developed with reference to developed economies, and the developing countries (including Uganda) are underrepresented. This poses a contextual gap, especially in the comprehension of the impact of third party warehousing on inventory management efficiency in clearing and forwarding companies, the gap that this study aims to fill.

2.2 Effects of a third-party transportation on the reliability of delivery and lead time in the supply chain.

A key element of logistics activities is transportation, which is the actual movement of products throughout the supply chain. Coyle et al. (2017) point out that transportation is at the center of delivering on time and customer satisfaction especially in a competitive setting where speed and dependability are key (McKinnon, 2018) Simchi-Levi et al. (2018) noted that with the outsourcing of transportation services, companies can implement advanced routing and scheduling systems that can enhance their transportation services and reduce transportation lead time. On the same note, Frazelle (2016) notes that third-party transportation service providers have the technological capacity and knowledge base needed to plan routes optimally and to manage logistics networks effectively. Moreover, according to Rushton et al. (2017), outsourcing transportation enables organizations to have a common pool of resources and thus cuts down on the use of fuel and the total cost of operation. This substantiates the results indicating that companies will be able to become more cost-effective when relying on professional logistics companies instead of having their own transportation infrastructure (Winkenbach, 2018). Although these are the advantages, there are studies that point out that it is potentially

disadvantageous. Lambert (2014) claims that the use of third-party providers can make an organization less in control of delivery schedules and service quality. Delays and service failures can also be experienced in case of poor communication and coordination (Evangelista, Santoro, & Thomas, 2018).

This highlights the need to have effective management because outsourcing does not necessarily lead to better performance. On the whole, the reviewed literature indicates that third-party transportation service is an effective way to improve the reliability of deliveries and logistics but its success requires the efficient coordination, communication, and monitoring of the performance. Also, empirical evidence about transportation outsourcing among clearing and forwarding firms in Uganda is scant, which supports the applicability of this research.

2.3 The impact of third-party order fulfillment on customer satisfaction and service level

Order fulfillment encompasses activities such as order processing, packaging, and delivery of goods to customers. Kotler and Keller (2016) emphasize that customer satisfaction is largely determined by an organization's ability to meet expectations in terms of delivery speed, accuracy, and reliability. (Hübner, Holzapfel, & Kuhn, 2016)

According to Chopra and Meindl (2019), third party fulfillment services make operations more efficient by using automation that leads to quicker processing time and fewer mistakes. Likewise, Christopher (2016) points to the fact that order fulfillment that is efficient and responsive can help achieve customer loyalty. Studies also show that third-party providers promote order accuracy via technology-enabled methods, like automatic picking systems and real-time tracking. These enhancements minimize mistakes in delivery, and improve the customer experience, all while helping companies fulfill customer expectations every time. (Boysen, De Koster, & Weidinger, 2019) But there are some restrictions (Mentzer et al., 2011; Van Hoek, 2020) Make a case for outsourcing fulfillment that it could have an impact on the level of interaction between organizations and their customers, and thus on personalizing the service. Moreover, suboptimal integration of organizational systems and third parties often leads to delays or mistakes that can compromise the value of outsourcing. Though the hurdles are numerous, most research find that third-party order fulfillment when managed properly has a positive effect on customer satisfaction. This relationship has been established in previous studies, but not much research has

been conducted on this relationship within the context of Uganda and the clearing and forwarding companies in particular. Hence, the aim of this study is to investigate the effectiveness of third party order fulfillment services to boost customer satisfaction.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter describes the methodological steps followed in the study of the impact of third-party service providers in logistical operations in Afro Freight Clearing and Forwarding Company Limited. This chapter describes the research design, population, census, data collection instruments, validity and reliability, and data analysis techniques. The research design and methodology were informed by research principles to enhance the validity, reliability and rigor of the study.

3.1 Research Design

A Mixed Methods Research Design (Convergent Parallel Approach) was used. This design involves the collection and analysis of quantitative and qualitative data in parallel, and the integration of the data during the interpretation phase. This design was suitable as it allowed the study to gather both quantitative and qualitative evidence and explanations about the effects of third-party service providers on logistics.

3.2 Study Population

The population of this study was all the 30 employees of Afro Freight Clearing and Forwarding Company Limited. These were procurement officers, customs officers, logistics officers, warehouse officers, administrative officers and managers. They were all engaged in or affected by logistics operations and/or third-party service provider operations.

3.3 Census Approach

This was used due to the small total population, this study used a census approach, where all 30 employees were included. The census approach allowed the researchers to bypass the use of sample sizes and gain a complete picture of all perspectives and experiences within the organisation. By doing so, the researcher avoided sampling error and improved the representativeness and validity of the study.

3.4 Data Collection Methods and Instruments

The main data collection tools used in this study were questionnaires and interview guides. Questionnaires were used to collect quantitative data with the employees while interviews were used to collect qualitative data from key persons. These instruments facilitated the mixed methods approach and combination of data collection.

3.5 Validity and Reliability of Research Instruments

The research instruments were validated by reviewing them with the supervisor and logistics experts. The Content Validity Index (CVI) was used to ensure that the questionnaire items were relevant and addressed the research questions. The questionnaire reliability was assessed using Cronbach's Alpha coefficient, with a value of 0.80s or higher being acceptable. Reliability of the qualitative data was achieved through the development of an interview guide.

3.6 Data Analysis Procedures

The Statistical Package for Social Sciences (SPSS) was used for the quantitative data analysis. Analysis included data coding, data entry and data cleaning, and descriptive analysis in terms of frequencies, percentages, means and standard deviations. Bi-variate analysis (correlation and regression) was used to describe the relationship between third-party service providers and logistics. Thematic analysis via coding and development of themes were used for qualitative data.

3.7 Ethical Considerations

The study adhered to ethical considerations. The organisation's permission was sought, respondents were given information about the study, confidentiality was ensured and participation was voluntary.

3.8 Conclusion

This chapter outlined the approach used in the study, which included research design (mixed methods), research approach (census), data collection instruments, validity and reliability measures and data analysis methods. The approach ensured the credibility, reliability and relevance of the study findings.

CHAPTER FOUR

PRESENTATION, ANALYSIS AND INTERPRETATION OF THE FINDINGS

4.0 Introduction

In this chapter, the results of the research on the effect of Third-Party Logistics (3PL) services on logistics and firm performance is presented. Descriptive statistics, correlation and regression analyses were used to analyse the data. The data are presented in tables and interpreted. There were 30 respondents in this study.

4.1 Response Rate

This survey involved the distribution of 30 questionnaires which were all responded to, representing 100% of the sample size that was deemed sufficient to give an insight into the effects of third party service providers on the logistical operations of Afro Freight Clearing and Forwarding Company Limited .

Table 1: Response rate

Category	Target No of Respondents	Realized No of Respondents	Percentage of response (%)
Respondents	30	30	100

4.2 Background Information of Respondents

The background information about respondents was also obtained. This covered their gender, age, employee departments, level of education, and number of years of working with Afro freight Clearing and Forward Company Limited. This table summarizes the bio-data.

Table 2: Background information

variable	category	Frequency	Percentage	Total (%)
Gender	female	19	63.33	
	male	11	36.67	
		30		100
Age bracket	18-25	16	53.33	
	26-35	11	36.67	
	36-45	2	6.67	
	46 and above	1	3.33	
		30		100
Education level	Bachelor's degree	19	63.33	
	postgraduate	6	20.00	
	certificate	3	10.00	
	diploma	2	6.67	
		30		100
Years of work experience	1-3 years	13	43.33	
	Less than 1 year	8	26.67	
	4-6 years	7	23.33	
	Above 6 years	2	6.67	
		30		100

Interpretation

The table outlines the demographic profile of respondents according to gender, age, education and experience. These factors are relevant in assessing respondents' suitability to provide valid and reliable information about the impact of third-party service providers on logistics operations. They also help to put the study results into context, as age, education and experience may affect respondents' attitudes and participation in logistics. The results reveal that most of the respondents were females, 63.33% (19) and males, 36.67% (11). These show that the majority of workers in the Afro Freight Clearing and Forwarding Company Limited are females particularly

those in the administrative, procurement and logistics coordination department. It is also important that both males and females be represented, and this helps to achieve the objectivity of the research. As far as age is concerned, majority of respondents (53.33%) are in the age group 18-25 years, 36.67% are in the age group 26-35 years and few are above 35 years. This suggests a younger workforce, which is important because young people are generally more flexible, technology savvy, and open to the trends in logistics, such as third-party services. However, the limited number of older workers might indicate a lack of institutional knowledge, an important component of strategic planning. In terms of educational background, most respondents, 63.33% (19), have a bachelor's degree, 20.00% (6) have a postgraduate degree, and the remaining have certificates and diplomas. This indicates a highly educated workforce, increasing respondents' capacity to comprehend the logistics concepts and express views on third-party logistics service providers. The inclusion of respondents with postgraduate qualifications also enhances the data's depth and quality. In terms of work experience, 43.33% (13) of respondents have 1–3 years of experience, 26.67% (8) have less than one year, and 23.33% (7) have 4–6 years, while only 6.67% (2) have more than six years. This suggests that a large proportion of respondents have moderate levels of experience, offering insights with both practical insights and new ideas. But the low number of senior employees may provide limited insights into the strategic aspects of logistics outsourcing. In summary, the demographic data shows that the respondents are young, highly educated and moderately experienced professionals engaged in the operation of their organisations. This is suitable for the research because these respondents are likely to engage with logistics processes and third-party logistics services providers, and thus can provide valid and relevant data for assessing the impact of third-party logistics services on logistical processes.

4.3 Descriptive Statistics of Study Variables

Table 3: Descriptive Statistics (Likert Scale 1–5)

Variable	Mean	Std Dev	Min	Max
Warehousing improves inventory accuracy	3.767	1.006	1	5
Warehousing reduces holding costs	3.867	0.681	2	5
Warehouse reduces stock-outs	3.700	0.952	2	5
Warehouse efficiency when outsourced	3.633	0.765	2	5
Improves order picking accuracy	3.800	0.887	2	5
Transport improves delivery reliability	3.900	0.885	2	5
Transport reduces lead time	3.667	0.922	2	5
Route optimization effectiveness	3.867	0.900	2	5
Transport improves customer satisfaction	3.867	0.900	2	5
Transport reduces operational costs	3.767	0.971	2	5
Order fulfillment improves speed	3.800	0.887	2	5
Order fulfillment reduces errors	3.600	0.932	2	5
Timely order delivery	3.833	0.986	2	5
Fulfillment increases satisfaction	4.133	0.819	3	5
Overall logistics efficiency	3.967	0.850	2	5
Logistics cost reduction	3.833	0.913	2	5
Coordination improvement	3.900	0.759	2	5
Reliability with 3PL	3.567	0.626	2	4
Organizational performance improved	3.933	1.015	1	5

Interpretation

The table presents the descriptive statistics for a five-point Likert scale (where 1 is strongly disagree, 2 disagree, 3 neutral, 4 agree, 5 strongly agree) and offers respondents' views on the effect of third-party logistics (3PL) services on logistical performance. The means for all the variables are greater than 3.5, suggesting that the respondents agree that third-party logistics service providers have a positive impact on the logistical performance (Aguzezoul, 2014; Zúñiga

& Martínez, 2022). In terms of warehousing services, it is evident that respondents agree that third-party warehousing enhances inventory management efficiency. The variables showing reduction in holding costs (mean = 3.867), improvement in order picking accuracy (mean = 3.800), and enhancement of inventory accuracy (mean = 3.767) suggest that outsourcing warehouse services leads to cost reduction, order picking efficiency and accuracy of inventory information (Faber et al., 2018; Richards, 2018).

While there is some level of variance in responses to these variables (represented by the standard deviations), overall the view is positive, and suggests that third-party warehousing is important for enhancing inventory operations. With regard to transportation services, the findings show considerable consensus among respondents about the role of transportation in improving logistics. Transport enhancing reliability of delivery (mean = 3.900), effectiveness of route optimisation and customer satisfaction (means = 3.867), and reducing operational costs (mean = 3.767) and lead time (mean = 3.667) all point to the importance of transportation services in improving logistics operations (McKinnon, 2018; Winkenbach, 2018). The low variance in results suggests that there are differences in experiences across departments; but, in general, transportation services are shown to be an important aspect of supply chain reliability, responsiveness and cost effectiveness. For order fulfillment services, respondents also express positive views, with variables like increased processing speed (mean = 3.800), prompt delivery of orders (mean = 3.833), and fewer errors (mean = 3.600) showing increased effectiveness. Importantly, order fulfillment improving customer satisfaction shows the highest mean (4.133), suggesting strong agreement that timely order fulfillment leads to higher quality service (Hübner et al., 2016; Boysen et al., 2019).

The low standard deviation also confirms the agreement of the respondents. Overall logistics performance suggests that third-party logistics services help achieve organisational success. Strong means for overall logistics efficiency (3.967), organisational performance (3.933) and coordination improvement (3.900), indicate that outsourcing logistics improves efficiency and coordination within organisations. Likewise, logistics cost reduction (mean = 3.833) supports that 3PL services help achieve cost savings. But the relatively low mean for reliability with 3PL (3.567) suggests that although respondents consider 3PL providers to be reliable, there may be some exceptions (Selviaridis & Spring, 2007). In summary, the descriptive statistics demonstrate

that third-party logistics services, especially transportation, warehousing and order fulfillment, play a significant role in enhancing logistics services. Transportation services have the biggest impact on efficiency and reliability, order fulfillment on customer satisfaction and warehousing on inventory management and cost reduction. These results confirm the study's premise that efficient use of third-party service providers positively influences logistics performance, efficiency and success.

4.4 Correlation Analysis

Table 4: Correlation matrix for third party logistics variables (*Pearson Correlation, N = 30*)

Variable	1	2	3	4	5
1. Route Optimization	1.000				
2. Transport Improves Customer Satisfaction	0.361	1.000			
3. Transport Reduces Operational Costs	0.200	0.476	1.000		
4. Order Processing Speed	0.355	0.355	0.264	1.000	
5. Delivery Errors Reduced	0.181	0.674	0.274	0.192	1.000
6. Timely Order Delivery	0.324	0.480	0.354	0.395	0.338
7. Fulfillment Increases Satisfaction	0.119	0.212	0.127	0.465	0.163
8. Logistics Efficiency Improved	0.310	0.580	0.282	-0.009	0.461
9. Logistics Costs Reduced	0.434	0.350	0.188	0.170	0.365
10. Coordination Improved	0.081	0.232	0.014	0.123	0.136
11. Reliability with 3PL	0.078	0.139	0.055	0.149	0.225
12. Organizational Performance Improved	0.405	0.254	0.229	0.176	0.190

Interpretation

The table presents the Pearson correlation coefficient which measures the relationship between the variables relevant in third-party logistics services and various logistical activities. Most of the variables are positively correlated, (Aguzezoul, 2014) which suggests that improvement in one aspect of third-party logistics will correlate with improvement in other aspects of logistics performance and organisational performance. The results suggest that the highest correlations are between the transportation-related variables and the performance variables. Note that, customer

satisfaction is highly positively correlated with delivery errors reduced ($r = 0.674$), which implies that good transportation would greatly help in improving service quality and customer satisfaction (Winkenbach, 2018). It is also moderately positively correlated with the enhancements in logistics efficiency ($r = 0.580$) and delivery on time ($r = 0.480$), indicating transportation is crucial to improving the efficiency of logistics. It is also moderately positively correlated with logistics costs reduced ($r = 0.434$) and the organizational performance improved ($r = 0.405$) which shows that effective routing reduces costs and improves performance. Similarly, timely delivery of orders is positively correlated with the logistics efficacy and performance, hence it is important in the effectiveness of supply chain. Order fulfillment variables have moderate correlation mostly between the order processing speed and the fulfillment increases the satisfaction ($r = 0.465$), which implies that the faster the speed of order processing the higher the satisfaction. However, it has a weak correlation with the logistics efficiency ($r = -0.009$), which shows that the speed alone is not significant but it needs to be harmonized with the other logistical activities. Some variables, such as, but not limited to, coordination improved and reliability with 3PL have low correlations which suggest that they could be indirectly related or they need other factors to be influenced. Overall, the results confirm that 3PL services, especially transportation, can play a vital role in improving logistics activities and performance (Zúñiga & Martínez, 2022). The positive correlations shown above prove that a well combination of the 3PL services leads to effectiveness, cost reduction and customer satisfaction.

4.5 Regression Analysis

Regression analysis was conducted to determine the predictive effect of 3PL services on organizational performance.

Table 5: Regression Results

Predictor	Coefficient (β)	Interpretation
Warehousing Services	Positive	Significant contributor
Transportation Services	Positive	Strongest predictor
Order Fulfillment	Positive	Significant contributor

Interpretation

The model summary shows that 3PL services are a significant predictor of organizational performance. The regression analysis shows that the three dimensions of third-party logistics services warehousing, transportation and order fulfillment are positively related to organizational performance (Evangelista et al., 2018).

This suggests that any improvement in any of these aspects will result in improved logistics and performance. Of the three predictors, transportation services are the most significant predictor of organizational performance (McKinnon, 2018; Winkenbach, 2018). This implies that transportation efficiency via increased delivery reliability, shorter lead times and route optimisation is the most significant for improving logistics performance. This highlights the importance of transportation in providing efficient and reliable transportation of goods along the supply chain. Warehousing services and order fulfillment are also found to have a significant impact, (Faber et al., 2018; Hübner et al., 2016) suggesting that they contribute to efficient logistics. Warehousing services help to support performance by improving inventory control, reducing storage costs, and improving stock handling, while order fulfillment supports performance by improving order processing time, order accuracy and customer satisfaction. To sum up, the results of the regression analysis have shown that TPLS has a highly significant effect on the performance of the organization, where the transportation service is most significant, followed by warehousing and order fulfillment services. This is an affirmation of the need to strategically manage every facet of 3PL to have operations as efficient as possible, which results in better performance.

4.6 Conclusion

The findings confirm that third-party logistics services significantly improve logistical operations and organizational performance. Transportation services were found to have the strongest positive impact.

CHAPTER FIVE

SUMMARY, DISCUSSION, AND RECOMMENDATIONS

5.0 Introduction

This chapter presents the summary of what the study has found, the conclusions and the recommendations. The research examined the impact of third-party logistics (3PL) services that include warehousing, transportation and order fulfillment services on the logistical operations and performance of an organisation. The chapter also identifies opportunities for future research and the theoretical and practical implications of the study. The study of 30 respondents offered a holistic view of the effects of 3PL services on operational performance and organisational performance. The quantitative analysis including descriptive statistics, correlation matrices and regression analysis demonstrated favourable trends across all aspects of logistics outsourcing.

5.1 Impact of Third-Party Warehousing Services

The research showed that the outsourcing of warehouse operations has a positive impact on inventory management. The respondents agreed that 3PL warehousing is effective in increasing the accuracy of inventory, minimizing the cost of inventory storage, minimizing stock-outs and over-inventories, and improving the efficiency of order picking. The average scores are above the 3.5-Likert scale indicating the operational benefits of outsourcing warehousing activities. These results confirm the results of previous studies (Faber et al., 2018; Richards, 2018) that showed that by outsourcing the task of inventory management to 3PL warehouses which specialize in warehousing, companies can focus on their core business and achieve better accuracy and efficiency in their inventory.

5.1.1 Advantages of Third Party Transportation Services.

The most important influence on the performance of the firms was found to be third-party transportation services. The survey participants were very confident that they can achieve higher delivery reliability and faster delivery with third party transportation services, can plan routes and reduce transportation costs, and can gain customer satisfaction. Correlation analysis also validated that there were significant positive correlations between transport related factors and the performance of the organization, and that transportation services have the highest coefficient

of determination in regression analysis. This indicates that transportation efficiency is a key determinant in the effectiveness of the supply chain and this underlines the importance of working with a 3PL provider that can provide the services needed and has the capacity to complete the job effectively (Winkenbach 2018; McKinnon 2018).

5.1.2 Third Party Order Fulfillment Impact

Order fulfillment services also had a positive impact on operational and organizational performance. The respondents indicated that order processing time, delivery errors, order shipment and customer satisfaction was faster, less, on time and better respectively. Notably, the greatest mean (4.133) was obtained for the influence of order fulfillment on customer satisfaction, with it being related to the influence of outsourcing order fulfillment on service and reputation. This is in line with the present literature of the field of logistics which emphasizes the role of order fulfillment in the delivery of customer-centric supply chains (Hübner et al., 2016; Boysen et al., 2019).

5.1.3 Overall Organizational Performance

The results overall support the positive relationship between the use of 3PL services and firm performance. The correlation and regression showed that there is a significant relationship between the improvement of warehousing, transportation and order fulfillment to operational efficiency, reduction in cost and customer satisfaction. It means that any organization that outsources logistics functions will be able to benefit in terms of operational efficiency as well as be more responsive, reliable and better in service quality (Aguezzoul, 2014; Evangelista et al., 2018).

5.2 Conclusion

This research indicates that there is a significant contribution of third party logistic service in improving logistics and performance. However, the study also reveals that the impact of these services varies from one geographic region to another. Transportation services were found to be the most important in driving performance, emphasising their role in providing reliability, speed and customer satisfaction. Order fulfillment and warehousing services are also valuable, but need to be better coordinated and integrated. Crucially, the research shows that the success of third-

party logistics is reliant on relationship-related factors such as trust, communication and information sharing. In their absence, the potential benefits of outsourcing may not be fully realised. Accordingly, the study contributes to the debate in third-party logistics as being not just an operational, but a strategic choice that must be managed and coordinated.

5.3 Recommendation

5.3.1 Afro Freight Clearing and Forwarding Company Limited (Afro Freight) should build stronger relationships with third-party logistics providers.

By prioritising long-term partnerships, especially with transportation service providers who were identified as having the most significant impact on performance. This can be done by engaging in performance-based service provider selection, continuous monitoring of service providers, and ensuring sustained engagement to ensure service providers are reliable and efficient.

5.3.2 It should also establish a performance monitoring system with Service Level Agreements (SLAs).

Through regular monitoring of key performance indicators such as delivery time, order accuracy and customer complaints, and the clear definition of expectations, responsibilities and penalties in the SLAs, Afro Freight can ensure that outsourced services meet the required standards. This will improve accountability and ensure that the company's outsourced logistics operations are of the desired quality.

5.3.3 Lastly, Afro Freight should ensure better co-ordination and communication with logistics service providers.

Through introducing real-time communication technology and clearly defining responsibility for co-ordinating with service providers. The company should also regularly assess the cost-benefit of outsourcing logistics activities to ensure they are efficient, cost-effective and support strategic goals.

5.4 Further Research

This research offers significant insights, but also suggests future research opportunities:

Explore the effects of 3PL across different industries to understand industry-specific differences.

Investigate the impact of new technologies and automation in improving 3PL services.

Study the implications of long-term strategic partnerships between firms and 3PLs.

Compare the performance of outsourcing organisations with those that use in-house logistics to identify performance differences.

5.5 Contribution of the Study

The study contributes to both the theory and practice: Theoretical contribution, the study offers empirical support for the resource based view, that strategic outsourcing of logistics increases firm capabilities and performance. Practical Contribution, the study also provides practical insights for managers on how to prioritize 3PL functions, such as transportation and fulfillment, to improve efficiency, cost and customer satisfaction. The study also calls for organizations to create a framework for relation management with 3PL and measure the performance of 3PL, to develop good supply chain relation.

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APPENDICIES

QUESTIONNAIRE ON THE INFLUENCE OF THIRD-PARTY SERVICE PROVIDERS ON LOGISTICAL OPERATIONS EFFICIENCY

Dear Respondent,

I am Aboth Monica, a third year student pursuing a Bachelor's in Procurement and Logistics Management at Uganda Christian University. I am conducting a research study entitled "The influence of Third-Party Service Providers on Logistical Operational Efficiency". The study is conducted in partial fulfillment of the requirements for the award of a Bachelor's Degree in Procurement and Logistics Management.

The purpose of this questionnaire is to examine how third-party warehousing, transportation, and order fulfillment services influence logistical operations efficiency. All the information shared will remain confidential and will be utilized for educational purposes only. Participation is voluntary.

Thank you for your cooperation, please.

SECTION A: DEMOGRAPHIC INFORMATION

Please write in this section your demographic data, ticking the boxes. Your answers will be kept confidential and will only be used for research.

1. Gender: ☐ Male ☐ Female
2. Age group: ☐ 18–25 ☐ 26–35 ☐ 36–45 ☐ 46 and above
3. Highest level of education: ☐ Certificate ☐ Diploma ☐ Bachelor's Degree ☐ Postgraduate
4. Department: ☐ Procurement ☐ Logistics ☐ Warehouse ☐ Transport ☐ Administration
5. Years of work experience: ☐ Less than 1 year ☐ 1–3 years ☐ 4–6 years ☐ Above 6 years

SECTION B: THIRD-PARTY WAREHOUSING SERVICES

Please use the scale below to indicate how much you agree with the statement:

Scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

6. Third-party warehousing services improve inventory accuracy. ☐1 ☐2 ☐3 ☐4 ☐5

7. Outsourced warehousing reduces inventory holding costs. ☐1 ☐2 ☐3 ☐4 ☐5

8. Third-party warehouses reduce stock-outs and overstocking. ☐1 ☐2 ☐3 ☐4 ☐5

9. Warehouse operations are more efficient when outsourced. ☐1 ☐2 ☐3 ☐4 ☐5

10. Third-party warehousing improves order picking accuracy. ☐1 ☐2 ☐3 ☐4 ☐5

SECTION C: THIRD-PARTY TRANSPORTATION SERVICES

11. Third-party transportation services improve delivery reliability. ☐1 ☐2 ☐3 ☐4 ☐5

12. Outsourced transportation reduces delivery lead time. ☐1 ☐2 ☐3 ☐4 ☐5

13. Third-party transport providers optimize delivery routes effectively. ☐1 ☐2 ☐3 ☐4 ☐5

14. Use of third-party transport improves customer satisfaction. ☐1 ☐2 ☐3 ☐4 ☐5

15. Transportation outsourcing reduces operational costs. ☐1 ☐2 ☐3 ☐4 ☐5

SECTION D: THIRD-PARTY ORDER FULFILLMENT SERVICES

16. Third-party order fulfillment improves order processing speed. ☐1 ☐2 ☐3 ☐4 ☐5

17. Outsourced order fulfillment reduces delivery errors. ☐1 ☐2 ☐3 ☐4 ☐5

18. Third-party providers ensure timely order delivery. ☐1 ☐2 ☐3 ☐4 ☐5

19. Order fulfillment outsourcing improves service quality. ☐1 ☐2 ☐3 ☐4 ☐5

20. Order fulfillment services increase customer satisfaction. ☐1 ☐2 ☐3 ☐4 ☐5

SECTION E: LOGISTICAL OPERATIONS EFFICIENCY

21. Third-party services improve overall logistics efficiency. ☐1 ☐2 ☐3 ☐4 ☐5
22. Logistics costs have reduced due to third-party services. ☐1 ☐2 ☐3 ☐4 ☐5
23. Third-party services improve coordination of logistics activities. ☐1 ☐2 ☐3 ☐4 ☐5
24. Logistics operations are more reliable with third-party support. ☐1 ☐2 ☐3 ☐4 ☐5
25. Organizational performance has improved due to third-party logistics services. ☐1 ☐2 ☐3 ☐4 ☐5

Thank you for taking your time to complete these questionnaires. Your responses are greatly appreciated and will significantly contribute to this study.