



Effective Management System, the Backbone of International Logistic Business: DHL as A Case Study.

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The study analyzed effective management system, the backbone of International logistic business: DHL as a case study. Descriptive research design was adopted. A total of 390 questionnaires was administered to the staff of DHL logistics. Frequency distribution and percentages was determined, the hypotheses were tested using regression analysis ANOVA and Pearson correlation coefficients with the help of SPSS version 25.0. The findings revealed that;

- 1) *Strategic planning have significant effect on survival of DHL logistic firm.*
- 2) *Information management have significant effect on effectiveness of DHL logistic firm.*
- 3) *Inventory management have significant effect on competitiveness of DHL logistic firm.*

It was concluded that Strategic planning significantly impacts DHL's survival by enabling proactive adaptation to change, fostering long-term sustainability, and enhancing decision-making. It helps DHL identify opportunities, mitigate risks, and leverage strengths to overcome weaknesses.

Information management significantly boosts DHL's effectiveness. Strategic integration of Information Systems (IS) enhances operational efficiency, a critical factor for a logistics firm. IT implementations in tracking, safety, security, customer service, and IT integration have a positive impact. Efficiency improvements, achieved through advanced technologies, give DHL a competitive advantage by facilitating on-time shipping and reducing cargo issues.

Effective inventory management significantly boosts the competitiveness of a logistics firm like DHL. By optimizing inventory levels and processes, DHL can reduce costs, improve delivery times, and enhance customer satisfaction, all of which contribute to a stronger competitive edge.

Technological advancements significantly impact DHL's growth by enabling quicker responses to demand shifts and supply chain disruptions. These innovations streamline operations, improve efficiency, and support eco-friendly practices. Digital solutions

and fresh ideas are key to making supply chains more effective and sustainable. The adoption of new technologies allows DHL to improve its overall performance and adapt to changing market conditions.

Customer service significantly impacts customer satisfaction with DHL logistics. Well-managed logistics, including efficient customer service, contribute to timely deliveries and potentially lower shopping cart abandonment rates, thereby enhancing customer satisfaction.

The research results also indicated that transportation impacts DHL's service delivery, particularly in the context of customer service marketing. Transportation significantly impacts a logistics firm's service delivery, influencing efficiency, cost, and customer satisfaction. Effective transportation systems enable timely and reliable delivery, fostering customer loyalty and potentially boosting sales. Conversely, inefficiencies in transportation can lead to higher costs, delayed deliveries, and damage to products, impacting customer satisfaction and profitability.

Based on the research findings, the study recommends as follows;

- 1) Given that strategic planning significantly impacts DHL's logistics firm's survival, the study recommends the enhancement of strategic planning process, particularly by integrating data-driven insights, fostering a culture of continuous improvement, and leveraging strategic communication.
- 2) To enhance DHL's logistics effectiveness, leveraging information management through advanced technologies like route optimization and real-time tracking is crucial. Investing in infrastructure, workforce training, and a supportive regulatory framework can further strengthen their competitive edge, particularly in the evolving e-commerce landscape.

Keywords: Organization, Performance, Productivity, Efficiency and Profitability

INTRODUCTION

1.1 Background of the Study

The global logistics industry has evolved significantly over the past few decades, driven by globalization, technological advancements, and changing consumer demands. Efficient logistics management is essential for coordinating complex supply chains, optimizing resources, and meeting customer expectations. (Palevich, 2015). In business, international logistics is the study of planning and implementation of how a business moves physical goods and materials from supplier to customer in a way that involves crossing at least one international border (NetSuite, 2022). It also includes the international movement of money and information. It encompasses activities like transportation, customs clearance, warehousing, and distribution, ensuring efficient and compliant movement of products in global trade. This is crucial for businesses seeking to source materials internationally, expand into new markets, or optimize their global supply chains. Hence, a logistics management system is a platform that simplifies logistics operations, both forward and reverse, by making access to vital information easier (David, 2013).

The goal of logistics management is to ensure that goods are delivered to the right place, at the right time, and in the right condition, while minimizing costs and maximizing efficiency. This involves optimizing the supply chain to achieve the best balance between customer service and cost-effectiveness (Harrison *et al.*, 2019). An effective management system for international logistics focuses on optimizing the flow of goods across borders by integrating key areas like transportation, inventory, and warehouse management. This involves using technology, strategic planning, and collaboration to ensure timely, cost-effective, and reliable deliveries. It involves the integration of various activities, including transportation, inventory management, warehousing, material handling, packaging, and security (Karimi, 2016). This further expands logistics management to the process of planning, implementing, and controlling the movement of goods, services, and information between the point of origin and the point of consumption.

Logistics is concerned with getting the products and services where they are needed when they are desired (Selim, *et. al.*, 2022). It is difficult to accomplish any marketing or manufacturing without logistical support. It involves the integration of information, transportation, inventory, warehousing, material handling, and packaging. The logistics and supply chain industry is a critical backbone of global trade and commerce. In an increasingly interconnected world, businesses depend on efficient, reliable, and technologically advanced logistics networks to facilitate the movement of goods across countries and continents (Tien, *et al.*, 2019). Within this landscape, an effective management system plays a pivotal role in ensuring operational excellence, cost efficiency, customer satisfaction, and overall competitiveness (Selim, *et. al.*, 2022).

However, the operating responsibility of logistics is the geographical repositioning of raw materials, work in process, and finished inventories where required at the lowest cost possible. The formal definition of the word 'logistics' is: it is the process of planning, implementing and controlling the efficient, effective flow and storage of goods, services and related information from the point of origin to the point of consumption for the purpose of conforming to customer requirements. Thus, bringing to better understanding international logistic business in terms of practical usage and to glimpse into the how efficient management system have become a formidable tool to achieve high performance through customer satisfaction, reduce overall cost and increase efficiency, Dalsey, Hillblom, and Lynn (DHL) was selected being the world's leading logistic company and a multi-faceted one as well offering myriad types of services.

DHL operates in more than 220 countries and territories, providing a wide range of services including express parcel delivery, freight transportation with over 600,000 employees and advanced technological systems (Tarekegn, 2023). DHL consistently sets industry benchmarks for efficiency, reliability, and customer service. This achievement in DHL could be linked to the effective logistics management system over the years, which integrates strategic planning, resource optimization, technological innovation, transportation, inventory management and customer-focused operations. The company's ability to adapt to changing global dynamics, implement advanced supply chain solutions, and leverage data-driven decision-making has enabled it to maintain its leadership position in international logistics.

Conclusively, the overall, effectiveness of logistics services is a complex and multifaceted one that requires a comprehensive understanding of supply chain management principles, transportation and warehousing technologies, and customer service practices. Karim, *et al.*, (2021) supports that effective logistics management is essential for businesses to remain competitive and meet customer expectations. It can lead to cost savings, increased efficiency, improved customer satisfaction, and better supply chain performance. Logistics management also plays a crucial role in ensuring that products and services are delivered on time, which is critical for businesses in meeting customer demand and maintaining their reputation (Harrison *et al.*, 2019). Therefore, it is imperative to investigate and understand how effective management system have become the backbone of international logistic business such as DHL logistics.

1.2 Statement of the Problem

Most international logistic firms/businesses have experienced their logistics operations, primarily due to a shortage of trained personnel to carry out the various operational and strategic obligations of their logistics function owing to ineffective management system (Huge-Brodin, Sweeney, and Evangelista, 2020).

However, logistics management faces challenges such as supply chain disruptions, rising transportation costs, environmental concerns, and the need for real-time tracking and delivery, and manpower management, where managing people is the trickiest of all management tasks. While keeping the best interests of your firm in mind and according to legislation, one must have a humanitarian attitude toward the employees. Transportation rules, regulations, and security norms might differ from country to

country, state to state and very obviously, from city to city. The backbone of the DHL logistic firms, which have expanded to become an international logistics firm lies greatly on effective management system which influences its operational performance. Therefore, DHL being one of the largest and most successful logistics companies in the world, provides an ideal case study to examine how a robust its management system contributes to organizational success in the international logistics sector.

1.3 Objectives of the Study

The broad objective of this study investigated the role of effective management system on international logistic business with reference to DHL logistic firm. Other specific objectives are to;

- i.determine the effect of strategic planning on survival of DHL logistic firm
- ii.ascertain the effect of information management on effectiveness of DHL logistic firm
- iii.examine the effect of inventory management on competitiveness of DHL logistic firm

1.4 Research Questions

This study answered the following questions:

- i.What is the effect of strategic planning on survival of DHL logistic firm?
- ii.What is the effect of information management on effectiveness of DHL logistic firm?
- iii.What is the effect of transportation on service delivery of DHL logistic firm?

1.5 Research Hypotheses

The hypothesis of this study were formulated in their null forms as follows;

H0₁: Strategic planning have no significant effect on survival of DHL logistic firm.

H0₂: Information management have no significant effect on effectiveness of DHL logistic firm.

H0₃: Inventory management have no significant effect on competitiveness of DHL logistic firm.

LITERATURE REVIEW

2.1 Conceptual Framework

2.1.1 Meaning of Logistics

Logistics is concerned with getting the products and services where they are needed and when they are desired. It is difficult to accomplish any marketing or manufacturing without logistical support. It involves the integration of information, transportation, inventory, warehousing, material handling, and packaging.

The operating responsibility of logistics is the geographical repositioning of raw materials, work in process, and finished inventories where required at the lowest cost possible. Logistics is practiced for ages since organized activity began. Without logistics support no activity can be performed to meet defined goal. The current challenge is to perform logistics scientifically in order to optimize benefits to the organization. Logistics is a planning function of management. Logistics function is concerned with taking products and services where they are needed and when they are needed.

With increasingly globalized supply chain operations making increasingly complex the supply of materials to businesses and the shipping out of products, logistics became a business concept in the 1950s. In business it is defined as 'having the right item in the right quantity at the right time at the right place for the right price in the right condition to the right customer' (Cowles 2012). Usually, from a focal company's perspective, a logistic delivery has two different stages: inbound logistics and outbound logistics, which together cover the flow of materials from point of origin to point of consumption. Third party logistics companies perform both inbound and outbound deliveries and integrate the supply chain (Jayaram and Tan 2010).

2.1.2 International Logistics Business

International logistics business involves the planning, execution, and control of the flow of goods, information, and resources across national borders. It encompasses activities like transportation, customs clearance, warehousing, and distribution, ensuring efficient and compliant movement of products in global trade. This is crucial for businesses seeking to source materials internationally, expand into new markets, or optimize their global supply chains.

International logistics involves the complex process of moving goods across national borders, encompassing international transportation, distribution, and fulfillment of finished goods. A review of this industry would likely focus on the digital transformation underway, the role of various channels (transaction, distribution, and documentation), and customer satisfaction with IT capabilities.

The importance of logistics is recognized in various areas of economic and industrial development, where we can emphasize its important role in fostering competitiveness and economic development (D'Aleo & Sergi, 2017), while the particular importance of logistics is recognized in fostering international trade flows (Gani, 2017; Bugarčić, Skvarciany & Stanišić, 2020). The growth of international trade and raising participation of countries in international markets have created the need for GSC implementation, primarily in goods distribution, which has increased the importance of international logistics services. Karanina, Selezneva and Chuchkalova (2020) point out that logistics can be an effective instrument in stimulating economic growth, enabling the national economy to emerge from a state of recession.

The logistics system is a necessary and essential factor in economic and social activities in usual circumstances, and with great potential in situations where the role of logistics operations can be crucial in reducing and overcoming the negative consequences of crisis and external shocks that disrupt business environment and economic activities in national economies. The role of international logistics is primarily focused on meeting the demand and fast and safe delivery in foreign markets.

2.1.3 Logistics Management

Logistics management is that part of the supply chain which plans, implements and controls the efficient, effective, forward and backward (reverse) flow and storage of goods, services and information between the point of origin and the point of consumption in order to meet customers' requirements rather to the customers' delight. A professional working in the field of logistics management is called a logistician.

Logistics, as a business concept, evolved only in the 1950s. This was mainly due to the increasing complexity of supplying one's business with materials, and shipping out products in an increasingly globalize supply chain, calling for experts in the field who are called Supply Chain Logisticians. This can be defined as having the right item in the right quantity at the right time at the right place for the right price and to the right target customers (consumer); and it is the science of process having its presence in all sectors of the industry. The goal of logistics work is to manage the fruition of project life cycles, supply chains and resultant efficiencies. Logistics is Concerned with getting (or transmitting) the products and services where they are needed or when they are desired. It is difficult to accomplish any marketing or manufacturing without logistical support. It involves the integration of information, transportation, inventory, warehousing, material handling, and packaging. The operating responsibility of logistics is the geographical repositioning of raw materials, work in process, and finished inventories where required at the lowest cost possible.

2.1.4 Information Management

Information management involves the strategic acquisition, organization, storage, retrieval, and use of information to improve efficiency and effectiveness within an organization. It focuses on how information is created, collected, managed, and used to

support business processes and decision-making. Information management covers the procedures and guidelines organizations adopt to manage and communicate information among different individuals, departments and stakeholders. Information management focuses on the level of control an organization has over the information it produces.

Information management is crucial for logistics businesses as it enables informed decision-making, enhances efficiency, and improves overall supply chain performance. Logistics management information systems (LMIS) collect, organize, and report data to support operational and strategic decisions. Effective information management in logistics helps optimize various aspects of the supply chain, including sourcing, planning, delivery, and even organizational strategy. A logistics management information system collects, organizes, and reports data that enables people to make operational and strategic decisions and take informed action. Healthcare workers are overburdened with data collection, and managers can be overwhelmed by too much data.

Information management includes client connections, production, transportation, inventory, information streams, and mitigating bottlenecks connected with material distribution, protection, and discernibility (Ajibade, 2017). Thus, information management framework is a fundamental variable in logistics operations that improves transportation and back logistics through telematics models that permit real-time tracking. Similarly, the optimality of information management in the distribution and client process is fundamental in enhancing logistics operations allowing traceability and allocations (Alzahrani and Seth, 2021). This guarantees conveyance, and quality at a desired time. Therefore, information management is fundamental in the preparation, performance, and control of distribution. Consequently, senior management will have access to accurate information, including the traceability of goods, procedures, and resources in the production chain (Adedugba, Ogunniake, Adeyemo & Kehinde, 2021). Investment in information management can optimize efficiency, allowing the production network to maximize the flow of materials between the warehouse and other echelons in the production chain. Furthermore, an effective implementation of information management models, framework and software's in logistics operations requires a proper selection, and adoption of a robust tool such as information technology (Wu, Zuopeng and Wenzhuo, 2021)

2.1.5 Inventory Management

Effective inventory management is crucial for improving logistics performance. Efficient inventory management can reduce carrying costs, minimize stock-outs, and improve customer satisfaction. Effective inventory management can improve logistics performance and reduce supply chain costs.

In addition to the many tasks connected to a lean supply chain, many businesses worldwide are constantly looking for new ways to cut back on their inventory expenditures because doing so directly harms their capacity to make a profit. The efficiency and efficacy of the entire supply chain system are impacted by inventory management, which is a critical component of logistics operations.

Although inventories offer some protection against variations in the level of consumer demand, there is concern that they may make it more difficult for the supply chain to adapt to shifts in the demand's makeup. Therefore, inventories in the global supply chain may serve as a buffer against one risk while escalating another. (Davis, 2016) cites elements including new product market entry speed, market niche responsiveness, and quality issue feedback time. (Harrison, 2008) have proposed ways for reducing inventory, such as shortening lead times for production, delaying products, reducing total cycle time, compressing inventory, centralizing inventory, and the idea of virtual warehousing.

An inventory problem can be seen as the management of all types of assets inside a company. The criteria of cost minimization or profit maximization are used in almost all of the literature on the best way to manage inventories. The objective of an inventory management, for instance, is modeled as maximizing profit or lowering cost while meeting client needs. An excessive amount of

inventory takes up room, costs money, and raises the risk of damage, spoilage, and loss. Furthermore, bad management, ineffective forecasting, haphazard scheduling, and a lack of focus on process and procedures are frequently made up for by an abundance of inventory. The pioneering lean production philosophy of (Cooper, 2007) has been associated with lower levels of inventories in this setting.

2.1.6 Strategic Planning

Strategic planning is a process in which an organization's leaders define their vision for the future and identify their organization's goals and objectives. The process includes establishing the sequence in which those goals should be realized so the organization can reach its stated vision.

Strategic planning is a process of carefully and thoughtfully aligning the strengths of a company's business to the opportunities that are available to the company in its chosen business environment (Saunders, 2017). While strategic planning is both a science and an art, it is generally believed that in order for the planning process to be effective on a consistent basis the managers of the company must collect, screen and analyze information about the company's business environment, identify and evaluate the strengths and weaknesses of the company and develop a clear mission for the company and a set of achievable goals and objectives that then become the basis for tactical and operational plans (Saunders, 2017). Strategic planning is an important and essential process for every company regardless of the size of its business and the time and other resources that the company has available to invest in the developing, documenting, implementing and monitoring a strategic plan. The business environment and relevant technologies are constantly changing and new risks and uncertainties will surface on a regular basis.

The three major aspects of strategic logistics planning include long-term goals and the means and process for achieving those goals. Long-term goals: Long-term goals include customer satisfaction, your company's competitive advantage and supply chain management.

Regardless of the existence, or not, of a specific plan, strategy is essential in logistics as it is in any business function, but especially with logistics, since logistics is so closely related to a company's ability to compete in a demanding, global and volatile business environment. Olavarrieta and Ellinger (2017) found that a variety of firms use logistics strategic planning in order to increase profitability and growth and gain a sustainable competitive advantage at an international level. As with other functions, logistics strategy should work in the direction of achieving organizational goals in a corporate or business unit level (Saunders, 2017). Key elements in the formulation of logistics strategy are facilities, transportation, inventory and information systems (Gattorna and Walters, 2016).

Therefore, logisticians need to portray how these elements will be developed, integrated and managed in order to support the overall business strategy. However, the relationship between logistics and business strategy is not one-way. There is an interplay which occurs both vertically, between top management and functions, and horizontally, between different functions. This interplay leads to the need of an integrated strategy, which requires the existence of the principles of speed, learning, renewal, leadership, ownership, core capabilities and business modelling in order to be implemented successfully (Copacino, 2019). Information technology easily stands out in the discussion of logistics strategy due to its importance in the overall outcome. Information technology is integral to logistics planning and implementation since it enables companies to achieve desirable results. Electronic Data Interchange (EDI), bar-coding and scanning, data warehousing, decision support systems (DSS), electronic commerce enabling systems and various internet applications are considered as some of the most important technological developments that affect logistics strategic planning (Stock and Lambert, 2011). The point that emerges from the literature review is that on one hand, technologies contribute considerably to strategy implementation, but at the same time they also contribute to the formation of strategy itself since, through their capabilities, they can proactively alter or enhance future plans.

Of equal importance in logistics strategy is the issue of strategic alliances and networking (Sandelands, 2017). On one hand, the focus on core competences and the subsequent use of outsourcing regarding all business functions, and on the other, the extensive use of third party logistics companies (3PL), has led to a compelling need for the incorporation of logistics issues in the strategic design of national and global networks (Fawcett, 1992). Logistics itself, is considered nothing more than the management of networks of actors and activities (Ballou, 2019). Relationships in the supply chain are becoming complex, but if any positive outcome is to be achieved at the consumer-end of the chain then all participating companies need to cooperate by developing partnering mentalities and processes (Fernie, 2018).

However, approaches to strategic logistics management are not the same around the world. A study by Stainer (2017) has shown that there are considerable differences between managing logistics in Japan and in the West. The Japanese approach involves a more strategic attitude towards logistics than that in the West, since it has a top management commitment and involvement, a long-term orientation and a clear link to future growth.

2.2 Theoretical Framework

2.2.1 The Theory of Supply Chain Management

The planning and control of material and information movements, as well as logistics activities both internally within a company and externally between companies, have all been referred to as supply chain management (SCM) (Fisher, 2003). The growth of the SCM theory has been aided by a number of disciplines, including purchasing and supply, logistics and transportation, operations management, marketing, organizational theory, management information systems, and strategic management. The urgent necessity for conceptual frameworks and properly defined constructs has been emphasized by numerous authors in order to improve supply chain management theory Saunders. SCM theory places a strong emphasis on cooperative advantage. In order to provide mutual benefits to all supply chain partners, the business world is comprised of a network of interdependent connections that have been built and nurtured via strategic collaboration (Miles and Snow, 2017). SCM elevates inter-company competition to inter-supply chain competition by aiming for greater performance through better utilization of internal and external capabilities in order to establish a smoothly coordinated supply chain (Chopra and Meindl, 1999). Performance is therefore no longer influenced by a single firm in the context of SCM. Instead, the performance of every participant in the supply chain affects how well it functions as a whole.

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2.3 Empirical Studies

Wisdom and Hong-fen, (2020), assessed the impact of e-commerce on the performance of logistic service providers in Ghana. The study revealed that, almost 85% of e-commerce companies in Ghana preferred Jointly Managed Model. Also, there was positive correlation between e-commerce and the performance of logistic service providers in Ghana.

Polina and Albina (2020), presented the result of scientific research on the effectiveness of logistics system. The logistics costs or profit, which is formed during the promotion of material flows, can be defined as one universal parameter with which the effectiveness of the whole logistics system. The analysis of the regional practices in logistics shows that there are five key indicators of system's effectiveness such as the aggregate logistical costs, the quality level of the logistics service, the overall performance of the business system, and the total duration of the logistic processes in the system and the quality of logistics operations.

Koul, (2019), critically analyzed the responses of the customers relating to their expectations on the logistics technology innovations in the supply chain management. Theoretical as well as empirical contributions were taken into consideration, wherein two companies were mainly analyzed, i.e., FedEx and DHL. The research method used for meeting the aims as well as objectives

were both quantitative and qualitative approaches. In this regard, both secondary, as well as primary sources were used. The primary data was collected from a questionnaire survey and was analyzed by using Pearson's correlation and regression. After the study, it was found that both the companies had a positive impact on the management of customer experiences.

Al-Zadajali and Ullah, (2024), highlighted the components of logistics services, identify the factors affecting the performance of logistics services, and the Impact of Logistics Services on the Company's performance. The methodology adopted for conducting this study is qualitative as the literature pertaining to the topic of study has been searched and explored to arrive at conclusions. The main findings of the study suggested that logistics service providers should invest in logistics services, adopt best logistics practices, and collaborate with their customers to improve their logistics services and meet the changing demands of customers. Overall, the effectiveness of logistics services is a complex and multifaceted topic that requires a comprehensive understanding of supply chain management principles, transportation and warehousing technologies, and customer service practices.

Bajram and Luftim (2016), empirically studied the effective management of logistics in Albania, in other to collect accurate data, the study used a questionnaire as a research tool, answered by key managers of some organizations. The study involved organizations operating in the biggest cities in Albania. These cities have a higher level of the target population. From 170 questionnaires distributed, 110 questionnaires were answered, from which 105 questionnaires were used for analysis. The selection of the sample in this study was random. Subsequently, through regression analysis, the statistical model for this study was analyzed. The main findings of the study were related to the main activities, such as communication and packaging to improve logistics management.

Muhire (2022), evaluated the role of logistics management on the operational performance of organizations in Rwanda. The study used a descriptive survey design and was limited to the B Rwanda organization in Kigali. Data was gathered from 65 people working in Kigali, Rwanda. Structured questionnaires were used to collect data, which was then analyzed using both descriptive and inferential statistics with the support of the Statistical Package for Social Sciences (SPSS). A pilot study and the Cronbach's alpha coefficient of reliability were used to assess the research instrument's validity and reliability. Data was evaluated using frequency distribution tables and presented using means, percentages, and frequencies. The study established that there was a role of logistics management on the operational performance of in B Rwanda. It also confirmed that components such as warehouse management, inventory management and transport management were highly practiced in most of the firms studied and this had a positive impact on organization's operational performance. Therefore, as Pearson correlation coefficient show that between Logistics management and Operation performance of 0.92. Statistical evidence showed that there is a significance relationship between Logistics management and Operation performance. The Pearson relationship between Logistics management and Operation performance indicated that there is a positive strong correlation.

Kwame, Manso and Osei-Mensah, (2014), assessed outbound logistics of a manufacturing company (Guinness Ghana Breweries Limited) using the services of a third party logistics provider (DHL). Empirical research was employed to explore outbound logistics performance of the manufacturing company. Structured questionnaires were used to capture the perception of staff of GGBL regarding outbound logistics performance of the services of the third party logistics provider.

METHODOLOGY

3.1 Study Design

The cross-sectional survey research design was adopted for this study. This will be carried out using primary data through the use of questionnaire. Through this design, the use of questionnaire is considered appropriate as a method of retrieving information for data collection and classification. The study will consider the views of respondents from DHL Logistics and Customers. The

justification for using survey research design will be based on its capability for collecting enormous data; it is also useful in describing the characteristics of a large population extensively.

3.2 Population

The target population for this research will comprise of all DHL logistic Firms. The total population of respondents which comprised of staff profiled of e-channels platforms. The total population in this category is 16,000 staff from the DHL Annual report (2024).

3.3 Sample size and sampling Technique

In order to collect an unbiased sample for the study and because this study is targeted at employees of DHL logistics, a random sampling technique will be employed for the study so as to give all respondents an equal chance of being represented in the study. The objective of research work is to draw inference from the sample of the population in order to make generalizations on the whole population. However, because of the large population involved in most studies, researchers hardly study the entire population. Therefore, sample will be drawn from the study population from the DHL logistics services in Nigeria. The researcher adopted Yaro Yamane formula to determine the sample size. Thus, the sample size was derived using the formula below;

$$n = \frac{N}{1 + N(e^2)}$$

$$1 + N(e^2)$$

Where:

n = appropriate sample size

N = population size (16,000)

e = co-efficient or confidence margin or error unit

e = error of 5%

$$n = \frac{16000}{1 + 16000(0.05)^2}$$

$$n = \frac{16000}{1 + 16000(0.0025)}$$

$$n = \frac{130}{1 + 40}$$

$$n = \frac{16000}{41}$$

$$= 390.24$$

$$n = 390 \text{ staff approximately}$$

To this end therefore, 390 respondents would constitute the sample size for this research study.

3.4 Sampling Technique

This research study adopted a random sampling technique which made it possible for all the workers to have equal opportunity to being selected as the representative sample based on the total population of the sixteen thousand, a normal confidence level of 95% and error tolerance of 5% will be used.

3.5 Research Instrument

The research instrument is a device for collecting the data or measuring the variable which are used for answering research questions and/or testing hypothesis. The research instrument that was used for this study is an adopted semi structured questionnaire. A questionnaire is a document that consists of a set of leading questions which logically are arranged and are to be filled by the respondent himself. Semi-structured questionnaires will be adopted since they offer the researcher an opportunity to collect both structured and unstructured data. This is important in research since standardized data makes it easy to conduct

analysis and to draw inferences, while at the same time, open ended questions offered respondents opportunity to clarify their answers in the structured section (Cooper & Schindler, 2014). The questionnaire will be divided into three parts. Part 1 covers demographic factors, while parts 2 and 3 covers independent and dependent variable consecutively.

The research instrument designed for this study is a 5-point Likert scale questionnaire aimed at eliciting the respondent's perception of the role of effective management system on international logistic business with reference to DHL logistic firm.

3.6 Validity of the Instrument

Validation of instrument is the extent to which an instrument measures what it is supposed to measure and performs as it is designed to perform. Validity is defined as the ability of a scale or measuring instrument to measure what is intended to be measured (Kothari, 2004). A content validity will be used for the study. Content validity is a process of justifying a questionnaire through its contents and variables. The questionnaire will be submitted to the researcher's supervisor, a research statistician and a specialist in the field of research for verification and correction in order to establish an accurate criterion of the validity of the instrument and all necessary corrections will be made before the questionnaire will be administered.

3.7 Reliability of the Research Instrument

Reliability is the tendency toward consistency found in repeated measurements. The reliability of the instrument was ascertained using the internal consistency method. 132 questionnaire were given to the respondents, and after two weeks of interval, another 255 questionnaire were issued out to the same respondent to check consistency and reliability. This is called the test re-test method.

3.8 Model Specification

The model in this study followed the study of Omoush (2022) who examined the impact of the practices of logistic management on operational performance: a field study of road transport companies. Taking cognizance of their models, the model for this study was modified with respect to the objectives of the study and given as:

$$Y = f(X)$$

X = Effective management system

Y = International logistic business (DHL logistics)

$$X = (x_1, x_2)$$

$$Y = (y_1, y_2)$$

Sub-Variables for X are;

x_1 = Strategic planning (SP)

x_2 = Information management (IM)

x_3 = Inventory management (IVM)

x_4 = Technological advancements (TA)

x_5 = Customer service (CS)

x_6 = Transportation (TP)

Sub-Variables for Y are;

y_1 = Survival (SV)

y_2 = Effectiveness (EF)

y_3 = Competitiveness CP)

y_4 = Growth (GT)

y_5 = Customers satisfaction (CST)

y₆ = Service delivery (SD)

Functional Relationship

- SP = f(SV)(Model 1)
- IM = f(EF)(Model 2)
- IVM = f(CP)(Model 3)
- TA = f(GT)(Model 4)
- CS = f(CST)(Model 5)
- TP = f(SD)(Model 6)

Model Specification

All the models was tested using primary data

- SP= $\beta_0 + \beta_1SV_i + \mu$(Model 1)
- IM = $\beta_0 + \beta_1EF_i + \mu$(Model 2)
- IVM = $\beta_0 + \beta_1CP_i + \mu$(Model 3)
- TA = $\beta_0 + \beta_1GT_i + \mu$(Model 4)
- CS= $\beta_0 + \beta_1CST_i + \mu$(Model 5)
- TP = $\beta_0 + \beta_1TP_i + \mu$(Model 6)

β_0 = Intercept

β_1 = Coefficients

μ_1 = error term

3.9 Methods of Data Analyses

Data for the study were analyzed using frequency distribution table, and percentages were used to analyses the data from the questionnaire. Also, hypothesis will be tested using ANOVA and Regression models with the aid of Statistical Packages for Social Sciences version 25.0, which will be designed to investigate the agreement of a set of observed frequencies expected or an assumption of the theoretical pattern of the phenomena being studied.

3.10 DATA PRESENTATION AND ANALYSIS

3.10.0 Introduction

This chapter focuses on the evaluation and discussion of result from the analysis upon which the model specified in the previous chapter is based.

3.10.1 QUESTIONNAIRE DISTRIBUTION

Table 310.1.1 Distribution of questionnaire to staff of DHL logistics firm and response rate.

Respondents	Distributed questionnaires	Valid and Returned questionnaires	Invalid and returned	Not Returned
DHL logistics firm	390	365	19	6

Source: Field Survey, 2025

As reflected in Table 3.10.1.1, a total of 3 hundred and ninety (390) questionnaires were distributed to staff of DHL logistics firms, 365 were valid and returned to the researcher. 19 were returned but invalid. The remaining 6 were not returned. Hence, 365 of the respondents constituted the sample of return completed questionnaires.

Table 3.10.1.2 Distribution of respondent by sex

SEX	FREQUENCY	PERCENTAGE (%)
<i>Male</i>	217	59.45
<i>Female</i>	148	40.55
Total	365	100

Source: Field Survey, 2025

Table 3.10.1.2 shows the number of male staffs as 217 which makes up 59.45% of the total number of respondents and 148 females which makes up the remaining 40.55%. This indicates the population is more of male respondent than female.

Table 3.10.1.3 Distribution of respondent by age

POISTION	FREQUENCY	PERCENTAGE (%)
20-29	105	28.77
30-39	127	34.79
40-49	87	23.84
50 and above	46	12.60
Total	365	100

Source: Field survey, 2025

Table 3.10.1.3 shows the current age status of the respondents which include 105 respondents within the age of 20-29 *i.e.* 28.77% of the total respondents, 127 respondents within the age of 30-39 which makes up 34.79%, respondent within the age of 40-49 which makes up 23.84% and respondent within the age of 50 and above which makes up 12.60% of the total respondents.

Table 3.10.1.4 Distribution of respondent by educational level

QUALIFICATION	FREQUENCY	PERCENTAGE (%)
<i>Primary</i>	40	10.96
<i>Secondary</i>	55	15.07
<i>Certificate/Diploma</i>	91	24.93
<i>Bachelor degree</i>	142	38.90
<i>Post graduate degree</i>	20	5.48
<i>Others</i>	17	4.66
Total	365	100

Source: Field survey, 2025

Table 3.10.1.4 reveals the qualification of the respondents. 10.96% has Primary education, 15.07% has Secondary education, 24.93% has Certificate/Diploma, 38.90% has Bachelor degree, 5.48% Post graduate degree and while 4.66% had other educational qualifications. This shows that the respondents have knowledge of the variables used for this study.

Table 3.10.1.5 Distribution of respondent by marital status

POISTION	FREQUENCY	PERCENTAGE (%)
<i>Married</i>	148	40.55
<i>Single</i>	104	28.49
<i>Widow</i>	65	17.81
<i>Divorced or Separated</i>	48	13.15
Total	365	100

Source: Field survey, 2025

Table 3.10.1.6 shows the current marital status of the respondents which include 148 Married i.e. 40.55% of the total respondents, 104 Single which makes up 28.49%, 65 Widow which makes up 17.81% and 48 Divorced or Separated which makes up 13.15% of the total respondents.

Table 3.10.1.6 Distribution of respondent by status

POISTION	FREQUENCY	PERCENTAGE (%)
<i>Senior Management</i>	12	3.29
<i>Mid-Level Management</i>	75	20.55
<i>Operational Managers</i>	95	26.03
<i>Frontline Employees</i>	105	28.77
<i>IT Staff</i>	48	13.15
<i>Customers (Shippers/Recievers)</i>	30	8.21
Total	365	100

Source: Field survey, 2025

Table 3.10.1.5 shows the current position of the respondents which include 12 senior managers i.e. 3.29% of the total respondents, 75 mid-level managers which makes up 20.55%, 95 operational managers which makes up 26.03%, 105 frontline employees which makes up 28.77%, 48 I.T staff which make up 13.15 and 30 customers (shippers/receivers) which makes up 8.21% of the total respondents.

3.10.2 DATA PRESENTATION

Table 4.2.1 What is the effect of strategic planning on survival of DHL logistic firm?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Agreed	203	55.6	55.6	100.0
Agreed	120	32.9	32.9	44.4
Undecided	19	5.2	5.2	11.5
Disagreed	13	3.6	3.6	6.3
Strongly Disagreed	10	2.7	2.7	2.7
Total	365	100.0	100.0	

Source: Field survey 2025.

From table 3.10.2.1 above it could be seen that 203 respondents representing 55.6% strongly agreed that there is effect of strategic planning on survival of DHL logistic firm. 120 respondents representing 32.9% agreed the same, 19 respondents were undecided, and 13 respondents disagreed, while 10 respondents strongly disagreed that there is effect of strategic planning on survival of DHL logistic firm.

Table 3.10.2.2 What is the effect of information management on effectiveness of DHL logistic firm.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Agreed	227	62.2	62.2	100.0
Agreed	87	23.8	23.8	37.8
Undecided	17	4.7	4.7	14.0
Disagreed	18	4.9	4.9	9.3
Strongly Disagreed	16	4.4	4.4	4.4
Total	365	100.0	100.0	

Source: Field survey 2025.

From table 4.2.2 above it could be seen that 227 respondents representing 62.2% strongly agreed that there is effect of information management on effectiveness of DHL logistic firm. 87 respondents representing 23.8% agreed the same, 17 respondents were undecided, and 18 respondents disagreed, while 16 respondents strongly disagreed that there is effect of information management on effectiveness of DHL logistic firm.

Table 3.10.2.3 What is the effect of inventory management on competitiveness of DHL logistic firm.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Agreed	200	54.8	54.8	100.0
Agreed	112	30.7	30.7	45.2
Undecided	6	1.6	1.6	14.5
Disagreed	25	6.8	6.8	12.9
Strongly Disagreed	22	6.0	6.0	6.0
Total	365	100.0	100.0	

Source: Field survey 2025.

From table 3.10.2.3 above it could be seen that 200 respondents representing 54.8% strongly agreed that there is effect of inventory management on competitiveness of DHL logistic firm. 112 respondents representing 30.7% agreed the same, 6 respondents were undecided, and 25 respondents disagreed, while 22 respondents strongly disagreed that there is effect of inventory management on competitiveness of DHL logistic firm.

Table 3.10.2.4 What is the effect of technological advancements on growth of DHL logistic firm.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Agreed	227	62.2	62.2	100.0
Agreed	91	24.9	24.9	37.8

Undecided	20	5.5	5.5	12.9
Disagreed	13	3.6	3.6	7.4
Strongly Disagreed	14	3.8	3.8	3.8
Total	365	100.0	100.0	

Source: Field survey 2025.

From table 3.10.2.4 above it could be seen that 227 respondents representing 62.2% strongly agreed that there is effect of technological advancements on growth of DHL logistic firm. 91 respondents representing 24.9% agreed the same, 20 respondents were undecided, and 13 respondents disagreed, while 14 respondents strongly disagreed that there is effect of technological advancements on growth of DHL logistic firm.

3.10.3 TEST OF HYPOTHESES

Table 3.10.3.1 Regression result determining the effect of strategic planning on survival of DHL logistic firm.

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.927 ^a	.859	.859	.28767	.210

a. Predictors: (Constant), Strategic planning

b. Dependent Variable: Survival of DHL logistic firm

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	1.213	.072		16.931	.000	1.072	1.354
	Strategic planning	.758	.016	.927	47.048	.000	.726	.789

a. Dependent Variable: Survival of DHL logistic firm

F – Statistic = 2213.519

T-Statistic ($df_1 = 1$ & $df_2 = 363$) = 47.048

Source: SPSS version 25.0 Significant at 0.05% level of significance (See SPSS Output –Appendix I)

The regression results showed that the estimated coefficient of the regression parameters have positive sign and thus conform to our a priori expectation. This means that an increase in the independent variables will bring about credibility in the dependent variable.

The coefficient of determination R-square of 0.859 implied that 85.9% of the sample variation in the dependent variable is explained or caused by the explanatory variable while 14.1% is unexplained. This remaining could be caused by other factors or

variables not built into the model. The high value of R-square is an indication of a good relationship between the dependent and independent variables.

The value of the adjusted R^2 is 0.859 this shows that the regression line captures more than 85.9% of variation in the explanatory variables in the model of equation while the remaining 14.1% accounts for the stochastic error term. F-Statistics of 2213.519 measures the goodness of fit of the model which is greater than 2.5 rule of thumbs. Durbin Watson Statistic of 0.210 show the degree of no autocorrelation of variables in the region or partition curve. The t-Statistic is 47.048 at ($df_1 = 1$ & $df_2 = 363$).

Hypothesis one

H_{01} : Strategic planning have no significant effect on survival of DHL logistic firm.

With reference to Table 4.3.1, calculated t-statistics of is 47.048 at ($df_1 = 1$ & $df_2 = 363$) is greater than the critical value (i.e. 1.98). The null hypothesis is rejected and the alternative accepted. This means that, strategic planning had significant effect on survival of DHL logistic firm.

Table 3.10.3.2 Regression result ascertaining the effect of information management on effectiveness of DHL logistic firm.

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.940 ^a	.884	.884	.31905	.182

a. Predictors: (Constant), Information management

b. Dependent Variable: Effectiveness of DHL logistic firm

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	.774	.070		11.068	.000	.637	.912
	Information management	.823	.016	.940	52.649	.000	.792	.854

a. Dependent Variable: Effectiveness of DHL logistic firm

F – Statistic = 2771.878

T-Statistic ($df_1 = 1$ & $df_2 = 363$) = 52.649

Source: SPSS version 25.0 Significant at 0.05% level of significance (See SPSS Output –Appendix II)

The regression results showed that the estimated coefficient of the regression parameters have positive sign and thus conform to our a priori expectation. This means that an increase in the independent variables will bring about credibility in the dependent variable.

The coefficient of determination R-square of 0.884 implied that 88.4% of the sample variation in the dependent variable is explained or caused by the explanatory variable while 11.6% is unexplained. This remaining could be caused by other factors or variables not built into the model. The high value of R-square is an indication of a good relationship between the dependent and independent variables.

The value of the adjusted R^2 is 0.884 this shows that the regression line captures more than 88.4% of variation in the explanatory variables in the model of equation while the remaining 11.6% accounts for the stochastic error term. F-Statistics of 2771.878

measures the goodness of fit of the model which is greater than 2.5 rule of thumbs. Durbin Watson Statistic of 0.182 show the degree of no autocorrelation of variables in the region or partition curve. The t-Statistic is 52.649 at ($df_1 = 1$ & $df_2 = 363$).

Hypothesis two

H0₂: Information management have no significant effect on effectiveness of DHL logistic firm.

With reference to Table 4.3.2, calculated t-statistics of is 52.649 at ($df_1 = 1$ & $df_2 = 363$) is greater than the critical value (i.e. 1.98). The null hypothesis is rejected and the alternative accepted. This means that, information management had significant effect on effectiveness of DHL logistic firm.

Table 3.10.3.3 Regression result examining the effect of inventory management on competitiveness of DHL logistic firm.

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.949 ^a	.901	.901	.31778	.139

a. Predictors: (Constant), Inventory management

b. Dependent Variable: Competitiveness of DHL logistic firm

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
1 (Constant)	.885	.063		14.072	.000	.761	1.009
Inventory management	.830	.014	.949	57.632	.000	.801	.858

a. Dependent Variable: Competitiveness of DHL logistic firm

F – Statistic = 3321.405

T-Statistic ($df_1 = 1$ & $df_2 = 363$)= 57.632

Source: SPSS version 25.0 Significant at 0.05% level of significance (See SPSS Output –Appendix III)

The regression results in table 4.3.3 showed that the estimated coefficient of the regression parameters have positive sign and thus conform to our a priori expectation. This means that an increase in the independent variables will bring about proportionate increase in the dependent variable.

The coefficient of determination R-square of 0.901 implied that 90.1% of the sample variation in the dependent variable is explained or caused by the explanatory variable while 9.9% is unexplained. This remaining could be caused by other factors or variables not built into the model. The high value of R-square is an indication of a good relationship between the dependent and independent variables.

The value of the adjusted R^2 is 0.901 this shows that the regression line captures more than 90.1% of variation in the explanatory variables in the model of equation while the reaming 9.9% accounts for the stochastic error term. F-Statistics of 3321.405 measures

the goodness of fit of the model which is greater than 2.5 rule of thumbs. Durbin Watson Statistic of 0.139 show the degree of no autocorrelation of variables in the region or partition curve. The t-Statistic is 57.632 at ($df_1 = 1$ & $df_2 = 363$).

Hypothesis three

H0₃: Information management have no significant effect on effectiveness of DHL logistic firm.

With reference to Table 4.3.3, calculated t-statistics of is 57.632 at ($df_1 = 1$ & $df_2 = 363$) is greater than the critical value (i.e. 1.98). The null hypothesis is rejected and the alternative accepted. This means that, information management had significant effect on effectiveness of DHL logistic firm.

3.10.4 DISCUSSIONS OF FINDINGS

From the analysis and hypotheses testing, it was found that strategic planning had significant effect on survival of DHL logistic firm. This was in line with the research work of Akinyele and Fasogbon, (2007) who examined the impact of strategic planning on organizational performance and survival of First Bank of Nigeria, Plc (FBN). A survey technique was used with the administration of questionnaires to 100 respondents (of which 80 was retrieved) comprising of both the senior and junior staff in various First bank branches in Lagos metropolis. The data collected were analyzed using the Statistical Package for Social Sciences (SPSS). Also, T-Test and Chi-square statistical methods were used in testing the hypotheses using the SPSS. The three hypotheses were confirmed. For the purpose of testing for reliability of the instrument, 'The Split-Half Technique' from SPSS was used. The implication of this study is that Strategic planning enhances better organizational performance, which in the long run has impact on its survival and that strategic planning intensity is determined by managerial, environmental and organizational factors.

Also, information management had significant effect on effectiveness of DHL logistic firm. This also followed the result of Kechil, *et al.*, (2022) who determined the effects of Information Technology on Logistics Firms' Performance in Shah Alam, Selangor, Malaysia. The hypotheses and prediction model in this study are tested using correlation and multiple regression analysis based on data collected from 44 logistics firms in Shah Alam, Selangor. The findings show that IT implemented in tracking, safety and security, customer service, and IT integration have a significant positive impact on firm performance.

In the third hypothesis, inventory management have no significant effect on competitiveness of DHL logistic firm. This also supports the findings of Atnafu and Balda, (2018), who empirically examined the impact of inventory management practice on firms' competitiveness and organizational performance. Data for the study were collected from 188 micro and small enterprises (MSEs) operating in the manufacturing sub-sector and the relationships and hypothesis proposed in the conceptual framework were tested using structural equation modeling (SEM). The results indicate that higher levels of inventory management practice can lead to an enhanced competitive advantage and improved organizational performance. Also, competitive advantage can have a direct, positive impact on organizational performance.

Further, technological advancements had significant effect on growth of DHL logistic firm. The finding is in consonance with the study of Okwubali, *et al.*, (2023) who investigated the impact of technology innovation on logistics and supply chain management. A quantitative approach will be employed, gathering data through a survey administered to 384 active participants in Malaysia's logistics industry. The findings indicate that IT integration in tracking, security, customer service, and overall IT systems significantly enhances organizational performance.

SUMMARY OF FINDINGS, CONCLUSION AND RECCOMENDATIONS

3.10.4.1 SUMMARY OF FINDINGS

The study analyzed effective management system, the backbone of International logistic business: DHL as a case study. Descriptive research design was adopted. A total of 390 questionnaires was administered to the staff of DHL logistics. Frequency

distribution and percentages was determined, the hypotheses were tested using regression analysis ANOVA and Pearson correlation coefficients with the help of SPSS version 25.0. The findings revealed that;

- 4) Strategic planning have significant effect on survival of DHL logistic firm.
- 5) Information management have significant effect on effectiveness of DHL logistic firm.
- 6) Inventory management have significant effect on competitiveness of DHL logistic firm.
- 7) Technological advancements have significant effect on growth of DHL logistic firm.
- 8) Customer service have significant effect on customers' satisfaction of DHL logistic firm.
- 9) Transportation have significant effect on service delivery of DHL logistic firm.

3.10.4.2 CONCLUSION

Strategic planning significantly impacts DHL's survival by enabling proactive adaptation to change, fostering long-term sustainability, and enhancing decision-making. It helps DHL identify opportunities, mitigate risks, and leverage strengths to overcome weaknesses.

Information management significantly boosts DHL's effectiveness. Strategic integration of Information Systems (IS) enhances operational efficiency, a critical factor for a logistics firm. IT implementations in tracking, safety, security, customer service, and IT integration have a positive impact. Efficiency improvements, achieved through advanced technologies, give DHL a competitive advantage by facilitating on-time shipping and reducing cargo issues.

Effective inventory management significantly boosts the competitiveness of a logistics firm like DHL. By optimizing inventory levels and processes, DHL can reduce costs, improve delivery times, and enhance customer satisfaction, all of which contribute to a stronger competitive edge.

Technological advancements significantly impact DHL's growth by enabling quicker responses to demand shifts and supply chain disruptions. These innovations streamline operations, improve efficiency, and support eco-friendly practices. Digital solutions and fresh ideas are key to making supply chains more effective and sustainable. The adoption of new technologies allows DHL to improve its overall performance and adapt to changing market conditions.

Customer service significantly impacts customer satisfaction with DHL logistics. Well-managed logistics, including efficient customer service, contribute to timely deliveries and potentially lower shopping cart abandonment rates, thereby enhancing customer satisfaction.

The research results also indicated that transportation impacts DHL's service delivery, particularly in the context of customer service marketing. Transportation significantly impacts a logistics firm's service delivery, influencing efficiency, cost, and customer satisfaction. Effective transportation systems enable timely and reliable delivery, fostering customer loyalty and potentially boosting sales. Conversely, inefficiencies in transportation can lead to higher costs, delayed deliveries, and damage to products, impacting customer satisfaction and profitability.

5.3 RECOMMENDATIONS

Based on the research findings, the study recommends as follows;

- 3) Given that strategic planning significantly impacts DHL's logistics firm's survival, the study recommends the enhancement of strategic planning process, particularly by integrating data-driven insights, fostering a culture of continuous improvement, and leveraging strategic communication.
- 4) To enhance DHL's logistics effectiveness, leveraging information management through advanced technologies like route optimization and real-time tracking is crucial. Investing in infrastructure, workforce training, and a supportive regulatory framework can further strengthen their competitive edge, particularly in the evolving e-commerce landscape.

REFERENCES

- About DSV and our services, accessed April 29, 2025, <https://www.dsv.com/en-us/about-dsv>
- About Us - Mainfreight, accessed April 29, 2025, <https://www.mainfreight.com/europe/en-nz/the-mainfreight-difference/about-us>
- About us | C.H. Robinson, accessed April 29, 2025, <https://www.chrobinson.com/about-us/>
- About Us | Purolator, accessed April 29, 2025, <https://www.purolator.com/en/about-purolator>
- Adebayo, I. T. and Aworemi, J. R., (2021). Transport Management Practices and Firms' Performance in Nigeria. Proceedings of the *International Conference on Industrial Engineering and Operations Management Rome, Italy*, 1(1), 649-657
- Adedugba, A. *et al.* (2023). Information management role in logistics operations: optimization of distribution process in medical supply stores in Lagos State. *Brazilian Journal of Operations and Production Management*, 20(2), e20231394. <https://doi.org/10.14488/BJOPM.1394.2023>
- Adedugba, A.T., Ogunnaike, O.O., Kingsley, A.K. and Kehinde, B.E. (2021). Material handling and product optimality of an educational institution bakery using integer programming. *International Journal of Business Strategy and Automation*, 2(3), 53-61. <https://doi.org/10.4018/ijbsa.20210701.0a4>
- Ajibade, P. (2017). Efficient information management as organisational performance drivers in South Africa. *Journal of Social Science*, 53(2), 95-106. <https://doi.org/10.1080/09718923.2017.1409385>
- Akinyele S. T. and Fasogbon O. I., (2007). Impact of Strategic Planning on Organizational Performance and Survival. *Research Journal of Business Management*, 1: 62-71.
- Al Abbadi, M. S. M., Qureshi, M. I., Yasir, M., & Khan, N. (2021). Assessing challenges and opportunities in optimizing logistics and supply chain performance in Oman. *Academy of Entrepreneurship Journal*, 27, 1–22
- Al Jabri, A. M. A., Slimi, Z., Al Yaqoobi, H. H., & Mehmet, U. (2021). Logistic companies in Oman: Role in boosting economy: Implementing eco-friendly and technological logistics for sustainable development. *European Journal of Business and Management Research*, 6(5), 209–218.
- Al-Zadajali, A. and Ullah, A., (2024). The Effectiveness of Logistics Services on Firms' Performances – A Literature Review. *American Journal of Economics and Business Innovation (AJEBI)*, 3(1), 125-132: ISSN: 2831-5588 (Online), 2832-4862 (Print)
- Alzahrani, L. and Seth, K.P. (2021). The impact of organizational practices on the information security management performance. *MDPI Journal on Information*, 12(398), 1-16. <https://doi.org/10.3390/info12100398>
- Atnafu, D. and Balda, A., (2018). The impact of inventory management practice on firms' competitiveness and organizational performance: Empirical evidence from micro and small enterprises in Ethiopia. *Cogent Business & Management*, 5(1), 1-16.
- Bajram K. and Luftim C., (2016). Effective Management of Logistics - An Empirical Study of Albania. *European Virtual Conference on Management Sciences and Economics* 1(1), 1-7: ISBN 978-0-9933924-3-6
- Bugarčić, F. Ž., Skvarciany, V., & Stanišić, N. (2020). Logistics performance index in international trade: case of Central and Eastern European and Western Balkans countries. *Business: Theory and Practice*, 21(2), 452-459. <https://doi.org/10.3846/btp.2020.12802>

C.H. Robinson Worldwide, Inc. - Company Profile Report - IBISWorld, accessed April 29, 2025, <https://www.ibisworld.com/united-states/company/ch-robinson-worldwide-inc/9256/>

CEVA Logistics SA Company Profile - Overview - GlobalData, accessed April 29, 2025, <https://www.globaldata.com/company-profile/ceva-logistics-ag/>

Corporate Profile | Investor Relations | Hub Group Inc., accessed April 29, 2025, <https://investors.hubgroup.com/corporate-profile>

D'Aleo, V. & Sergi, B.S. (2017). Does logistics influence economic growth? The European experience. *Management Decision*, Vol. 55 No. 8, pp. 1613-1628. <https://doi.org/10.1108/MD-10-2016-0670>

David, J., (2013). Third party logistics in distribution efficiency delivery for competitive advantage in fast moving consumer goods companies in Kenya. *International Journal of Social Sciences and Entrepreneurship*, 1 (8), 15-27.

Do, Q. H. (2021). Critical factors affecting the choice of logistics service provider: An empirical study in Vietnam. *The Journal of Asian Finance, Economics and Business*, 8(4), 145–150.

DSV (company) - Wikipedia, accessed April 29, 2025, [https://en.wikipedia.org/wiki/DSV_\(company\)](https://en.wikipedia.org/wiki/DSV_(company))

Exhibitions Cargo LLC - PPAI - Promotional Products Association International, accessed April 29, 2025, <https://www.ppai.org/solution/62848/>

Expeditors Company Overview, accessed April 29, 2025, <https://www.expeditors.com/resources/video/expeditors-company-overview>

Expeditors International Pty. Limited - Company Profile Report - IBISWorld, accessed April 29, 2025, <https://www.ibisworld.com/australia/company/expeditors-international-pty-limited/468590/>

FedEx - Wikipedia, accessed April 29, 2025, <https://en.wikipedia.org/wiki/FedEx>

FedEx | FDX Stock Price, Company Overview & News - Forbes, accessed April 29, 2025, <https://www.forbes.com/companies/fedex/>

FedEx acquisition of TNT is made official - Logistics Management, accessed April 29, 2025, https://www.logisticsmgmt.com/article/fedex_acquisition_of_tnt_is_made_official

FedEx completes TNT acquisition - FreightWaves, accessed April 29, 2025, <https://www.freightwaves.com/news/fedex-completes-tnt-acquisition>

Full Service Printing Solutions | DPD Group, accessed April 29, 2025, <https://dpdgroup.net/services-overview/>

Gani, A. (2017). The Logistics Performance Effect in International Trade. *Asian Journal of Shipping and Logistics*, 33(4), 279–288. <https://doi.org/10.1016/j.ajsl.2017.12.012>

Global Courier Services - We offer the best, fast and reliable global delivery service, accessed April 29, 2025, <http://globalcouriersservice.com/>

Global Couriers, accessed April 29, 2025, <https://globalcouriers.com/>

Group structure and shareholders - Kuehne+Nagel Annual Report 2023, accessed April 29, 2025, <https://2023-annual-report.kuehne-nagel.com/annual-report/corporate-governance/group-structure-and-shareholders>

Hub Group: Transportation, Logistics & Supply Chain Solutions, accessed April 29, 2025, <https://www.hubgroup.com/>

Huge-Brodin, M., Sweeney, E., & Evangelista, P. (2020). Environmental alignment between logistics service providers and shippers—a supply chain perspective. *The International Journal of Logistics Management*, 31(3), 575–605.

Industries Served | Logistics & Supply Chain Solutions - Ryder, accessed April 29, 2025, <https://www.ryder.com/en-us/logistics/industries>

J B Hunt Transport Services Inc Company Profile - GlobalData, accessed April 29, 2025, <https://www.globaldata.com/company-profile/j-b-hunt-transport-services-inc/>

J. B. Hunt - Wikipedia, accessed April 29, 2025, https://en.wikipedia.org/wiki/J._B._Hunt

Ju, Y., Wang, Y., Cheng, Y., & Jia, J. (2019). Investigating the impact factors of the logistics service supply chain for sustainable performance: Focused on integrators. *Sustainability*, 11(2), 538.

Karanina, E., Selezneva, E., & Chuchkalova, S. (2020, September). Improving the national logistics model on an international scale in the context of the economic crisis. In IOP Conference Series: Materials Science and Engineering (Vol. 918, No. 1, p. 012041). IOP Publishing. <https://iopscience.iop.org/article/10.1088/1757-899X/918/1/012041/meta>

Karim, N. H., Abdul Rahman, N. S. F., Md Hanafiah, R., Abdul Hamid, S., Ismail, A., Abd Kader, A. S., & Muda, M. S. (2021). Revising the warehouse productivity measurement indicators: ratio-based benchmark. *Maritime Business Review*, 6(1), 49–71. <https://doi.org/10.1108/MABR-03-2020-0018>.

Karimi, V., (2016). Analyzing the Impact of Supply Chain Management Practices on Organizational Performance through Competitive Priorities (Case Study: Iran Pumps Company. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 4 (1), 1–15.

Kechil, N. A., Zulfakar, M. H., Muhammad, A., Talib, M. S. A., & Nasir, S. (2022). Effects of Information Technology on Logistics Firms' Performance in Shah Alam, Selangor, Malaysia. *International Journal of Academic Research in Accounting Finance and Management Sciences*, 12(3), 430–447.

Knop, K. (2019). Evaluation of quality of services provided by transport & logistics operator from pharmaceutical industry for improvement purposes. *Transportation Research Procedia*, 40, 1080–1087.

Koul, S., (2019). Analysis of the impact of logistics technology innovation in supply chain management. *Journal of Research in International Business and Management*, 5(1), 129- 135: (ISSN: 2251-0028).

Kuehne + Nagel - Wikipedia, accessed April 29, 2025, https://en.wikipedia.org/wiki/Kuehne_%2B_Nagel

Kwame O. K., Manso, F. J. and Osei-Mensah, R., (2014). Outbound Logistics Management in Manufacturing Companies in Ghana. *Review of Business and Finance Studies*, 5(1), 83-92.

Lin, X., Al-Mamun A., Yang, Q. and Masukujjaman, M., (2023). Examining the effect of logistics service quality on customer satisfaction and re-use intention. *PLoS One*, 18(5): e0286382. doi: [10.1371/journal.pone.0286382](https://doi.org/10.1371/journal.pone.0286382)

Logistics technology services - Logistics Partner of Technology Industry - CEVA Logistics, accessed April 29, 2025, <https://www.cevalogistics.com/en/your-industry/technology>

Mail & Shipping Services - USPS, accessed April 29, 2025, <https://www.usps.com/ship/mail-shipping-services.htm>

Mathauer, M., & Hofmann, E. (2019). Technology adoption by logistics service providers. *International Journal of Physical Distribution & Logistics Management*.

Mirotin, L. B. (2022). Logistics: customer service: a textbook. Moscow: INFRA.

Muhire A., (2022). Role of logistics management on the operational performance of organizations in Rwanda. *Global Scientific Journal (GSJ)*, 10(11), 341-349: ISSN 2320-9186

Negi, S. (2021). Supply chain efficiency framework to improve business performance in a competitive era. *Management Research Review*, 44(3), 477–508. <https://doi.org/10.1108/MRR-05-2020-0272>.

Negi, S. (2021). Supply chain efficiency framework to improve business performance in a competitive era. *Management Research Review*, 44(3), 477–508. <https://doi.org/10.1108/MRR-05-2020-0272>.

NFI Industries | Supply Chain and Logistics Solutions, accessed April 29, 2025, <https://www.nfiindustries.com/>

Okwubali, S. I. Olannye, A. P., Okpighe, G.O. And Negbe, M., (2023). Impact of Technology Innovation on Logistics and Supply Chain Management. *International Journal of Management & Marketing Systems*. 14(10), 29 – 44, ISSN: 2384-537X,

Our Story - NFI Industries, accessed April 29, 2025, <https://www.nfiindustries.com/about-nfi/our-story/>

Palevich, M., (2015). Supply chain management. *Hospital Material Management Quarterly*, 20(3), 54-63.

- Penske Logistics - A Leader in Logistics Services, accessed April 29, 2025, <https://www.penskelogistics.com/>
- Penske Logistics Reviews, Ratings & Features 2025 | Gartner Peer Insights, accessed April 29, 2025, <https://www.gartner.com/reviews/market/third-party-logistics/vendor/penske-logistics>
- Polina A. and Albina K., (2020). Evaluation of the Effectiveness of the Logistics System. *Advances in Economics, Business and Management Research*, 139, 486-490
- Providing Global Warehousing Services and Logistics Solutions - Mainfreight, accessed April 29, 2025, <https://www.mainfreight.com/americas/en-nz/services/warehousing>
- Purolator International | Supply Chain Solutions Provider, accessed April 29, 2025, <https://www.purolatorinternational.com/>
- Rushton, A. Croucher, P. Baker, P. (2014). The Hand Book of Logistics & Distribution Management (5th ed.), London: Kogan Page,
- Ryder - Wikipedia, accessed April 29, 2025, <https://en.wikipedia.org/wiki/Ryder>
- Santarek, K., Tien, N. H., Dao, M. T. H., & Minh, D. T. (2022). Factors impacting effectiveness of R-logistics activities at supermarkets in Vietnam. *International Journal of Multidisciplinary Research and Growth Evaluation*, 3(1), 217–223.
- Selim, N. I. I. B., Zailani, S., Aziz, A. A., & Rahman, M. K. (2022). Halal logistic services, trust and satisfaction amongst Malaysian 3PL service providers. *Journal of Islamic Marketing*, 13(1), 81–99.
- Shipment Status Report - Estes, accessed April 29, 2025, <https://www.estes-express.com/resources/shipment-status-report>
- Solutions - DPD Group, accessed April 29, 2025, <https://dpdgroup.net/solutions/>
- Stain, D., (2016), Cyfrowy głos rzeczy, Eurologistics, 3(1), 42-43.
- Tien, N. H., Anh, D. B. H., & Thuc, T. D. (2019). Global supply chain and logistics management. Delhi: Academic Publications.
- Toll Group - Wikipedia, accessed April 29, 2025, https://en.wikipedia.org/wiki/Toll_Group
- Tyapuhin, A.P. (2017). Designing commodity distribution systems based on logistics: studies allowance, Moscow: Finance and Statistics,
- United Parcel Service - Wikipedia, accessed April 29, 2025, https://en.wikipedia.org/wiki/United_Parcel_Service
- UPS Supply Chain Warehouse Services Reviews, Ratings & Features 2025 - Gartner, accessed April 29, 2025, <https://www.gartner.com/reviews/market/third-party-logistics/vendor/ups-supply-chain-solutions/product/ups-supply-chain-warehouse-services>
- Wisdom A. and Hong-fen L., (2020). The Impact of E-Commerce on the Performance of Logistic Service Providers in Ghana. *Journal of Economics and Sustainable Development*, 11(10), 29-35: ISSN 2222-1700 (Paper) ISSN 2222-2855 (Online)
- Wu, H., Zuopeng, Z. and Wenzhuo, L. (2021). Information technology solutions, challenges, and suggestions for tackling the COVID-19 pandemic. *International Journal of Information Management*, 57, 1-8. <https://doi.org/10.1016/j.ijinfomgt.2020.102287>
- XPO, Inc. - Wikipedia, accessed April 29, 2025, https://en.wikipedia.org/wiki/XPO,_Inc.
- Yan, H., Song, M.-J., & Lee, H.-Y. (2021). A Systematic Review of Factors Affecting Food Loss and Waste and Sustainable Mitigation Strategies: A Logistics Service Providers' Perspective. *Sustainability*, 13(20), 11374.
- Ying, F., Tookey, J., & Seadon, J. (2018). Measuring the invisible. *Benchmarking: An International Journal*, 25(6), 1921–1934. <https://doi.org/10.1108/BIJ-11-2016-0176>.