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FOURTH-PARTY LOGISTICS AND PERFORMANCE OF OIL AND GAS MARKETING COMPANIES IN KENYA

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Abstract

The goal of the research was to establish the role of Fourth-Party Logistics on the performance of Oil and Gas Companies in Kenya. The study was stipulated and guided by the subsequent specific objectives: To establish how warehouse management affects the performance of Oil and Gas companies and to assess the role of transportation in the performance of Oil and Gas companies. The theories that reinforce this research include Resource Based Theory, Profit Maximization Theory, and Agency Theory. The research applied descriptive design for quantitative data. The data was collected through questionnaires. The descriptive expounds on the cause and the results between the Fourth-Party Logistics and performance. The target population in this study was 3,000 employees across all the Oil and Gas Companies the findings show that warehouse management was connected to and significantly correlated with performance (r = .785, p = .000). This implied that an improvement would lead to better performance in Fourth-Party logistics since warehouse management had a good and substantial influence. Transportation had a favorable relationship with performance at Fourth-Party Logistics substantially, as shown by (r = .622, P= .000). This also suggested that because transportation has a moderate impact, improving it will result in better performance in Fourth-Party logistics operations. The conclusion is that warehouse management and transportation significantly influence Oil and Gas businesses' performance. Since the study found a significant correlation between warehouse management, transportation and performance, it is reasonable to assume that if the management of a company adopts warehouse management, the performance of fourth-party logistics companies will also improve.

Keywords: Fourth Party Logistics, Logistics, Logistics Management, Firm Performance

Background of the Study

Logistics and SCM strategies are inevitable in turbulent markets. Companies employ these strategies to ensure the smooth flow of information, goods, and services. The strategies have been supported by innovations and creativity. The broadening areas of logistics have increased digitalization in the fast-paced globalization. Many scholars have put forward different insights on logistics and SCM. Raue & Wielland (2015) postulated that logistics entails a customized-based process that ensures quick and speedy deliveries. Cooper (2014) illustrated the well-coordinated interactions that ensure the service provision is economical and effective. According to Potter & Christoper (2015), logistics and SCM include value addition in service delivery to achieve market preferences. Many companies have faced a myriad of logistics and SCM challenges. The customer-based markets demand prompt deliveries. The broad spectrum of logistics and SCM entails the integration and objective services and goods deliveries. Logistics and SCM are paramount to all sectors of the economy. It is a predominant consideration in the Oil and Gas companies due to the great demand for their products. Logistics incorporates planning and execution of effective storage. Furthermore, it advocates for efficient service and goods delivery due to its well-interconnected activities. Total has managed to structure its logistics and SCM to suit the digitalized market and improve the quality of the service. Fourth-party logistics is the epicentre of organizational performance. It increases the internal productivity and service delivery. It incorporates informational management, transport management, warehousing management, and material and inventory management. The fast-paced business environment demands significant processes and procedures that promote efficiency, effectiveness, convenience and operationalization. Namusonge (2017) blueprinted that party logistics fuels competitiveness and reengineers the operations of the companies. Currently, the business is striving to remain competitive in the market Maata and Ombui (2018). Fourth-party logistics have attracted several sectors and enterprises in their struggle to adapt to the dynamic business environments and offer substantial results.

Fourth Party Logistics

Fourth-party logistics represents the maximization of external enterprise to drive internal issues such as transportation, warehousing and inventory management. It is paramount in the reduction of cost. Several companies utilize the presence of logistics service providers to maximize efficiency. The objective of Fourth party logistics is to improve quality deliveries through the elimination of traffic volumes Samson and Ombui (2020). Fourth-party logistics can rely on advanced in technology, operational excellence, warehouse management and transport systems to speed up service delivery. Therefore, Fourth Party Logistics is the incorporation of specialized service providers to reduce cost, increase productivity and generate more profits. The companies specialized in logistics have well-developed systems, knowledgeable staff, and scope. Rylander (2021) indicated that the majority of supply chain functions have been outsourced since time immemorial. The giant companies with great financial strengths are still outsourcing the logistics services from specialized companies. The major considerations for Fourth-party services are scope, specialization, agility, and speedy response. Granville (2012) noted that logistics management must be supported by prompt deliveries hence ensuring satisfaction of customers' preferences. However, the logistics system has been facing great challenges globally. Logistics and SCM have experienced uncertainties and at times lack of customer satisfaction hence the need for the study. Lwiki et al (2013) surveyed eight Sugar firms in Kenya. The research concluded with a significant positive correlation between lean inventory management and return on equity. The study was a very important yardstick in the determination of the level of association. Technological advancement has created a holistic perspective on outsourcing logistic services. The study recommended that efficient outsourced logistics must improve the accomplishment of objectives. An expanded SCM and global market network of production speeds up the movement of goods. Technological advancement increases faster deliveries and reduces warehousing costs.

Firm Performance

The performance covers a wide area of the spectrum from the operation, and financial to strategic to market-based. The performance is widely used in the studies yet loosely defined (Lawal, 2010). Performance is the continuance of prudent logistic operations to enhance timely delivery. Moreover, it relates to the financial generation of revenues. Performance enhances the global technological advances and innovation (Rushton, 2014). It changes customer perceptions and increases loyalty. Mathenge et al (2011) indicated that performance is a logistics tool that enables the firms to know their efficiency and effectiveness. Performance reinforces the maximization of value to the customers (Ombui, 2018). In summary, performance refers to the implementation of logistic and SCM strategies more resiliently, consistently and in real-time than the competitors, while mitigating operational risk, and cost, and advancing incremental sales. The global market has made the whole world resemble a village through advanced logistics strategies and technologies. Production has been maximized due to the presence of quick deliveries, minimum time, and cost. It reduces the carrying cost, material handling and cost of holding products (Joseph, 2021). Performance targets innovation of strategies and operational value to the clients (Lucie & Hudziak, 2012). Furthermore, Rushton (2014) put forward a tremendous logistic improvement leading to operational excellence. The study stated the importance of plans, execution, and regulatory procedures to reinforce the efficiency and effectiveness of transportation. Giri & Sarker (2012) postulated that performance is determined through efficiency and prompt deliveries. Performance enhances the profitability through prudent use of resources. Additionally, it gears the business towards holistic operation and financial stability. It is a driving force towards productivity and economical use of resources. Transportation is critical and is an integral part of logistics. Moreover, Rudson (2014) indicated that performance eases the whole process from production, loading, transporting, storage, and eventual processing (John & Cheng, 2012). It speeds up the process from the point of production to the point of consumption. All the firms must-have techniques, strategies and plans that improve moving loads, delivery speed, and high quality, saving cost and time (Rushton, 2014). The clear time frame and proper link from producers to consumers is realizable through logistics. In a nutshell, performance must be met at a cost to enhance the timely service delivery, production, efficiency, effectiveness, and economical usage of resources.

Statement of the Problem

Fourth-party logistics is paramount in timely delivery, effective logistics and strategic transportation. Maata and Ombui (2018) stipulated the need for advanced operation and distribution. Fourth-party logistic firms in Kenya have gained momentum and are a great area of business venture. The companies have employed a variety of strategies to outshine their competitors. According to Iver (2011), the factors that cause Oil and Gas shortages are not the same as the factors causing surplus. This indicates a mixed approach where shortages are sometimes a manmade crisis. This leaves a gap in services that add value to the supply chain. Kenya has had several challenges in the transportation of Oil and Gas products. The presence of 4PL firms increases the efficiency and effectiveness. Petroleum is one of the prime movers of the country's social and economic development. Petroleum products are predominantly used in transport, commercial and industrial sectors. Kenya is a net importer of refined petroleum products. The volume of imported products has also been increasing though with slight fluctuations in the trend. The landed cost of imported petroleum products has also been increasing over time as well as the taxes and duties levied by the government. The number of registered oil marketers has also continued to grow with Vivo, Total and Kenol Kobil, being multinationals holding above 50% of the market share (EPRA, 2019).

Statistics illustrate that machinery and petroleum imports have been increasing significantly since time immemorial. Machinery and Petroleum products were the major imports in Kenya in the year 2020 and this was approximated at Kshs. 231.9 Billion equivalents to 2.5 Billion US dollars and Kshs. 201.1 Billion estimated to be 2.2 Billion US Dollars respectively (KNBS, 2021). For instance, by February 2021, the exports had increased

significantly for the fuel and lubricants. In January 2021, it resulted in Kshs. 127.2 Million representing 1.4 Million US Dollars but increased drastically in February 2021 to Kshs.518.5 Million (KNBS, 2021). In a nutshell, the Oil and Gas sector has contributed significantly to the growth of Kenya's GDP. Despite sporadic fluctuations in prices, increased interest rates and myriad predicaments, the Oil and Gas industry remains the driving force for economic growth. Every company strives to maximize shareholder's wealth. The ever-changing commercial environment needs to operate optimally. The organizations are mandated to accomplish objectives through efficiency. However, great bottlenecks have reduced productivity. Fourth Party Logistics has been used severally by giant companies. This is because logistics needs comprehensive procedures, expertise, and specialized knowledge. It is very predominant in cost reduction, production, profit-making and timely deliveries. Logistics is a great determinant of the operational success of Oil and Gas Companies (Visha et al, 2013). Companies must put measures in place to enhance efficiency, effectiveness, and productivity. Logistics is a problem-solving activity and provides innovative ways of dealing with current problems. Companies are increasingly making profits, improving operations, increasing flexibility and minimizing capital investments (Namusonge, 2021).

Logistics creates more opportunities for entrepreneurship. Oil and Gas transportation has increased integration and globalization (Guajardo, 2013). Logistics ensures best practices, best quality services, reduced costs, high speed, and prudent management of resources. Furthermore, it mitigates risks and spearheads growth. The drastic market changes provide a yardstick for performance through continuous improvement and innovation. However, this research will focus on the role of the fourth-party logistics on the performance of the Oil and Gas Marketing Companies in Kenya. The study surveyed all the Oil and Gas Marketing Companies in Kenya. Based on the global research, regional studies and local studies, it is clear that there are contextual, conceptual and methodological gaps. Moreover, despite the paramount role of 4PL, there is minimal focus on that area thereby creating an immense knowledge gap. Nevertheless, poor inventory, warehousing, transport management; clearing and forwarding have caused delays, stagnated operations and caused great problems for companies. Moreover, 4PL has been subjected to debate and controversies due to preceding findings spanning from positive, negative and neutral associations with performance. Therefore, this research was aimed at bridging the knowledge gap on Fourth-Party Logistics and Performance of Oil and Gas Companies in Kenya. Additionally, it may provide a framework for 4PL implementation in other sectors other than the oil and gas sector.

Objectives

To establish how warehouse management affects the performance of oil and gas companies in Kenya.

To assess the role of transportation on the performance of oil and gas companies in Kenya.

Theoretical framework

Resource Based Theory

Resource-Based View concentrates on the capabilities and abilities resulting from the firm's resources to enhance effective operation (Foss, 1997). Pfeffer and Salancik (1979) developed the theory to stipulate the harmonious co-existence amid the department while utilizing the available resources. The resources are periodically utilized to achieve a competitive advantage. The resources are very important in competitive advantage and the performance of every industry (Barney, 1991). The resources should always be valuable, not substitutable, and unique traits. The theory is paramount to the study through the elaboration on the resources depended on by the organization in their logistics and deliveries. The theory links the fourth-party logistics and performance by incorporating the organization's resources ranging from assets, skills, capital, and capabilities (Roy & Aubert, 2001). The theory stands on the assumption that organizations are structured administratively. The structure links and brings together all activities of individuals and teams within the organization. The diverse system of the firms demands different resources to ensure productivity (Penrose, 1959). The organization's decisions are important evaluation and assessment (Kutsikos & Mentzas, 2011).

The study is paramount in the provision of more insight into information for strategic operational excellence. RBV is important to this study since in the oil and gas industry, competitive advantage stems from tangible assets, which arise from a union of tangible assets, capabilities, and intangible assets such as reputation and intellectual property (IP). Capability types that set one firm apart from others in an extremely competitive field.

Profit Maximization Theory

Profit Maximization Theory postulates that firms are initiated to attain the highest total profit. The theory was formulated by Kopltn (1963). Profitability maximization is the ability of a firm to enhance productivity by reducing the operational cost. The firms must increase their effectiveness to enable them to remain competitive and perform in the market. The theory presupposes that firm will maximize their potential to reach the highest level in their performance. The theory is special in advocating for profit maximization in Fourth Party Logistics by providing tactical measures aimed at reducing cost in transportation, forwarding and clearance, inventory management and distribution, hence improving firm performance. Profit maximization theory links fourth-party logistics with strategic measures which are efficient, effective and productive for firm performance. Entrepreneurs are the sole owner who encourages effective and efficient operation to achieve realistic results. Moreover, the theory put forward the ability of the firm to adjust to customer's tastes and preferences. It stands to maximize the value of the firm by seeking profits (Prateek, 2020). Profit-Maximization Theory assumes that the techniques of the production are well-elaborated and known. The profit maximization theory puts forward the maximization of shareholder's wealth. However, the challenge experienced includes profit uncertainty and fluctuating prices. The technological changes may be very expensive in the assimilation of the company. There is also the absence of perfect knowledge Barner (1991). Oil and Gas Companies must initiate profit maximization measures to enhance performance. The tangible and intangible assets must be used to increase the shareholders' wealth and maximize profitability (Barner, 1991).

Agency Theory

The theory was advanced by Mitnick (1970). It is an agent-principal contract arising to enhance service delivery. The agent is hired by the principal to discharge duties and responsibilities on behalf of the principal. Numerous instruments can be utilized in trying to align both agent and principal interests, like efficiency wages, commissions on piece rates, sharing profit, the bond posted by an agent or firing fear. In most relationships between employer and employee, the principal-agent problem is found; for example, when top executives of corporations are hired by the owners (Forey & Lockwood, 2010). The theory provides a yardstick for appropriate Fourth Party Logistics. The theory encourages the appropriate decision-making that reduces friction and the pursuit of personal interest in Fourth -party logistics. Agency theory stipulates the agency relationship whereby the assignment is given to the agent by the principal. The agent is expected to perform tasks on behalf of the principal. The agency theory aims to provide solutions to challenges emerging from agency activities. However, agency problems may occur due to the desire of the agent to pursue self-interest. The principal's and agent's interests may overlap or collide hence leading to agency costs (Ocharo, 2019). Agency challenges are rampant in the financial sector (David, 2009). The failure of management to carry on the stipulated duties and venture into personal interest is a diversion from the key objective of the firm. The firm is unable to maximize shareholder's wealth. The capital does not buffer, and the integral part may no longer accelerate the transformation and sustainable returns. Heath (2009) stipulates the need to follow the obligation fully while serving the principal interest.

Conceptual Framework

The conceptual framework of the study is presented as shown in Figure 1.

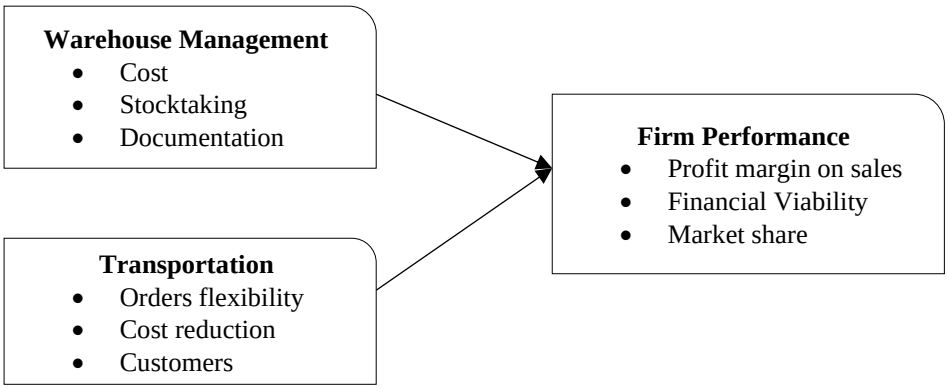

Figure 1: Conceptual Framework

Empirical Review of Variables

Warehouse Management

Warehouse management encompasses the fundamental streamlined structures and process that enhances daily operation (Kivuva, 2018). The efficiency and effectiveness of warehouse management entail utilizing space, adequate staffing, coordinating, and simplifying data-driven decisions. Warehouse management has been critical for purposeful logistics. Warehouse management enhances inventory tracking and ensures no inventory shrinkage (Oballah, Waiganjo & Wachieuri, 2015). Zhang, Donk & Vaart (2011) researched the usage of Information Technology to enhance Warehouse management, reduce jams, efficient picking and packing and enhance the logistic growth in Supply Chain Management. The research utilized a descriptive research design and recommended continuous improvement to suit the current market demand. Furthermore, the research presented a logical and systematic analysis for further development and understanding the warehouse management. The study concentrated on the supply chain management to enhance the performance.

Rylander (2021) studied the implementation of technology in the warehouse operation. The study focused on the timely and efficient operation of the warehouse while reducing the operational cost. Martin (2018) opined that the operation of the warehouse must be aimed at reducing costs associated with inventory, personnel, operation, and implementation. It is a blueprint that encourages faster delivery and problem-solving. Baruffaldi et al., (2019) stated that the warehouse is an integral part of supply chain management. It supports the optimization of accurate transactions and warehousing. It promotes the efficient activities of the warehouse. The key processes from receiving ends to shipping demand productivity in warehousing through prudent storage and accurate records keeping. The study concluded that warehouse management has a positive correlation with organizational performance. The study recommended more relooking into the warehouse management system, effective logistics and Fourth Party outsourcing.

Transportation

The efficiency of the moving products is determined by effective transportation and distribution (Srinivas, 2018). Sreenivas & Srinivas (2017) researched the role of transportation in logistics. The research adopted a descriptive design and came up with the conclusion that effective transportation has a positive correlation with the logistic chain. The business objective must be maximized to reap more benefits. The research conducted by Lemmens, Decouttee, Vandaele & Bernnuzzi (2016), on the vaccine supply chain. The study wanted to assess the strategic and tactical decisions that enhance the chain of distribution the study found out that economical ways must be considered in distribution and transportation. The research further emphasized the need for technological advancement to add value to logistics. The study recommended a well-planned distribution network for the vaccine. Poor delivery of products

and services is an ingredient for poor organisational performance which leads to customer dissatisfaction and loss of goodwill (Christopher, 2021). John (2021) conducted a study on logistics and focused on transportation. The study stated that transportation makes good products accessible at the least principal cost. Furthermore, it elaborated on the quality and service transportation needs to meet the needs of the customers. The study indicated that transportation provides connective roles from the production to the consumption point. PWC (2020) opined that transportation encourages interdependency. It contributes significantly towards logistics. It advocated for transportation that optimizes technological advancement. Delivery of services must be reliable, timely and satisfy the customers. The firms should outsource quality services that promote efficiency and effectiveness. In a nutshell, the outsourced services must serve the intended fully and exhaustively.

Performance

Performance is a wide-spectrum concept and trying to answer an open question with limited research studies on definitions and measures. Performance is an important parameter mostly defined as a dependent variable which seeks to produce variations of performance. Performance may be compared or measured in terms such as profitability and sales turnover. Performance is the extent to which the organization achieves a set of pre-determined targets that are in line with its mission. The most common performance drivers include customer value, team performance, talent management, and strategic focus all of which are achieved through, proper planning, evaluation, implementation and control. The critical success factors for performance consist of access to the right knowledge and skills, proper planning, innovation and flexibility. Organizational performance measures consist of return on equity, profit, return on assets and market share; while non-financial performance measures consist of corporate social responsibility, innovation, responsiveness and employee development. From the study of Gathungu and Mwangi, (2012), sensing the capabilities of the firm is useful in the identification and assessment of opportunities within the firm's environment through exploring technology, probing markets and listening to customers.

Performance can be measured by assessing the degree of achievement of the strategic, economic, output and other technological benefits of outsourcing contracts. Customer satisfaction can be viewed as the level of acceptance or fitness between a customer requirement and outsourcing outcome. However, Grover et al., (1996) identified outsourcing success as the benefits from outsourcing gained by a firm as a result of adopting an outsourcing strategy. Outsourcing success can be measured by the use of items such as; access to skilled personnel, economies of scale in human and technological resources, risk reduction in technological obsolescence and increased access to key information technologies. A firm which can exploit the right resources and turn them into capabilities can increase its competitive advantage while firms that lack resources and capabilities may outsource certain functions to optimize the performance and increase its competitiveness. Other reasons why firms outsource include obtaining resources unavailable internally, risk sharing and gaining world-class capabilities (Ombui, 2018). When repair service and maintenance of equipment is taken as an in-house activity the firm has to maintain (stock) all the relevant spare parts, train the maintenance personnel and upgrade their knowledge on changing technologies periodically (Namusonge, 2017).

All these activities lead to higher operating costs hence the need for outsourcing contract to reduce the cost and idle time of equipment by using efficient and effective maintenance strategies offered by the service provider which also improve equipment, availability and increases their lifespan. Outsourcing brings about flexibility, firms are free to reorganize and rationalize resources and can become more innovative as they focus on what it does best. The firm can improve efficiency by making sure the service provider adheres to the service level agreement. However, outsourcing is now considered an innovative strategy which makes use of the latest technologies and management techniques to put firms in sustainable leadership positions (Bush & McIvor, 2008). Findings from research show that the size of spending on outsourcing makes outsourcing decisions more strategic in an organization today

than it was before (Will Cocks, 2011). As far as way back in 1980s the outsourcing trends have been growing in firms with non-core functions increasing to a level of advanced strategic and transformational outsourcing (Schniederian et al., 2007). Outsourcing decisions can be seen as a rational decision by management, Lacity et al, (2009). To improve their performance, firms outsource to others who have state-of-the-art skills that are not currently available in the organization. They are therefore able to improve critical areas of the business which leads to improved performance. Also, when non-critical business functions are outsourced, the firm can focus on its core business which improves organization performance (Smith & McKeen, 2004).

Methodology

The research applied descriptive design for quantitative data. The data was collected through questionnaires. The descriptive expounds on the cause and the results between the Fourth Party Logistics and performance. Descriptive research is critical in cause-effect correlation analysis. The design is useful when the key area of analysis is people's beliefs, attitudes and habits demonstrated in the questionnaires and interviews. Mugenda and Mugenda (2014) stated descriptive design as a trial of collecting data from constituents of a population while trying to investigate the present status of the population amid one or more variables. A survey of the Oil and Gas Companies in Kenya was undertaken. The target population in this study was 3,000 (unit of analysis) employees across all the Oil and Gas Companies in Kenya. This was made possible through the utilization of questionnaires.

Table 1: Target Population

DEPARTMENT	POPULATION
Planning and Supply	1,217
Operations	1,008
Procurement	338
Commercial	215
Finance	184
Internal Audit	37
TOTAL	**3,000**

The sampling technique entailed the process of the most appropriate method stratified random sampling. It provided an in-depth understanding of the phenomena under study. It also increased the chances of representation, reliability, and accurate findings. This Sampling Technique is paramount in the selection of better coverage and results in efficient and productive representation. The technique maximized was Sloven's formula in coming up with a relevant sample (Russell, 2013) n= **N/ (1+ N e ^{2}).** Therefore, taking a 95.86% confidence level and 4.14% margin of error, the sample size becomes 488 employees. n=3,000/(1+(3,000*0.0414*0.0414))=488 employees. The research collected both primary and secondary data through the use of self-administered questionnaires. Secondary data was obtained from the company website, journals and published financial and non-financial statements. Before the actual data was collected, the researcher conducted a pilot study. Data was presented in tables. The measurement of all the variables was through the use of the Likert scale. The equation can be summarized as; $Y=\beta_0+ \beta_1X_1+ \beta_2X_2+ Ɛ$ where Y =Performance, X_1= Warehouse Management, X_2 = Transportation, β_0 =Constant of the regression equation, β_1, and β_2, = regression coefficients that was estimated and Ɛ = error term or disturbance term

Research findings

Table 2: Correlation Matrix

Variables		Performance	Warehouse Management	Transportation
Performance	Pearson Correlation	1		
	Sig. (2-tailed)			
Warehouse Management	Pearson Correlation	.785**	1	
	Sig. (2-tailed)	0.000		
Transportation	Pearson Correlation	.622**	.314**	1
	Sig. (2-tailed)	0.000	0.000	

Table 2 demonstrates how warehouse management was connected to and significantly correlated with performance (r = .785, p = .000). This implied that an improvement would lead to better performance in fourth-party logistics since warehouse management had a good and substantial influence. Transportation has a favourable relationship with performance at Fourth-Party Logistics substantially, as shown by (r = .622, P= .000). This also suggested that because transportation has a moderate impact, improving it will result in better performance in fourth-party logistics operations.

Table 3 Model Summary Multivariate Analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.684 [a]	.468	.449	.58089

a. Predictors: (Constant), transportation, warehouse management

The regression of the performance of fourth-party logistics was conducted with data from 400 respondents that were tested. Results show a positive association of R = .684 and R2 = .468 which meant that 46.8% of the variation in performance of fourth-party logistics can be explained by a change in all the predictor factors as in Table 3.

Table 4 ANOVA[a] Results for Model Summary

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	32.678	2	8.169	24.210	.000 [b]
	Residual	37.118	398	.337		
	Total	**69.786**	**400**			

a. Dependent Variable: Firm Performance

b. Predictors: (Constant), transportation, and warehouse management

The values of F = 24.210 indicate that all of the predictor factors statistically and significantly affect performance, showing that the model is a good fit for the data. As shown in Table 4, the overall regression model significantly predicts the dependent variable at the level of significance of 0.000, which is less than 0.05.

Table 5 Regression Coefficients[a] for Multivariate Analysis

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	.1580	.367		1.504	.001	.876	2.281
Warehouse	.358	.118	.329	3.027	.003	.123	.592
management	.307	.114	.274	2.697	.000	.081	.532
Transportation							

a. Dependent Variable: Performance

As a result, the regression model for the study is: $Y= \beta_0 + \beta_1X_1 + \beta_2X_2$ where Performance =.1580 +.358 (warehouse management) +.307 (transportation)

The study's findings revealed that the predictor variables have a significant positive impact on performance. The findings indicate that performance has a significant relationship, p 0.05 (P = 0.000). Thus, the predictor variable values are statistically significant with p = 0.05, implying that increasing the mean index of predictor variables should improve performance. The outcomes are summarized in Table 5 According to the model, warehouse management was the predictor variable that had the greatest impact on performance, followed by transportation.

Conclusion

It was possible to conclude the study's findings that warehouse management significantly influences oil and gas businesses' performance. Since the study found a significant correlation between warehouse management and oil and gas company performance, it is reasonable to assume that if company management adopts warehouse management, the performance of fourth-party logistics companies will also improve. The study's results suggest that oil and gas businesses work to improve their warehouse management by focusing on cost-effectiveness. It was possible to conclude that the performance of oil and gas firms was positively correlated with the function of transport management. The Pearson correlation coefficient was used to establish this connection. The results of the study showed a substantial correlation between the performance and the function of transport management. According to the study's findings, oil and gas performance is influenced by logistics management as a result, the study concludes that transport management may improve the performance of oil and gas companies.

Recommendations

The study established that warehouse management, and transportation, have a great influence on the performance of oil and gas companies in Kenya. The study suggests that, to ensure a competitive advantage over other market competitors and achieve superior firm performance, oil and gas companies should incorporate modern warehouse management techniques and also adopt efficient and effective transport systems daily. It is recommended that oil and gas company managers use dynamic slotting. Demand-based warehouse scheduling for the oil and gas industry is preferable to batch scheduling because it enables picks to be placed as a byproduct in one or more upcoming cycles or waves. These are designed to coincide with shipment and transit timeframes, giving you more flexibility and efficiency during the selection process. Oil and gas company management ought to spend money on a warehouse management system. For utmost effectiveness, employ a warehouse management solution. Orders will be consolidated as part of a strong warehouse management solution, reducing travel time during picking and boosting productivity. It may link with an organization's ERP system or inventory control system to keep your inventory in sync, enhancing accuracy, cutting expenses, and raising customer delight. Transportation optimization is a crucial issue that business owners should pay attention to, especially since transportation expenses account for a sizable amount of overall business expenditures. Oil and gas industry management should apply transportation optimization. Transportation management systems can effectively save time during transportation and speed up that process, which will reduce delivery delays and shorten the time allotted for product delivery. Optimizing transportation will also help reduce transportation costs and simplify supply chain operations across geographies. Future research may be done, although under different circumstances, on the basic goal of the study, which was to determine the role of fourth-party logistics on the performance of oil and gas companies in Kenya. The study also concentrated on transportation and warehouse management. Thus, the four skills mentioned in the paper do not truly cover all of fourth-party logistics performance in empirical work. As a result, comparable studies may be carried out utilizing various capacities to affect how well oil and gas firms operate. The impact of supply chain skills on industries other than oil and gas, such as transportation and logistics, may also be studied further.

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