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INFLUENCE OF LOGISTICS MANAGEMENT PRACTICES ON PERFOMANCE OF OIL MARKETING COMPANIES IN NAIROBI COUNTY, KENYA

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ABSTRACT

The purpose of the study was to examine the influence of logistics management on performance of oil marketing companies in Nairobi County, Kenya. The study was restricted in scope to cover only downstream oil marketing companies in the Kenyan oil industry especially those that had operations in Nairobi County, Kenya. The study was done in major oil firms that presented a true representation of the Kenyan oil industry in all aspects. The target sample population of the study was 164 employees drawn from different oil marketing companies in Nairobi County. According to the regression analysis there existed a relationship between independent variables and dependent variable with a correlation coefficient of 0.799. It showed that the independent variables in the study were able to explain 63.80% variation in the performance of the oil marketing companies while the remaining 36.20% was explained by the variables or other aspects outside the model. There is need for the firms to have a good coordination on the transport mechanisms as this would bring the benefits to a maximum. The study recommended that the organizations need to adopt he usage of auto-ID technologies can improve accuracy. The of ID technologies is encouraged since it will help in product marking to realize accuracy and efficiency to effectively enhance their operations. The organizations need to invest in the information management because the flow or movement of materials or money is usually triggered by associated information movement. This may offer the good design of supply chain and improve in supply chain performance of the firms.

Key Words: *Supplier Management, Transport Management, Warehouse Management, Information Management, Marketing companies*

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INTRODUCTION

The boom in global demand of oil along with the ease of international trade and the inflexibility involved in the petroleum industry's supply chain has made its management more complex and more challenging (Achieng & Rotich, 2013). Despite the importance of logistics management and its growing complexity, the petroleum industry is still in the development stage of efficiently managing their supply chains. In fact, according to Steve Welsh, managing director of the College of Petroleum and Energy Studies at the University of Oxford, the oil and petrochemical industry's insight into the logistics management is still in its infancy (Kiriago & Bwisa, 2013). However, even with the inflexibility and complexity involved in the industry's logistics management, there is a lot of room for improvement and cost reduction.

The top world oil producers are Saudi Arabia, Russia, the United States, Iran, Mexico, China, Canada, United Arab Emirates, Venezuela, Norway, Kuwait, Nigeria, Brazil, Kazakhstan and Iraq. The Organization of the Petroleum Exporting Countries (OPEC) controls major crude oil by setting production quotas. The values are added by processing and chemically changing the crude oil, which is called refining (Achola, 2012). It is important to note that greater economic rewards can be gained only with well-integrated global oil logistics management. While the separation of logistics management activities among different companies enables specialization and economies of scale, many important issues and problems need to be resolved for successful logistics management operations – the main purpose of logistics management (Mwanzia, 2014).

The public sector n many African countries are operating in an environment characterized by countless economic and political disruptions to their sources of supplies and services. In order to survive in this turbulent marketplace, these organizations must continually monitor their competitive position as well as their internally controllable processes, especially the procurement process (Mboroto & Finance, 2013). The government ministries in African countries are no exception. The governments through various ministries annually procure billions of shillings' worth of systems, supplies, and services in support of the government operations. As a result, modernization of logistics management practices and processes presents government with a clear opportunity to leverage significantly improved value for money from its total spend on goods and services.

Despite having made significant progress in infrastructure development in recent years, Kenya's transport infrastructure was inadequate to meet the country's needs. The country's infrastructure indicators looked relatively good compared to other low-income countries in Africa, but they remained below the levels found in Africa's middle-income economies, like Egypt or Nigeria (World Bank 2012). Bringing Kenya's infrastructure up to the level of the region's middle-income countries boosted annual growth by more than three percentage points. Kenya's development plans included significant improvements to roads, railways, seaports, airports, water and sanitation, as the country attempts to increase its competitiveness in the global market (KSC 2013). Road and rail connections with neighbouring countries were still limited, but Kenya could be an important regional hub for air transport, railways, and ports in the years to come.

There exists a modest upstream oil industry as the Kenyan government in its investment incentives continues to encourage foreign interest in oil exploration and eventual production. Companies like Africa Oil and Tullow Oil have been working on some sites in Northern Kenya and have recently announced oil discoveries and embarked on establishing the commercial viability of the said discoveries, which if confirmed will endow the country with a precious resource (PIEA, 2012). The country has a defunct petroleum refinery owned and managed by the Kenya

Petroleum Refineries Ltd (KPRL) and an installed oil pipeline of 800 km owned and managed by Kenya Pipeline Company (KPC). This pipeline runs from Mombasa to Nairobi and Western Kenya with terminals in Nairobi, Nakuru, Eldoret and Kisumu (KPC, 2012; ERC, 2012). KPC offers primary transport of refined products for all oil marketing companies to Nairobi and Western Kenya meaning presence at all KPC depots countrywide has a bearing towards ability to compete effectively in the market.

Statement of the Problem

According to the UNESCO for Asia and the Pacific (2012), the logistics management has witnessed continuous exponential effect in supply chain performance in oil industry worldwide. The oil sector plays major role in Kenya's economic development through its contribution to gross domestic product (GDP) of above 4%, which is nearly Kshs.205.7 billion. This contribution by the logistics management in oil industry is primate in cities and towns (Bruisma, Gorter & Nijkamp 2010). However the dynamic logistics has affected performance of oil marketing companies as the global price fluctuations of goods has resulted to hiccups in the supply chain performance in the sector (UNCHS, 2015).

In Kenya, the oil marketing firms spend about Kshs. 200 billion per year on procurement and logistics. However on annual bases, the losses close to Ksh. 51 billion about 37 per cent of the profits due poor logistics management used such as inflated warehousing management costs, information management, transportation management and customer needs pressure and stiff competition from the rivals (KISM 2014). The inefficiency and ineptness of overall selection and implementation of logistics management such as supplier management, transport management, warehouse management and information management contributes to loss of over Ksh.67 million annually (Tom 2014).

According to Victor (2012), supply chain expenditure in oil marketing organizations could be minimized through proper selection of better logistics management methods. This elaborates the dire need for better management of its logistics management network to enhance performance in the oil marketing firms. It is on this premise the study sought to establish the influence of logistics management practices on performance of oil marketing companies in Nairobi County, Kenya.

Study Objectives

The general purpose of the study was to establish the influence of logistics management practices on performance of oil marketing companies in Nairobi County, Kenya. The specific objectives were:-

- To establish how supplier management influence performance of oil marketing companies in Nairobi County, Kenya
- To find out how transport management influence performance of oil marketing companies in Nairobi County, Kenya
- To establish how warehouse management influence performance of oil marketing companies in Nairobi County, Kenya
- To examine how information management influence performance of oil marketing companies in Nairobi County, Kenya

LITERATURE REVIEW

Theoretical review

Supply Chain Operations Reference Model

The Supply Chain Operations Reference model provides a unique framework that links performance metrics, processes, best practices, and people into a unified structure (Council, 2008). The framework supports communication between supply chain partners and enhances the effectiveness of supply chain management, technology, and related supply chain improvement activities. Business value, whether real or perceived, is derived from the

predictability and sustainability of business outcomes. It lives, healthy or sick, in those gaps between expected vs. perceived vs. actual performance (McManus, 2002). Value is articulated by measuring what is being managed. The SCOR model helps refine strategy, define structure (including human capital), manage processes, and measure performance (Larsson *et al.,* 2008).

According to Cooper, Lambert and Pagh (1997), SCM is "the performance of key business processes from end users to original suppliers that provides products, services and information that add value for customers and other stakeholders. The SCOR model (Supply chain council, 2003) divides supply chain management into several main business processes and further even more sub-processes. While it accentuates on the process view of the supply chain, this model also presents supplier and customers connections to illustrate the whole chain.

Fugate Logistic Performance &Aramyan Models

The Model Created By Fugate Et Al. (2010), puts emphasis on the dimensions of order management in terms of efficiency, effectiveness and differentiation of logistics activities as determinants of logistics performance. Fugate Et Al. (2010) Analyzed the Relationship between Logistics Performance and Organizational Performance, stating that order management in logistics performance is multidimensional and is a function of the resources used in order management and logistics, according to outlined objectives and outcomes against competitors. Conversely, Fugate et al. (2010) find firms that choose to combine efficiency and effectiveness achieve better performance than their competitors who choose only one of these dimensions, which is in line with what is stated by Seldin and Olhanger (2007).

Scientific Management Theory

The theory basically consists of the works of Fredrick Taylor. Fredrick Taylor started the era of modern management in the late nineteenth and early twentieth centuries; Taylor consistently sought to overthrow management by rule of thumb and replace it with actual timed observations leading to the one best practice, Waring (2016). He advocated for the systematic training of workers in the one best practice rather than allowing them personal discretion in their tasks. He further believed that the workload would be evenly distributed between the workers and management with management performing the science and the workers performing the labour with each group doing the work for which it was best suited. Taylor's strongest positive legacy was the concept of breaking a complex task down into a number of sub tasks and optimizing the performance of the subtasks hence, his stop watch measured time trials (Giordano, 2016). As a result he proposed four underlying principles of management.

Game Theory

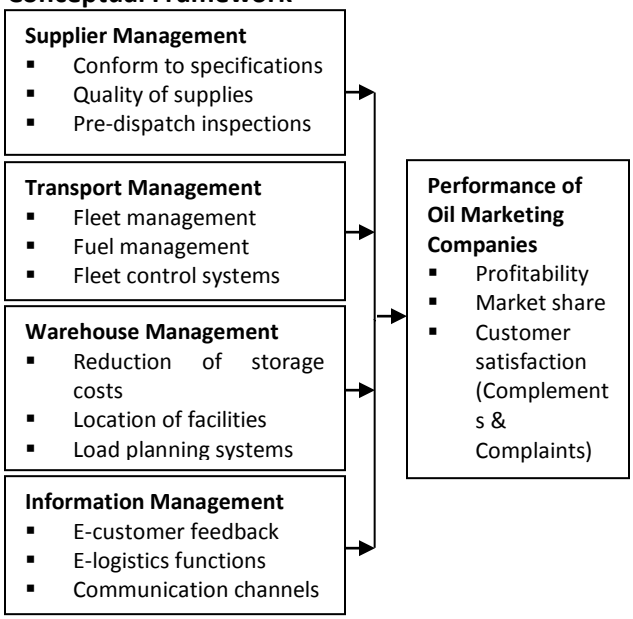
Game theory is a mathematical theory of decision making by participants in conflicting or cooperating situations. Its goal is to explain or provide a normative guide for, rational behavior of individuals confronted with strategic decisions or involved in social interactions (Myerson, 2013). The theory is concerned with optimal strategic behavior, equilibrium situations, stable outcomes, bargaining, coalition formation, equitable allocations, and similar concepts related to resolving group differences.

Game theory has a profound influence on methodologies of many different branches of sciences, especially those of economics, operations research and management sciences. Traditionally game theory can be divided into two branches: non cooperative and cooperative game theory. Camerer (2013) game theory uses the notion of strategic equilibrium or simply equilibrium to determine the rational outcomes of a game

Queuing Theory

Queuing theory is a mathematical study of waiting lines or queues (Shingo, 2005). The theory enables mathematical analysis of several related processes, including arriving at the back of the queue, waiting in queue (a storage process) and being served in front of the queue. The theory permits the derivation and calculation of several performance measures including the average waiting time in the queue or the system, the expected number waiting or receiving service, and the probability of encountering the system in certain states such as empty, full having an available server or having to wait a certain time to be served (Kalashnakov, 2014).

Conceptual Framework



Independent Variables **Dependent Variable**

Figure 1: Conceptual Framework

Source: (Author, 2019)

Supplier Management

Supplier management is a business process that allows a company to adequately select its vendors and negotiate the best prices for goods and services that it purchases. Senior managers also monitor the corporate supply chain to ensure that vendors familiarize themselves with the company's operating activities and manufacturing processes (Reuter, 2016).

According to Mwanzia (2014) argues that SRM managers should be responsible for managing no more than three supplier relationships, in order to devote sufficient time to each. Staff involved in SRM activities will have a good combination of commercial, technical and interpersonal skills. Commercial acumen, market knowledge, analytical abilities and project management expertise are important. But “softer” skills around communication, listening, influencing and managing change are critical to developing strong and trusting working relations. SRM managers understand their suppliers’ business and strategic goals and are able to see issues from the supplier’s point of view, while balancing this with their own organizational requirements and priorities.

Transport Management

The key element in a logistics chain is transportation system, which joints the separated activities. Transportation occupies one-third of the amount in the logistics costs and transportation systems influence the performance of logistics system hugely. Transporting is required in the whole production procedures, from manufacturing to delivery to the final consumers and returns. Only a good coordination between each component would bring the benefits to a maximum (Mwanzia, 2014).

From the logistical system point of view, three factors are fundamental to transportation performance: cost, speed, and consistency (Barua, 2010). The cost of transport is the payment for shipment between two geographical locations and the expenses related to maintaining on-transit inventory. Logistical systems utilized transportation that minimized total system cost (Mboroto & Finance, 2013).

Warehouse Management

Richard (2017) stated that, a typical petroleum industry supply chain is composed of an exploration phase at the wellhead, crude procurement and storage logistics, transportation to the oil refineries, refinery operations, and distribution and transportation of the final products. The upstream activities (exploration, development and production of crude oil or natural gas) and downstream activities (tankers, pipelines, retailers and consumers) are two important activities in the petroleum industry (Gu, et al, 2010). SCM in O&G industry requires the company to integrate its decisions with those made within its chain of customers and suppliers. This process involves relationship management of the company to their customers and suppliers. A firm can create long-term strategic relationships with their suppliers and in most cases there is a collaborative process between the oil and gas company with its suppliers (Kiriago & Bwisa, 2013).

Information Management

Handoko, Aryanto and So (2015) argues that managing the information flows is the most critical of these activities. This is because the flow or movement of materials or money is usually triggered by associated information movement. Ongori and Migiro (2010) proposed that current developments in systems thinking and continuous system simulation, when applied within the context of an operations management framework, may offer the good design of supply chain and improve in supply chain performance.

Empirical Review

Supplier Management

Bashuna (2013) assessed selected factors affecting effective management of the procurement function at Nakuru North Sub County Procurement Unit. This study carried out a census in the procurement units among departmental heads from all the 30 Ministry departments. The study established that management of the procurement function was found to be slightly effective. This was greatly attributed to project financing, accountability, ICT adoption and the internal control system as applied in departments. Njeru (2015) conducted a research on determine factors affecting effective implementation of procurement practices in tertiary public training institutions in Kenya. A descriptive correlational research design was adopted and the target population comprised 40 tertiary public training institutions in Kenya. The study concluded that supplier management followed by training and then procurement policies are the major factors that mostly affect effective implementation of procurement practices tertiary public training institutions in Kenya.

Transport Management

Njeri (2016) sought to establish the effect transport of oil on performance of oil marketing companies in Rwanda. The study adopted descriptive design in form of a survey where questionnaires were administered to the targeted population. Questionnaires were administered through personal interviews with the respondents. The target population of this study was 54 employees in the oil companies in Rwanda who are involved in restructuring. There are 18 oil marketing companies with an estimated total of 360 employees. Stratified random sampling was used to pick the sample since the population was divided into companies dealing with oil to ensure effective representation. The study revealed that there was strong relationship, 94.0% of the variation in the dependent variable between transportation with performance of oil marketing companies in Rwanda.

Warehouse Management

Fahad (2013) study sought to establish factors affecting supply chain management by oil companies in Kenya. The study was guided by the following specific objectives: To assess effect of constrained

infrastructure on supply chain management by oil marketing companies. The research design used for this study was a descriptive design. The target population of this study was all the employees in the oil companies in Kenya. There are 50 oil marketing companies with an estimated total of 1500 employees. A sample size of 150 employees was taken. Data was collected by use of a questionnaire. Data was analyzed mainly by use of descriptive and inferential statistics.

Information Management

A study conducted by Price Waterhouse Coopers (2014) established that outsourcing has moved markedly from attending to a single function more efficiently, to reconfiguring a whole process in order to attain greater shareholder value across the enterprise. In effect, emphasis is shifting from outsourcing parts, facilities and components, towards outsourcing the intellectual based system. Price Water Coopers (2014) conducted a survey in the United States among America's fastest growing companies, the conclusion arrived at was that businesses that outsource were growing faster, were larger and made more profits than those that did not. The survey further revealed that, of the companies that outsourced, 70 percent claimed to save money and 25 percent had improved focus on core business. The goals of outsourcing often include reducing labor and overhead costs, maximizing profits, dominating a market, and gaining a competitive advantage. While this strategy looks quite promising, it is surprising to find that "more than one-fourth of outsourcing deals fail in the first year.

METHODOLOGY

The study used a descriptive survey design to help in indicating trends in attitudes and behaviors and enable generalization of the findings of the research study to be done. The population of this study was all the 1430 employees (CEOs, head of departments, business line managers, middle level managers, supervisors and operatives) of the 63 registered Oil Marketing Companies (OMCs) in Kenya licensed by ERC. The target population was identified based on the fact that 80% of all registered Oil Marketing Companies (OMCs) in Kenya licensed by ERC cover only downstream oil marketing companies in the Kenyan oil industry. The study collected both qualitative and quantitative data and were analyzed using both quantitative and qualitative methods with the help of (SPSS). The qualitative data was analyzed by the use of content analysis which helped the study in giving recommendation in line with the conclusions drawn for the whole population understudy. The equation below showed the linear regression model of the independent variables against the dependent variable that was adopted by the study.

$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$

Where:

Y = Dependent variable (Performance of Oil Marketing Companies).

X_1 = Supplier Management

X_2 = Transport management

X_3 = Warehouse management

X_4= Information management

ε = Error term, which is assumed to be normally distributed with mean zero and constant variance.

FINDINGS

Supplier Management

The study sought to assess the influence of supplier management on performance of oil marketing companies in Kenya. This section presents findings to statements posed in this regard with responses given on a five-point Likert scale (where 1 = strongly disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5= Strongly Agree). Table 1 presented the findings. The scores of 'strongly disagree' and 'disagree' were taken to represent a statement not agreed upon, equivalent to mean score of 0 to 2.5. The score of 'Neutral' has been taken to represent a statement equivalent to a mean score of 2.6 to 3.4. The score of 'agree' and 'strongly agree' were been taken to

represent a statement highly agreed upon equivalent to a mean score of 3.5 to 5.0. Table 1 presented the findings.

As tabulated the study found out that there was a mean of 2.987 with a standard deviation of 1.543 these showed that identification of errors through pre-dispatch inspections to reduce disappointments with customer's end though the sentiments were very much contested as shown by a standard deviation above 1.0. It was established from the study results that there was a mean of 3.243 with a standard deviation of 1.368 these showed that supplier conform to product specifications so that customers get what they want at the right time though the sentiments were very much contested as shown by a standard deviation above 1.0.

Further, according to the study findings there was a mean of 3.125 with a standard deviation of 1.218 these showed that there was quality management on the supplies from the suppliers though the sentiments were very much contested as shown by a standard deviation above 1.0. Finally, the study results showed that mean of 3.276 with a standard deviation of 1.628 these shows that suppliers records were well maintained to avoid problems of poor visibility and traceability though the sentiments were very much contested as shown by a standard deviation above 1.0. The study findings indicated that supplier management practices influence performance of oil marketing companies in Kenya. Supplier involvement in product development allowed firm to make better use of their supplier's capabilities and technology to deliver competitive products. Coordinating operational activities through joint planning also results to inventory reduction, smoothing production, improve product quality, and lead time reduction (Kiriago & Bwisa, 2013).

Table 1: Supplier Management Descriptive Statistics

Supplier Management	Mean	Std. Dev
Identification of errors through pre-dispatch inspections to reduce disappointments with customers end	2.987	1.543
Supplier conform to product specifications so that customers get what they want at the right time	3.243	1.368
There is quality management on the quality of supplies form the suppliers	3.125	1.218
Suppliers records are well maintained to avoid problems of poor visibility and traceability	3.276	1.628

Transport Management

The study examined the influence of transport management on performance of oil marketing companies in Kenya. This section presents findings to statements posed in this regard with responses given on a five-point Likert scale (where 1 = strongly disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5= Strongly Agree). Table 2 presented the findings. The scores of 'strongly disagree' and 'disagree' were taken to represent a statement not agreed upon, equivalent to mean score of 0 to 2.5. The score of 'Neutral' has been taken to represent a statement equivalent to a mean score of 2.6 to 3.4. The score of 'agree' and 'strongly agree' were taken to represent a statement highly agreed upon equivalent to a mean score of 3.5 to 5.0.

As tabulated the study found out that there was a mean of 3.215 with a standard deviation of 1.654 these showed that the organization had a vehicle scheduling and maintenance policy though the sentiments were very much contested as shown by a standard deviation above 1.0. It was established from the study results that there was a mean of 3.267 with a standard deviation of 1.059 these shows that the organization has well defined fuel management policy

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though the sentiments were very much contested as shown by a standard deviation above 1.0.

Further, according to the study findings there was a mean of 3.281 with a standard deviation of 1.454 these shows that the organization has a well automated and tracking system though the sentiments were very much contested as shown by a standard deviation above 1.0. Finally, the study results showed that mean of 2.976 with a standard deviation of 1.272 these shows that the organization has scheduling pickups at regional distribution centers though the sentiments were very much contested as shown by a standard deviation above 1.0. The study findings indicated that transport management practices influence performance of oil marketing companies in Kenya.

Table 2: Transport Management Descriptive Statistics

Transport Management	Mean	Std. Dev
The organization has a vehicle scheduling and maintenance policy	3.215	1.254
The organization has well defined fuel management policy	3.267	1.059
The organization has a well automated and tracking systems	3.281	1.454
The organization has scheduling pickups at regional distribution centers	2.976	1.272

Warehouse Management

The study went further to examine the influence of warehouse management on performance of oil marketing companies in Kenya. This section presents findings to statements posed in this regard with responses given on a five-point Likert scale (where 1 = strongly disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5= Strongly Agree). Table 3 presents the findings. The scores of 'strongly disagree' and 'disagree' were taken to represent a statement not agreed upon, equivalent to mean score of 0 to 2.5. The score of 'Neutral' has been taken to represent a statement equivalent to a mean score of 2.6 to 3.4. The score of 'agree' and 'strongly agree' were taken to represent a statement highly agreed upon equivalent to a mean score of 3.5 to 5.0.

As tabulated the study found out that there was a mean of 2.767 with a standard deviation of 1.324 these showed that the organization had achieved minimum storage costs though the sentiments were very much contested as shown by a standard deviation above 1.0. It was established from the study results that there was a mean of 2.987 with a standard deviation of 1.542 these showed that the organization had adopted usage of load planning systems though the sentiments were very much contested as shown by a standard deviation above 1.0.

Further, according to the study findings there was a mean of 3.126 with a standard deviation of 1.218 these showed that the organization had invested in response based replenishment warehouse management systems though the sentiments were very much contested as shown by a standard deviation above 1.0. Finally, the study results showed that mean of 3.543 with a standard deviation of 1.039 these The organization has warehouses which are strategically located the sentiments were very much contested as shown by a standard deviation above 1.0. The study findings indicated that warehouse management practices influence performance of oil marketing companies in Kenya.

The key element in a logistics chain is transportation system, which joints the separated activities. Transportation occupies one-third of the amount in the logistics costs and transportation systems influence the performance of logistics system hugely. Transporting is required in the whole production procedures, from manufacturing to delivery to the final consumers and returns. Only a good

coordination between each component would bring the benefits to a maximum (Mwanzia, 2014).

Table 3: Warehouse Management Descriptive Statistics

Warehouse Management	Mean	Std. Dev
The organization has achieved minimum storage costs	2.767	1.324
The organization has adopted usage of load planning systems	2.987	1.542
The organization has invested in response based replenishment warehouse management systems	3.126	1.009
The organization has warehouses which are strategically located	3.543	1.039

Information Management

The study went further to examine the influence of information management on performance of oil marketing companies in Kenya. This section presented findings to statements posed in this regard with responses given on a five-point Likert scale (where 1 = strongly disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5= Strongly Agree). Table 4 presented the findings. The scores of 'strongly disagree' and 'disagree' have been taken to represent a statement not agreed upon, equivalent to mean score of 0 to 2.5. The score of 'Neutral' were taken to represent a statement equivalent to a mean score of 2.6 to 3.4. The score of 'agree' and 'strongly agree' were taken to represent a statement highly agreed upon equivalent to a mean score of 3.5 to 5.0.

As tabulated the study found out that there was a mean of 2.876 with a standard deviation of 1.009 these showed that the organization had a smooth information flow to all logistics functions though the sentiments were very much contested as shown by a standard deviation above 1.0. It was established from the study results that there was a mean of 3.008 with a standard deviation of 1.609 these shows that the organization practiced internal information sharing though the sentiments were very much contested as shown by a standard deviation above 1.0.

Further, according to the study findings there was a mean of 2.998 with a standard deviation of 1.112 these shows that the organization had invested on information communication systems though the sentiments were very much contested as shown by a standard deviation above 1.0. Finally, the study results showed that mean of 3.218 with a standard deviation of 1.009 these the organization had implemented the usage of electronic order processing though the sentiments were very much contested as shown by a standard deviation above 1.0. The study findings indicate that information management practices influence performance of oil marketing companies in Kenya.

Table 4: Information Management Descriptive Statistics

Information Management	Mean	Std. Dev
The organization has a smooth information flow to all logistics functions	2.876	1.009
The organization practice internal information sharing	3.008	1.609
The organization has invested on information communication systems	2.998	1.112
The organization has implemented the usage of electronic order processing	3.128	1.009

Performance of Oil Marketing Companies

The findings were summarized in Table 5. From the table, a majority (43.5%) of the respondents said to a high extent they have maintained and consistently grown their overall market share year. A majority of the respondents (36.3%) said to a high extent they have maintained and consistently grown their total business profitability year on year. A majority (50.8%) of the respondents said to a high extent they have

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maintained and consistently grown the total capital employed for their total business year on year.

A majority (38.7%) of the respondents said to a high extent they have maintained and consistently reported higher returns on capital employed for their total business year on year.A majority (49.2%) of the respondents said to a high extent they have maintained and consistently grown their total business number of customers' year on year. Further, 37.9% of the respondents said to a high extent their diversified products continue to command high brand equity across all the segments they are present year on year.

Table 5: Descriptive statistics for Firm Performance

Statement	Very Low Extent	Low Extent	Average Extent	High Extent	Very High Extent
We have maintained and consistently grown our overall market share year on year	11.3%	7.3%	12.9%	43.5%	25.0%
We have maintained and consistently grown our total business profitability year on year	0.8%	8.1%	31.5%	36.3%	23.4%
We have maintained and consistently grown the total capital employed for our total business year on year	6.5%	4.0%	22.6%	50.8%	16.1%
We have maintained and consistently reported higher returns on capital employed for our total business year on year	0.0%	9.7%	37.9%	38.7%	13.7%
We have maintained and consistently grown our total business number of customer's year on year	7.3%	4.0%	21.8%	49.2%	17.7%
Averages	**5.18%**	**6.62%**	**25.34%**	**43.70%**	**19.18%**

Multiple Regression Analysis

According to the model summary Table 6 the coefficient of determination (R^2) is used to measure how far the regression model's ability to explain the variation of the independent variabies. It is notable that there exists a relationship between indepedent variables and depedent variable with a correlation coefficent of 0.799. The data showed that the high R square is 0.638. It shows that the independent variables in the study were able to explain 63.80% variation in the perfomance of the oil marketing companies while the remaining 36.20% is explained by the variables or other aspects outside the model.

Table 6: Model Summary

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate
	.799	.638	.615	.012

Analysis of Variance (ANOVA)

The study further used Analysis of Variance (ANOVA) in order to test the significance of the overall regression model. The results of Analysis of Variance (ANOVA) reveal that the significance of the F-test was done to test the effect of independent variables on the dependent variable simultaneously. According to Table 7, obtained F-count (calculated) value was 26.908 greater the F-critical value (Table) (14.987) with significance of 0.000. Since the significance level of 0.000< 0.05 we conclude that the set of independent variables affect the performance of oil marketing companies and this shows that the overall model was significant. Thus the four variables play a significant role in the performance of oil marketing companies in Kenya.

Table 7: ANOVA

Model	Sum of Squares	d.f	Mean Square	F	Sig.
Regression	82.424	4	20.6061	26.908	.000
Residual	81.174	106	.7658		
Total	163.598	110			

NB: F-critical Value = 14.987;

The general form of the equation was to predict perfomance of oil marketing companies from supplier management, transport management, warehouse management and information management is:($\mathbf{Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon}$) becomes: $Y= 8.324+ 0.876X_1+ 0.789X_2+ 0.723X_3 + 0.683X_4$. This indicates that perfomance of oil marketing companies = 8.324 + 0.876* Supplier Management + 0.789*Transport Management + 0.723*Warehouse Management + 0.683*Information Management.

From the study findings on the regression equation in Table 8 established, taking all factors into account (independent variables) constant at zero perfomance of OMCs would be 8.234.The data findings analyzed also showed that taking all other independent variables at zero, a unit change in supplier management would lead to a 0.876 change in perfomance of OMCs; a unit change in transport management would lead to a 0.789 change in perfomance of OMCs, a unit change in warehouse management would lead to 0.723 change in perfomance of OMCs and a unit change in information management would lead to 0.683 change in perfomance of OMCs. This infers that logistics management practices contributed most performance of OMCs.

Based at 5% level of significance, supplier management had a .000 level of significance; transport management showed a .001 level of significance, warehouse management showed a .003 level of significance and information management show a .004 level of significance hence the most significant factor was supplier management.

Table 8: Regression Coefficient Results

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	**β**		
(Constant)	8.324	1.417		5.876	.000
X_1_Supplier Management	.876	.178	.665	4.908	.000
X_2-Transport Management	.789	.203	.654	3.876	.001
X_3_Warehouse Management	.723	.240	.455	3.008	.003
X_4Information Management	.683	.313	.332	2.180	.004

CONCLUSIONS

Based on the study findings, the study concluded that performance of OMCs in Kenya is affected by supplier management, transport management, warehouse management and information management as the major logistics management practices which mostly influence performance of OMCs in Kenya.

The study concluded that supplier management the first important factor which influences performance of OMCs in Kenya. The regression coefficients of the

study show that supplier management had a significant influence on performance of OMCs in Kenya. This implied that increasing levels of supplier management would increase the levels of performance of OMCs in Kenya.

The study concluded that transport management is the second important factor which influences performance of OMCs in Kenya. The regression coefficients of the study show that transport management had a significant influence on performance of OMCs in Kenya. This implied that increasing levels of transport management would increase the levels of performance of OMCs in Kenya.

The study concluded that warehouse management the third most important factor which influences performance of OMCs in Kenya. The regression coefficients of the study show that warehouse management had a significant influence on performance of OMCs in Kenya. This implied that increasing levels of warehouse management would increase the levels of performance of OMCs in Kenya.

The study concluded that information management the fourth important factor which influences performance of OMCs in Kenya. The regression coefficients of the study show that information management had a significant influence on performance of OMCs in Kenya. This implied that increasing levels of information management would increase the levels of performance of OMCs in Kenya.

RECOMMENDATIONS

The study recommended that there is need to enhance their suppliers' business and strategic goals and are able to see issues from the supplier's point of view, while balancing this with their own organizational requirements and priorities. This will enhance streamline and make more effective the processes between the firms and customers.

There is need for the firms to have a good coordination on the transport mechanisms as this would bring the benefits to a maximum. From the logistical system point of view, three factors are fundamental to transportation performance: cost, speed, and consistency and expenses related to maintaining on-transit inventory can be minimized.

The study recommended that the organizations need to adopt he usage of auto-ID technologies can improve accuracy. The of ID technologies is encouraged since it will help in product marking to realize accuracy and efficiency to effectively enhance their operations. The organizations need to invest extensively in warehousing management

The organizations need to invest in the information management because the flow or movement of materials or money is usually triggered by associated information movement. This may offer the good design of supply chain and improve in supply chain performance of the firms.

Areas for Further Research

The findings demonstrated that logistics management practices affected performance of OMCs in the country. These practices included supplier management, transport management, warehouse management and information management. Due to global supply chain management trends, over time, some new issues influencing logistics management on firm performance are likely to appear and there is need to be able to identify when that happens, especially barriers and learn how to deal with them. This can only be possible when there is continuation of research on logistics management. The current study should therefore be expanded further in future in order to other logistics management practices such as order processing, ICT among others on how they affect performance of OMCs. Additional variables in the model could be explained through the insertion of other moderators to the hypothesized relationships.

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