



**EFFECT OF PHYSICAL DISTRIBUTION PRACTICES ON THE PERFORMANC OF KAPA OIL REFINERIES LIMITED,  
MOMBASA, KENYA**

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**ABSTRACT**

*This research Study aimed at investigating the effect of physical distribution on performance of Kapa oil refinery limited. The general objective of the study was to assess the effect of physical distribution on performance of Kapa oil refinery limited. The specific objectives were; to establish the effect of customer service on performance of Kapa oil refinery limited, to establish the effect of material handling on performance of Kapa oil refinery limited and to determine the effect of order processing on performance of Kapa oil refinery limited. To strengthen the theoretical review the researcher used contingency, resource based view and agency theories. The study used stratified random sampling technique to select respondents. A conceptual framework was used to illustrate a diagrammatic relationship between dependent and independent variables. The study used descriptive research design. The target population was 128 staff members of Kapa oil refinery limited in Mombasa County. The sample size was taken to be 96. A pilot study was carried out to refine the instrument. The quality and consistency of the survey was further assessed using Cronbach's alpha. Data analysis was performed on a computer using Statistical Package for Social Science (SPSS Version 22) for Windows. Analysis was done using regression and correlation. The study recommended that: Customer service should be experienced such that a customer would not forget thus enabling repeat customers. Material handling should be given priority in the organization to enable efficiency and smooth operation. Order processing should be automated to enhance a competitive edge and retain customers thus positively enhancing organizational performance.*

**Key Words:** Customer Service, Material Handling, Order Processing, Organizational Performance

## Introduction

Physical distribution is the set of activities concerned with efficient movement of finished goods from the end of the production operation to the consumer. Physical distribution is part of business management and has six major functions: transportation, storage and deposit, assembling and processing, material handling, packaging and wrapping, and information. Physical distribution functions are annexed to physical distribution facilities, such as terminal, distribution center, warehouse, and so on the other hand in the enterprise logistics is emphasized that it is centered in searching and achieving the best present and future satisfaction of the final customer and includes the socio-environmental and ethic-legal aspects, the planning, execution and control of all related activities with the procurement, flow, warehousing and maintenance of materials, products and even services; from the raw material source, including customer through inverse logistics, to the sale point of the finished product whether local or international, massive or enterprise, in the most effective and efficient manner, maximizing performance and the expected quality, while minimizing waste, time and cost using modern information technologies (Hernández *et al.*, 2012).

Recently, physical distribution has been extended and has found a broader concept under title Supply Chain Management. Supply chain management is commenced before distribution and tries to supply proper inputs (primary appliances, combined components, and capital equipment) and to convert them into final outcomes efficiently. One of the dominant specifications of supply chain management is making distinction and coordination between internal and external actions. For example, by many scholars, supply chain management has been introduced as a management method for business and internal and external relations with

suppliers. The research literature shows that the most successful producers have connected their internal processes with external suppliers (Gualaudris and Kalschmidt, 2014).

Organizational performance is external efficacy measures in an organization in three general areas: financial performance (profit, asset return, investment return); market and sale performance, market share, equity return (total return, equity, economic value added). Unfortunately, supply chain perspective understands market as a destination. Firstly, a company must examine needs of its goal market. Then it can increase efficiency by designing supply chain backward. This modern perspective is the core of modern logistics systems and examines supply chain similar to demand chain. The initial point of designing a logistics system is what customers need it and what competitors supply. Customers care about due delivery, desire of vendors to immediate supply, much care and precision in commodity administration, returning defected goods, and keeping inventory by vendors. A company must also notice to service standards of its competitors. Every company desires to supply services at least as dimensions of supply chain management (Gold *et al.*, 2013). One of the complex types of supply chains is "whole production supply chain" that includes reverse logistics, producer, distributor, retail-seller, and third party. Since each member of supply chain follows its special goal, there is a coordinator mechanism to manage the effective flows of raw materials, parts, finished products, and returned products (Jonrinaldi and Zhang, 2013).

Logistics is the main components of supply chain. The Specialty Council of Supply Chain Management interprets logistics as a part of supply chain responsible for planning, implementation, and control of commodity flow and information between production and consumption to accomplish customer needs (Green *et al.*, 2008). From old times, managers have focused on

enhancement of organizational performance. Supply financial performance is defined as a degree to which a company is going to reach to achieve the financial goals of stockholders. Operational goals that managing director follows include criteria by which performance of a company can be measured (Sabzehali, 2009).

Manufacturing firms like Kapa Oil Refineries Limited Company should now consider the implications for the overall supply chain when making decisions related to their organization's manufacturing, purchasing, selling, and logistics processes. Those processes are integrated and coordinated throughout the supply chain to better serve the ultimate customers. It has become critically important to measure the performance at the supply chain level as well as organizational performance. These stronger relationships result in improved performance of supply chain related functions such as logistics, purchasing and selling. In this particular case, a supply chain focus resulted in improved logistics performance, which in turn led to improved organizational performance. While organizational managers will likely still be evaluated on organization-level performance metrics, the route to enhancing organizational performance may well be through supply chain performance in the future. In short, global optimization trumps local optimization.

### **Statement of the Problem**

Distribution firms have always researched for methods to minimize the cost and maximize flow of shipping each unit of commodity to and fro across the supply and demand nodes. Though, warehousing has smoothed out the fluctuations in demand and supply at market place yet major constraints are being faced in assigning supply and properly matching orders placed during redistribution to final retailer's outlets. In recent times logistics firms are faced with greater problems of optimizing the whole system so as to

develop strategies that minimizes cost and maximizes flow (Hassan, 2010). This is because optimization helps to minimize shadow costs incurred which cannot be objectively determined by conventional accounting methods such as cost of losing a customer from a delayed delivery.

The efficiency of order processing has a direct effect on lead times. Orders are received from the sales team through the sales department. Many companies establish regular supply routes that remain relatively stable over a period of time providing that the supplier performs satisfactorily. Order-processing systems should function quickly and accurately. Other departments in the company need to know as quickly as possible that an order has been placed and the customer must have rapid confirmation of the order's receipt and the precise delivery time (Rosenbloom, 2003). Even before products are manufactured and sold the level of office efficiency is a major contributor to a company's image. Incorrect documentation and slow response by the sales team are often an unrecognized source of ill-will between buyers and sellers. When buyers evaluate their suppliers, efficiency of order processing is an important factor in their evaluation. Inefficient computer system for order processing allows stock levels and delivery schedules to be automatically updated so management can quickly obtain an accurate view of the sales position. Accuracy is an important objective of order processing as are procedures that are designed to shorten the order processing cycle.

Inventory management is a critical area of PDM because stock levels have a direct effect on levels of service and customer satisfaction. The optimum stock level is a function of the type of market in which the firm operates (Hakala, 2011). Few companies can say that they never run out of stock, but if stock-outs happen regularly then market share will be lost to more efficient competitors. The key lies in determining the re-order point. Carrying

stock at levels below the re-order point might ultimately mean a stock-out, whereas too high stock levels are unnecessary and expensive to maintain. The stock/cost dilemma is clearly illustrated by the systems approach to PDM (Hooley, 2005)

Stocks represent opportunity costs that occur because of constant competition for the company's limited resources. If the company's marketing strategy requires that high stock levels be maintained, this should be justified by a profit contribution that will exceed the extra stock carrying costs (Areni, 2003). Sometimes a company may be obliged to support high stock levels because the lead-times prevalent in a given market are particularly short. In such a case, the company must seek to reduce costs in other areas of the PDM. This is the gap this study will seek to fill.

Regardless of the extent of recent studies, physical distribution is still an alluring part of research due to its relative uniqueness and the increasing growth in adoption of supply chain strategies practices in organizations. To the best knowledge of the researcher, no study has been carried out on the effect of physical distribution management practices and the impact towards organizational (Howardell, 2003). This study therefore seeks to bridge this gap by investigating how physical distribution management affect the performance of an organization specifically Kapa Oil Refineries Limited Company.

### **Research Hypotheses**

- There is no significant effect of customer service on performance of Kapa Oil Refineries Limited Company.
- There is no significant effect of material handling on performance of Kapa Oil Refineries Limited Company.

- There is no significant effect of order processing on performance of Kapa Oil Refineries Limited Company.

## **Theoretical Framework**

### **Contingency Theory**

Contingency theory means that one thing depends on other things, and for organizations to be effective, there must be a "goodness of fit" between their structure and the conditions in their external environment. As such the correct management approach is contingent on the organization's situation (Daft, 2001). This study accepts the notion of contingency theory, which suggests that the selected PMS design and use must conform to its contextual factors (Pugh, 2008). However, for the purpose of this study, contingency theory is used and reviewed in a narrower focus as follows. Contingency theory represents a rich blend of organizational theory such as organizational decision making perspectives and organizational structure (Lawrence and Lorsch, 2004; and Donaldson, 2001). The essence of the contingency theory paradigm is that organizational effectiveness results from fitting characteristics of the organization, (such as its cultures) to contingencies that reflect the situation of the organization (Lawrence and Lorsch, 2004). According to Donaldson (2001), organizations seek to attain the fit of organizational characteristics to contingencies which leads to high performance.

Therefore, the organization becomes shaped by the contingencies (fit) to avoid loss of performance. Contingency theory is based on the premise that there is no universally appropriate or perfect measurement system which applies equally to all organizations in all circumstances. In fact, it is suggested that particular features of an appropriate measurement system will depend upon the specific



circumstances in which an organization finds itself. The study position is that contingency theory offers a useful way of conceptualizing the relationship between certain “contingency” variables and organization structure (PMS design and use). In the view of contingency theorists, the design of accounting information and control systems, i.e. one particular type of PMS, is based upon specific characteristics of the organization and its environment. Contingency theory is essentially a theoretical perspective within organizational theory that emphasizes how contingent characteristics or contextual factors (Daft, 2001) such as technology, size, environment, culture and strategy affect the design and functioning of organizations (Covaleski, Dirsmith & Samuel, 2006). This theory is relevant to the study because one thing depends on another thing to be effective hence for effective procurement measures the organization needs to have strategic measures put in place in procurement department.

### **Resource Based View Theory**

The resource-based view (RBV) emphasizes the firm’s resources as the fundamental determinants of competitive advantage and performance. It adopts two assumptions in analyzing sources of competitive advantage (see for instance Barney, 1991 and Peteraf and Barney, 2003). First, this model assumes that firms within an industry (or within a strategic group) may be heterogeneous with respect to the bundle of resources that they control. Second, it assumes that resource heterogeneity may persist over time because the resources used to implement firms’ strategies are not perfectly mobile across firms (i.e., some of the resources cannot be traded in factor markets and are difficult to accumulate and imitate). Resource heterogeneity (or uniqueness) is considered a necessary condition for a resource bundle to contribute to a competitive advantage. The argument goes “If all firms in a market have the

same stock of resources, no strategy is available to one firm that would not also be available to all other firms in the market.

The RBV of the firm examines the link between a firm’s idiosyncratic attributes and performance (Barney, 1991) based on its internal strengths to take advantage of opportunities and counter threats in the market, aimed at creating sustainable CA through acquiring, utilizing, and exploiting firm-specific resources (Riahi-Belkaoui, 2003) and, more importantly, integrating different resources to form strong organizational capabilities (Grant, 1996a; Verona, and Ravasi, 2003; and Zollo and Winter, 2002). Emerging as an extension of the RBV, the knowledge-based perspective defines firms as bodies that generate, integrate and distribute knowledge (McEvily, and Chakravarthy, 2002; Miller, 2002; Narasimha, 2000; and Narasimha, 2001) which is considered to be the key or strategic asset to hold the potential of sustainable CA (Grant, 1996a; and Lopez, 2005). Thus, adopting the resource-based theory of the firm blended with a knowledge-based approach, Citing the theory of technology assimilation, Khalifa and Liu (2003) also state that technologies must be infused and diffused into business processes to enhance organizational performance (Cooper and Zmud, 1990; and Fichman and Kemerer, 1997).

The resource-based view (RBV) has since become one of the dominant contemporary approaches to the analysis of sustained competitive advantage. A central premise of the resource-based view is that firms compete on the basis of their resources and capabilities (Peteraf and Bergen, 2003). Most resource-based view researchers choose to “look within the enterprise and down to the factor market conditions that the enterprise must contend with, to search for some possible causes of sustainable competitive advantages” holding constant all external environmental factors (Peteraf and Barney, 2003, p. 312). This inward-looking approach has proven to be both influential

and useful for the analysis of many strategic issues (Foss and Knudsen, 2003), among which the conditions for sustained competitive advantage and diversification.

The RBV suggests that the resources possessed by a firm are the primary determinants of its performance, and these may contribute to a sustainable competitive advantage of the firm (e.g., Hoffer & Schendel, 2004; Wenerfelt, 2007). According to Barney (2005), the concept of resources includes all assets, capabilities, organizational processes, firm attributes, information, knowledge, etc. controlled by a firm that enable the firm to conceive of and implement strategies that improve its efficiency and effectiveness (Barney, 2004; Daft, 2007). The RBV is an efficiency-based explanation of performance differences; it is concerned with Ricardian rents resulting from the scarcity of superior resources (Peteraf and Bergen, 2003) and quasi-rents, i.e. the difference between the value of an asset in its first best use and its value in its next best use. "Superior resources are more 'efficient' in the sense that they enable a firm to produce more economically and/or better satisfy customer wants" (Peteraf and Barney, 2003,) In contrast, Porter's industrial organization approach emphasizes the exercise of market power and monopoly-type rents as the sources of performance differentials (Conner, 2004).

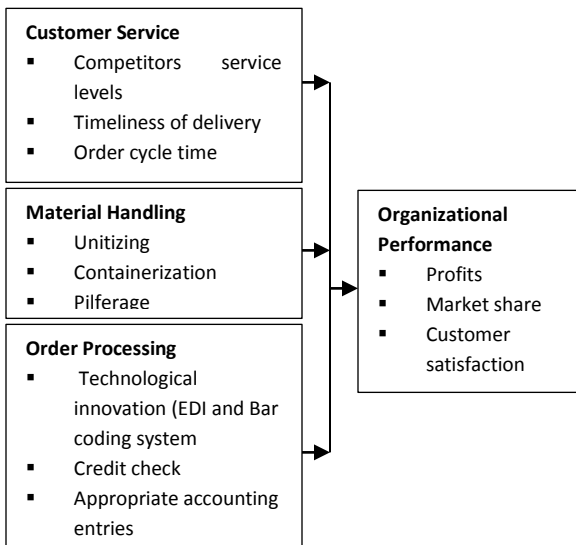
### **Agency Theory**

Agency theory is a concept that explains why behavior or decisions vary when exhibited by members of a group. Specifically, it describes the relationship between one party called the principal, that delegates work to another called the agent. It explains their differences in behavior or decisions by noting that the two parties often have different goals and, independent of their respective goals, may have different attitudes toward risk. The concept originated from the work of Adolf Augustus

Berle and Gardiner Coit means, who were discussing the issues of the agent and principle as early as 2006. Berle and Means explored the concepts of agency and their applications toward the development of large corporations. They saw how the interests of the directors and managers of a given firm differ from those of the owner of the firm, and used the concepts of agency and principal to explain the origins of those conflicts (Murtishaw & Sathaye, 2006).

Jensen and Meckling shaped the work of Berle and Means in the context of the risk sharing research popular in the 1960s and '70s to develop agency theory as a formal concept. Jensen and Meckling formed a school of thought arguing that corporations are structured to minimize the costs of getting agents to follow the direction and interests of the principals. The theory essentially acknowledges that different parties involved in a given situation with the same given goal will have different motivations, and that these different motivations can manifest in divergent ways. It states that there will always be partial goal conflict among parties, efficiency is inseparable from effectiveness, and information will always be somewhat asymmetric between principal and agent. The theory has been successfully applied to myriad disciplines including accounting, economics, politics, finance, marketing, and sociology (Nikkinen and Sahlström, 2004). This theory is relevant to the study because all organizations have people who explain their differences in behavior or decisions by noting that the two parties often have different goals and, independent of their respective goals, may have different attitudes toward risk. Sections of organizations interact amongst themselves in exchange of key information and materials.

## Conceptual Framework



Independent Variables

Dependent Variables

**Figure 1: Conceptual Framework**

### Customer service and organizational performance

Customer service (CS) is broadly defined as the combination of activities/strategies offered by retailers in an effort to increase service quality, i.e. a shopping experience that is perceived to be more rewarding (Howardell, 2003). Customer service is serious of activities designed to enhance the level of customer satisfaction that is, the provision of service before, during and after so that the product or service meet customer expectation. (Rhee and Bell, 2002). Service quality is an important aspect in customer service because it the ability to get the desired services from the chosen provider at the right price. Because desire is considered the ultimate for a customer, thus, it is proposed that the consumer ultimately wants: lower prices; improved choice of services; better value for money; acceptable quality; availability; that increase the sales the organization which may result Organizational growth (Lacobucci, 2005). Thus the study will consider the relationship between service quality and organizational growth.

According to Bell (2003), in an early study states that services are different from products in many ways. CS is firstly regarded an experience that differs from merchandise because it is intangible and inconsistent. While merchandise can be held and examined, a service, such as the assistance that is provided by a salesperson, cannot. This intangibility makes it difficult to objectively evaluate CS. Automated manufacturing for example makes the quality of merchandise consistent from one item to another while the quality of CS, i.e. the way in which the same products are presented to customers, can vary dramatically from store to store and from one customer to another.

According to kotler (2005) good customer service is an important aspect of whole business process. It is also creating customer satisfaction, loyalty, high profitability and eventually increases organizational growth. Thus, good customer service is the primary reason that customers differentiate company from its competitors. So, it is clearer to state that business success is due to the good customer service, in other words if the customer service of any organization increase, the growth of the organization increase in terms of sales growth, profit, brand equity and employee's growth.

According to Matušínská (2009), the next "evolutionary" form of CRM could be VCRM (Value Customer Relationship Management) which is basically CRM based on values or VKCRM (Value Key Customer Relationship Management) which is CRM that prioritizes communication with key customers. These systems will mainly prioritize the swiftness of processing questions (speed), detailed knowledge of the customer (access to data), immediate solution of problems (one-and-done), personalization (customized contacts), no waiting for assistance (direct help), functioning 24 hours a day, 7 days in a week (all time), complex ways of sales (multi-channel-strategy), direct contact with a



customer (one-to-one), single contact person (one-touch-point) and other.

### **Material Handling and organizational performance**

Hassan (2010) blueprints a framework that defines the steps that have to be taken during MHS design. Design process of MHS is a complex problem and it should be decomposed into smaller sub-systems. According to Hassan (2010), MHS consists of hardware, software, human and management sub-systems that work together to perform all activities related to material handling. Hardware is the largest sub-system and includes several physical elements such as equipment for transfer, storage, identification etc. Software ensures the communication link between hardware elements, but also the material handling system with its environment. Finally, human and management subsystem addresses operations of MHS, and aims to function it efficiently regarding company's manufacturing strategies.

After decomposing the problem into smaller steps, objectives of the MHS should be specified according to requirements and conditions of the overall system that MHS will operate under, and characteristics and inputs of its environment. Environment and its elements of the MHS, which it will operate in, should be identified in earlier phases of design, since it interacts, provides input and affects the MHS. Elements of external environment include suppliers, customers, regulations (e.g. safety constraints) where on the other hand, internal environment consist characteristics of the facility such as physical layout, type of production, type of industry and facility (Hassan, 2010).

Material Handling is the movement, storage, control and protection of material, goods, and products throughout the process of manufacturing, distribution, consumption and disposal. Materials handling makes production flow possible, as it gives

dynamism to static elements such as materials, products, equipment's, layout and human resources (Stock & Lambert, 2006; Chopra & Meindl, 2003). Groover (2003) highlights that despite its importance, materials handling is a topic that frequently is treated superficially by the companies. However, other authors have perceived its relevance. The relevance of materials handling stems from the intrinsic relationship that it has with production flow. When it presents an imbalance, there is formation of extra stock or rupture in supply. When the flow does not have enough velocity, transit time is long and the system is not capable of serving the customers when they need it.

It is well understood that material handling improvement may have positive effects over production. However, it is not only production, but the way the employees see the new situation. When the perception is favorable, the benefits are possible; if not, behavioral issues can emerge. Evaluations are important when interventions into the work environment are implemented. The present work is specifically related to materials handling management. By means of effective materials handling management, the company's operational performance may improve (Chopra & Meindl, 2007; Rosenbloom, 2003) aiming to satisfy the customers or meet their expectations in terms of their needs, desires and demands (Oliver, 2010; Stock & Lambert, 2004).

Beyond the basic function of movement, it is also relevant to cite the functions of storage and information transfer, which occurs simultaneously and has both strategic and operational dimensions. Organizations are relying on information systems using tools like Electronic Data Interchange (EDI), or similar information technology resources, to gain in precision and reliability, in the interchange, and availability of information (Lambert & Stock,

2001; Laudon & Laudon, 2006, Milan, Basso & Pretto, 2007). According to Asef-Vaziri & Laporte (2005) an important proportion of manufacturing expenses can be attributed to material handling and the most critical material handling decisions in this area are the arrangement and design of material flow patterns. This idea is shared by Ioannou (2002), which argues that an important aspect of any production system is the design of a material handling system (MHS) which integrates the production operations.

Material handling accounts for 30–75% of the total cost of a product along the production chain, and efficient material handling can be responsible for reducing the manufacturing system operations cost by 15–30% (Lashkari, 2006). For Bowersox and Closs (2007), the main logistic responsibility in manufacturing is to formulate a master-program for the timely provision of materials, components and work-in-process. Stevenson (2004) understands that logistics (including materials and goods flowing in and out of a production facility as well as its internal handling) has become very important to an organization to acquire competitive advantages, as the companies struggle to deliver the right product at the correct place and time. The main challenge is to promote, with low cost, a flow whose velocity allows the execution of manufacturing process with the expected satisfaction level.

#### **Order Processing and organizational performance**

Efficient and accurate order processing is essential to the success of any type of business. A truly efficient system will require that orders must be verified with customers to ensure there are no questions about what the customer wants. (Bergstra, 2005) Once the order is verified, the items needed to fill the order accurately must be collected in a timely fashion. After collecting the necessary products, they must be packaged

securely and delivered to the customer within the time frame promised. Failure to efficiently manage any of these tasks increases the chances of disappointing the customer, and thus losing any possibility of repeat business.

Order processing is the process or work-flow associated with the picking, packing and delivery of the packed items to a shipping carrier. Order processing is a key element of order fulfillment. Order processing operations or facilities are commonly called "distribution centers according to (Bozutti 2007). It comprises in undertaking the processes that are needed to make certain orders processed quickly, accurately, and efficiently. Order-processing and inventory control are related to each other. Order processing is considered as the key to customer service and satisfaction. It includes receiving, recording, filling, and assembling of products for dispatch. Fricke Lambert (2004) the amount of time required from the dates of receipt of an order up to the date of dispatch of goods must be reasonable and as short as possible.

Order processing is the term used to identify the collective tasks associated with fulfilling an order for goods or services placed by a customer. The processing procedure begins with the acceptance of the order from the customer, and is not considered complete until the customer has received the products and determined that order has been delivered accurately and completely. Companies often invest a great deal of time and effort in designing an efficient strategy for processing orders, thus increasing the possibility of establishing a long-term working relationship with its customers, (Hofstede and Weske, 2003).

When physical goods are involved in order processing, a more complex approach is commonly employed. Customers may place orders by submitting a written request, by phone, or by using online order forms that are routed directly to the

seller. (Berens, 2005) Each order is then routed to a distribution center, where the type and quantity of items requested by the customer are collected and prepared for shipping. In order to facilitate this process, larger companies often operate multiple distribution centers that are strategically located, allowing for the shipment to be delivered to the customer as soon as possible.

### METHODOLOGY

The researcher used descriptive research design. Descriptive study is concerned with finding out who, what, where and how much of a phenomenon, which is the concern of the study. Sekaran (2011) observes that the goal of descriptive research is to offer the researcher a profile or describe relevant aspects of the phenomena of interest from the individual organization, industry. The researcher used regression analysis to show the effect of the independent variables on the dependent variable. The regression equation was as follows;  $Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \epsilon$

$\alpha$  = Constant

$\beta_1, \beta_2, \beta_3$ , = Partial regression coefficient

Y = Organizational Performance

$X_1$ = Customer Service

$X_2$ = Material handling

$X_3$ = Order Processing

$\epsilon$  = error term

### FINDINGS AND DISCUSSION

To establish the relationship between the independent variables and the dependent variable the study conducted correlation analysis which involved coefficient of correlation and coefficient of determination.

#### Coefficient of Correlation

In trying to show the relationship between the study variables and their findings, the study used the Karl Pearson's coefficient of correlation (r). This is as shown in Table 1 below. According to the findings, it was clear that there was a positive correlation between the independent variables, customer service, material handling and order processing and the dependent variable, organizational performance. The analysis indicates the coefficient of correlation, r equal to 0.384, 0.601 and 0.149 for customer service, material handling and order processing respectively. This indicates positive relationship between the independent variables namely; customer service, material handling and order processing and the dependent variable, performance of Kapa Oil refineries limited with material handling contributing most to the dependent variable.

**Table 1: Correlation matrix**

	Organizational Performance	Customer Service	Material Handling	Order Processing
Organizational Performance	1			
Customer Service	.384*	1		
Material Handling	.601**	.271*	1	
Order Processing	.000	.029		1

<b>Order</b>	.149	.536**	.116	1
<b>Processing</b>	.699	.000	.359	
	65	65	65	65

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\*. Correlation is significant at the 0.05 level (2-tailed).

### Coefficient of determination

Table 2 showed that the coefficient of determination was 0.415. Coefficient of determination explains the extent to which changes in the dependent variable can be explained by the change in the independent variables or the

percentage of variation in the dependent variable (Organizational performance) that is explained by all independent variables. From the findings this meant that 41.5% of project implementation is attributed to combination of the three independent factors investigated in this study.

**Table 2: Coefficient of determination (R<sup>2</sup>)**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.644 <sup>a</sup>	.415	.386	1.69776

a. Predictors: (Constant), Order Processing, Material Handling, Customer Service

This means that 41.5% of the relationship is explained by the identified three factors namely customer service, material handling and order processing. The rest 58.5% is explained by other factors in the industry not studied in this research. In summary the three factors studied namely, customer service, material handling and order processing explains or determines 41.5% of the relationship while the rest 58.5% is explained or determined by other factors.

the statistical significance was considered significant if the p-value was less or equal to 0.05. The significance of the regression model was as per Table 3 below with P-value of 0.00 which is less than 0.05. This indicates that the regression model is statistically significant in predicting factors affecting organizational performance at Kapa Oil Refineries limited in Mombasa.

### Regression results

#### Analysis of Variance (ANOVA)

The study used ANOVA to establish the significance of the regression model. In testing the significance level,

Basing the confidence level at 95% the analysis indicates high reliability of the results obtained. The overall ANOVA results indicates that the model was significant at F = 14.406, p = 0.000.

**Table 3: ANOVA**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	124.574	3	41.525	14.406	.000 <sup>b</sup>
	Residual	175.826	61	2.882		
	Total	300.400	64			

a. Dependent Variable: Organizational Performance

b. Predictors: (Constant), Order Processing, Material Handling, Customer Service

### Multiple Regression results

The researcher conducted a multiple regression analysis as shown in Table 4 so as to determine the

**Table 4: Regression Coefficients**

Model		Unstandardized Coefficients		Standardized	T	Sig.
		B	Std. Error	Coefficients		
1	(Constant)	7.166	4.194		1.709	.000
	Customer Service	.244	.121	.255	2.014	.000
	Material Handling	.983	.200	.529	4.925	.000
	Order Processing	.028	.132	.026	.215	.000

a. Dependent Variable: Organizational Performance

The regression equation was:

$$Y = 7.166 + 0.244X_1 + 0.983X_2 + 0.028X_3$$

Where;

Y = the dependent variable (Organizational Performance)

X<sub>1</sub> = Customer service

X<sub>2</sub> = material handling

X<sub>3</sub> = Order processing

The regression equation above has established that taking all factors into account (Organizational performance as a result of customer service, material handling and order processing) and constant at zero, organizational performance was 7.166. The findings presented also shows that taking all other independent variables at zero, a unit increase in customer service led to a 0.244 increase in the scores of organizational performance; a unit increase in material handling led to a 0.983 increase in organizational performance; a unit increase in order processing led to a 0.028 increase in the scores of organizational performance. This therefore implies that all the three variables have a positive relationship organizational performance

relationship between organizational performance and the three variables investigated in this study.

with material handling contributing most to the dependent variable.

### Conclusion

From the research findings, the study concludes all the independent variables studied have significant effect on organizational performance as indicated by the strong coefficient of correlation and a p-value which is less than 0.05. The overall effect of the analyzed factors was very high as indicated by the coefficient of determination. The overall P-value of 0.00 which is less than 0.05 (5%) is an indication of relevance of the studied variables, significant at the calculated 95% level of significance. This implies that the independent variables namely; customer service, material handling and order processing had significant effect on performance of Kapa Oil Refineries Limited. The study concludes that as customer service is maximized, customer loyalty and customers' communication had been prioritized. On material handling, the study concludes that company's operational performance has been improved. Lastly, on order processing, the study concludes that customer orders were fulfilled.



## Recommendation

The study recommended that:

- Customer service should be an experience such that a customer would not forget thus enable repeat customers.
- Material handling should be given priority in the organization to enable efficiency and smooth operation.
- Order processing should be automated to enhance a competitive edge and retain customers thus positively enhancing organizational performance.

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