



**STRATEGIC MANAGEMENT PRACTICES INFLUENCING OPERATIONAL PERFORMANCE OF CONTAINER TERMINALS AT KENYA PORTS AUTHORITY**

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**ABSTRACT**

*The introduction of containerization triggered complementary technological and organizational changes that revolutionized global freight transport. Despite numerous claims about the importance of containerization in stimulating international trade, and economic aspects worldwide, much has not been discussed regarding strategic management practices and containerization. The study sought to establish strategic management practices influencing performance of container terminals at Kenya ports authority. A descriptive research design was used where the target population comprises of 230 employees at KPA Mombasa terminal KPA. The study's sample frame included the top management, middle management and lower subordinate staff at KPA. The study used simple random sampling technique where 30% of the population from sample frame was randomly selected to make a sample size of 69 employees at KPA. Data collection was done using questionnaires to gather primary data where both structured and unstructured questions was used to ensure that all areas were captured. Both open ended and closed ended questions was used to allow respondents to elaborate more on the answers provided. The Validity and reliability of the study was done to check the internal consistency of the questionnaires where a cronbach's alpha value of 0.70 or more was required before going to the field for data collection. Data was then be analyzed by use of descriptive statistics (frequencies and percentages) as well as inferential statistics. The Statistical Package for Social Sciences (SPSS V23) was used for data analysis. The study found out that the ANOVA results indicated that the model was significant at  $F = 60.416$ , and  $df$  of 4 with  $p < .05$ . At 95% confidence level the analysis indicates high reliability of the results obtained thus indicating that the study was statistically determined. The study showed that there was a positive and significant relationship between innovation strategy and performance (0.005) which is less than 0.005, leadership strategy and performance (0.000) which is less than 0.005. However there was no significant relationship between strategy evaluation and performance (0.343), strategy implementation and performance (0.417)*

**Key Terms:** Container terminals, Dwell time, Innovation strategy, Strategy evaluation, Strategic leadership, Strategy implementation, Quay crane

## INTRODUCTION

Containerization of ship cargo was first introduced in 1956 (Levinson, 2006), aiming to cut down the costs of maritime transport by reducing cargo handling costs. Instead of loading/unloading each piece of transport item to or from a ship in a labor intensive manner, containerization increases the efficiency and speed of transport by reducing the packing requirements and handling processes at all transfer points. At the end of 2005, the world container fleet was expected to have increased to 21.6 million TEUs (Twenty foot equivalent units) (UNCTAD, 2006). Thus, countries without adequate unitized transport facilities will be disadvantage in their international trade (Castro, 1999).

In order to achieve economies of scales, new ships are built with much greater capacity. To date, the largest container vessel can carry 11,000 TEUs. However, the deployment of larger ships demands huge investment in providing greater depth alongside the berth of the calling ports as well as more powerful quay cranes with long outreach and lift height. For efficient operation, ports also require a large storage yard and a better road and rail infrastructure. To satisfy the growing demand of container berths, ESCAP (2005) estimates that US\$27 billion is needed from 2002 to 2015 for 569 new container berth in the Asia and Pacific region (ESCAP, 2005).

With regards to the growing international sea traffic and changing technology in the maritime transport industry, seaports are coping with mounting pressures to upgrade and provide cutting edge technology. They are also being forced to improve container terminals efficiency to provide comparative advantages that will attract more traffic. Some of the key challenging factors terminal operators are surmounting to is to secure traffic flows and prevent diversion to nearby ports including handling containers and cargos more rapidly, providing more adequate and performing equipment, reducing berth times and delays,

enabling large storage capacity and ensuring multimodal connections to hinterland (Castro, 1999). However, container terminals efficiency is often associated with productivity and performance; also additional factors that are associated with the more organizational side of production such as how efficiently ports use inputs to produce current output levels and whether the technologies adopted by container terminal operators are most efficient, that are critical to determining container terminals efficiency (Chin and Tongzon, 1998).

Efficiency often means speed and reliability of container terminal services. In a survey conducted by UNCTAD (2011), 'on time delivery' was cited to be a major concern by most shippers (UNCTAD, 2006). In fast paced industries where products must be moved to the markets on time, terminal operators are vital nodes in logistics chain and as such must be in a position to guarantee shipping lines very reliable service levels. These include on time berthing of vessels, guarantee turnaround time for vessels and guaranteed connection of containers. That is the total turnaround time it takes to wait for pilot to berth, terminal time, unberthing and final departure from port area (Tongzon and Ganesalingam, 2009).

Terminal efficiency can be reflected in the freight rates charged by shipping companies, turnaround time of ships and cargo dwelling time. The larger a ship stays at berth, the higher is the cost that a ship will have to pay. This can be passed on to shippers in terms of higher freight charges and longer cargo dwelling time, thus reducing the attractiveness for them to hub at a port. Tongeon and Ganesalingam (2009) identified several indicators of terminal efficiency and categorized them into two broad groups namely operational efficiency measures and customer oriented measures. The first set of measure deals with capital and labor productivity as well as asset utilization rates. The second set includes direct charges, ship's waiting time,

minimization of delays in inland transport and reliability (Tongzon and Ganesalingam, 2009).

A Survey conducted by the East African Logistics Performance reveals significant improvement in port and corridor efficiency. Ongoing reforms and infrastructure improvements at the port of Mombasa have yielded significant results as cargo dwell time has dropped from an average 6.5 days in 2011 to 5 days in 2012. Despite these improvements, the efficiency at the port of Mombasa is still below the internationally acceptable standards of a maximum 3 days dwell time (East African Logistics Performance Survey, 2012). Compare to 2011, corridor efficiency has slightly improved resulting from concerted efforts by EAC governments to upgrade regional road infrastructure and eliminate nontariff barriers. Despite these initiatives, truck turnaround times remain low as an average truck records less the 5,000KMs per month against an industry practice of 9,000 to 12,000KMs per months (East African Logistics Performance Survey, 2015).

The efficiency of container terminal is still affected by the high regulatory burden of the road transport sector with numerous checkpoints (weight bridges, customs and police checks) along the transport corridor. This situation is compounded by congestion in urban areas along the transport corridor and less than adequate investment in the rail network to effectively complement the road transport system (East African Logistics Performance Survey, 2015). The Port of Mombasa is the largest in East Africa and a vital gateway for imports and exports to Kenya and its neighboring countries. The imports and exports that pass through the Port of Mombasa are critical to Kenya's economic growth, and to the economic well being of its neighbors as well. Liquid bulk items, mostly petroleum, oil and lubricants are the single greatest import item by weight. Without these imports, Kenya's economy (and most other countries of the

EAC) which depend on imports for all of its petroleum needs, would grind to a halt.

The next four largest items by weight, maize clinker, wheat, iron and steel are critical in meeting the country's food needs and in supporting its vibrant construction industry (KPA, 2014). Conversely, Mombasa entry port has exceeded its design capacity, yet it is expected to handle growing imports and exports. The port is already operating at maximum capacity for both general and containerized cargo, and will suffer progressive declines in operational effectiveness unless both capacity and terminal efficiency issues are urgently addressed (KPA, 2010). In terms of capacity, container imports at the port have risen on average 10 percent each year since 2005 (KPA, 2014), despite relatively low GDP growth rates in 2007 to 2008. In term of efficiency, several key issues need to be addressed for both imports and exports that relate to movement of goods through the port, and inefficiencies caused by the management of trucks loading and unloading goods, collection of custom duties, inspection, etc. The operational capacity for container cargo is particularly acute with the growing demand in containerized cargo; the Mombasa entry Port is facing serious capacity problems (KPA, 2010).

Short term immediate impact is an increase in vessel delays, port congestion surcharges, and slower throughput of the port (when congested) thus causing Significant cargo delays and higher costs to importers. Exporters also experience increased costs because of possible unscheduled delays at the port, disappointing customers who have based their own business decisions on fixed delivery schedules. The fact of the matter remains that, the capacity issues at the port of Mombasa could act as a brake on growing trade within the region (KPA, 2014) The survival and success of an organization occurs when the organization creates and maintains a match between its strategy and the

environment and also between its internal capability and its strategy (Grant, 2002).

Ports are critical enablers of a country's competitiveness on the international market hence they need to be oriented towards supply chain to meet the changing needs of their customers. Kenya Ports Authority's mandate is to maintain, operate, improve and regulate all scheduled sea ports situated along the coastline (KPA, 2012). To be more responsive to customers' demands and keep abreast with global shipping trends, the Kenya Ports Authority has resorted to various strategies to uplift its services to the world-class level. (KPA, 2012)

The Kenya Ports Authority (KPA) is a state corporation charged with the responsibility of managing the Port of Mombasa, and all other ports along the Kenyan coastline. KPA is one of the leading parastatals in the Country and a major facilitator of sea-borne trade within the East and Central African region. Its strategic direction is guided by her vision "world class seaports of choice". The mission is to "facilitate and promote global maritime trade through provision of competitive port services (KPA, 2009, KPA, 2012).

The port is equipped to handle a wide range of cargoes including dry bulks such as grain, fertilizers, cement and soda ash and liquid bulks such as crude oil and oil products as well as bagged products like coffee, tea, sugar, among others, break-bulk including iron and steel, timber, motor vehicles, machinery and containerized cargo. The Authority's mandate is to maintain, operate, improve and regulate all scheduled sea ports situated along Kenya's coastline. Other ports include Lamu, Malindi, Kilifi, Mtwapa, Kiunga, Shimoni, Funzi and Vanga. It is only the port of Mombasa which is fully developed with modern equipment hence making it the principal port in the region. At the port of Mombasa the Kenya Ports Authority's core business is to provide: safe navigation, pilotage, berthing, mooring, Pollution control, stevedoring, shore

handling and storage services (KPA, 2009, KPA, 2012).

KPA envisions itself to be World class seaports of choice with a mission of facilitating and promoting global maritime trade through provision of competitive port services. To achieve these vision and mission, KPA is guided by five key objectives which include: improving managerial, operational and financial performance; developing, maintaining and sustaining port facilities and infrastructure. Through this KPA has been in apposition to meet customer needs; promoting the Port of Mombasa as a primary gateway to the great lakes region and also serve the horn of Africa; maintaining and promoting a clean, safe working and rewarding environment; integrating the functionality of the Port of Mombasa in the development vision of the republic of Kenya and the region; and instilling sound corporate governance practices. KPA, (2012)

With growing international sea traffic and changing technology in the maritime transport industry, sea ports are coping with mounting pressures to upgrade and provide cutting edge technology. They are also being forced to improve terminals efficiency to provide comparative advantages that will attract more traffic. Some challenging factors include: providing adequate and performing equipment, reducing berth times and delays, enabling large storage capacity and ensuring multimodal connections to hinterland (UNCTAD, 2006); as well as improving infrastructure (Haralambides 2002).

### Research Hypotheses

The study was guided by the following null hypothesis

- **H<sub>01</sub>:** There is no significant relationship between innovation strategy and performance of container terminals at Kenya ports Authority

- **H<sub>02</sub>:** There is no significant relationship between strategy evaluation and performance of container terminals at Kenya ports Authority
- **H<sub>03</sub>:** There is no significant relationship between strategic leadership and performance of container terminals at Kenya ports Authority
- **H<sub>04</sub>:** There is no significant relationship between strategy implementation and performance of container terminals at Kenya ports Authority

## RELATED LITERATURE

### Theoretical Framework

#### Resource Based Theory

The resource based view (RBV) is a management tool applied to establish strategy resources available or accessible to an organization. The ultimate principle of the RBV lies on the fact that a competitive advantage of an organization depends on utilization of valuable resources (Wernerfelt, 1984) into a sustainable competitive advantage. A resource based view of an organization explains its ability to deliver sustainable competitive advantage when resources are managed in such a way that their outcomes cannot be copied by competitors to create a competitive barrier. As explained in RBV, the organizations competitive advantage can only be reached if the organizations unique resources have characteristics that are rare, valuable, incomparable or un identical (Makadok, 2001). The main concern in the RBV is based on the ability of the organization to maintain a combination of its unique resources in a way that cannot be imitated by competitors. The above theoretical highlights guided this study in various ways. The theory is highly useful in understanding how the innovation strategies, strategic direction, strategic leadership and strategic implementation are used by organizations and how organization plan and execute these strategies. RBV was adopted to reinforce the present study, in view of the highly dynamic and competitive business environment, for successful strategy implementation, with a view to

gain competitive advantage and expand market share both locally and globally. RBV was thus engaged to help in the understanding of how well organization can mobilize their resources to achieve successful strategy implementation.

#### Contingency Theory

Contingency theory means that things 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 good management approach is contingent on the organization’s situation. This study accepts the notion of contingency theory that proposes that selected implementation design use must be in conformity to its contextual factors. However, for the purpose of this study, contingency theory is viewed in finer focus as follows. It’s widely accepted that contingency theory represents a very ironic mixture of organizational theory such as organizational decision making and organization structure (Donaldson, 2001). The core part of contingency theory model is that organizational effectiveness originates from fitting characteristics of the organization, (such as innovation) to contingencies that reflect the situation of the organization. As argued by Donaldson (2001), the organization strives to attain the fit of the organizational characteristics that leads to high performance. The organization is therefore is shaped by the contingencies (fit) to avoid dipping in performance. This shows that, there is an alignment between organization and its contingencies and this alignment creates and an association between organizational contextual characteristics and contingencies.

#### The concept of Performance Theory

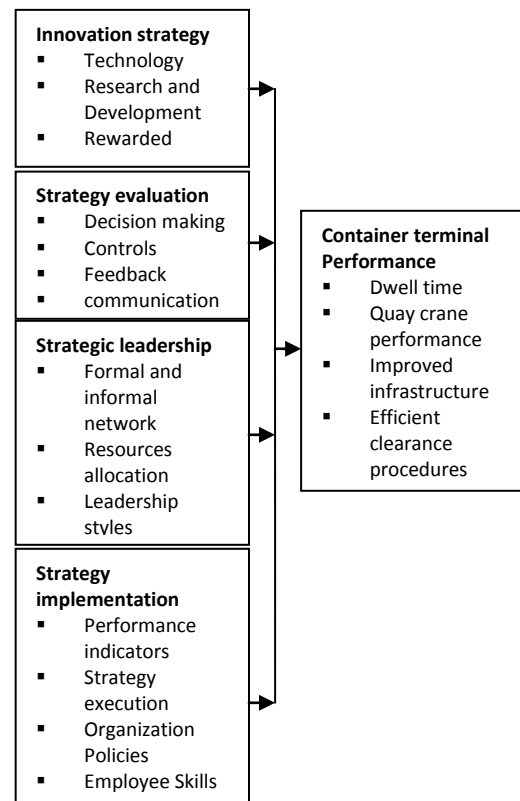
The third theory of the study the concept of performance explained by the balanced scorecard methodology as an analysis technique designed to

translate an organization's mission statement and overall business strategy into specific, quantifiable goals and monitor the organization's performance in terms of achieving these goals. As explained by Kaplan and Norton (1992), balanced scorecard methodology as a comprehensive approach that analyzes an organizations overall performance in four way, based on the idea that assessing performance through financial returns only provides information about how the organization did prior to the assessment, so the future performance can be predicted and proper actions taken to create the desired future.

The methodology further examines performance in four areas; cost analysis in terms of procurement the most traditionally used performance indicator, includes assessments of measures such as operating costs and return on investment customer analysis looks at customer satisfaction (need assessment) and retention ; internal analysis looks at production and innovation, measuring performance in terms of maximizing profit from current products or services provided and following indicators for future productivity; and finally, learning the growth analysis explores the effectiveness of management in terms of measures of employee satisfaction and retention and information system performance.

As a structure, balanced scorecard methodology breaks broad goals down successfully into vision, strategies, tactical activities, and metrics. As an example of how the methodology might work, an organization might include in their mission statement. The performance indicators such as delivery performance, customer satisfaction and quality of products or services are weighted to indicate their relative importance to the organization.

## Conceptual framework



**Independent Variables      Dependent Variable**

**Fig 1: Conceptual framework**

### Innovation strategy

Innovation strategy is a plan used by an organization to encourage the use of technology or services, this is normally done by investing resources in research development (R&D) undertakings. Today innovation is being regarded as the most essential instrument in every organization that intends to explore new markets and gain competitive edge (Gunday et al, 2011). The competitive increase in both local and global market, has been attributed to rapid advancement in technologies and competition strategies driven by innovation. Thus, innovation is being regarded as a tool for transformation of ideas, knowledge and information to enhance organizations competitiveness and sustained competitive

advantages. The organizations apply different innovation strategies, but an effective innovation strategy should be one that is inspiring and adds value to product or service being developed. According to G.R. Jones and W.L. Hill (2009) innovation is an act of creating new products or processes that are unique. The four basic types of innovations as stated in Schumpeter's classification of innovation types, OECD (2005) are; product, process, market and organization innovations and the possible combination of these basic types subject on availability of resource the organization has. (Johnson and Scholes 2002)

First, a product innovation involves the development of a new product with attributes that are superior to those already existing in the market to increase national and international competition. Second, a process innovation is the employment of a new or improved production or method of service delivery. This will entail changes in equipment designed to reduce unit costs of production or service delivery, but maintain product and quality service delivery. Third, a market innovation is defined as the application of a new marketing strategies that may involve changes in product design, packaging and pricing. The main aim is to meet customer needs and to open up new market fronts and position the organization to increase sales incomes (Gunday et al, 2011)

Finally, an organizational innovation is the implementation of a new organizational method or techniques in the firm's business practices, workplace organization or external relations. Such innovations have a tendency to increase the performance of the organization by cutting on administrative and transaction costs, improving workplace satisfaction and increase labour.

The aspect of customer responses time; the time it taken to deliver goods or performance of services at container terminal is very important. Slow response time can be a major source of customer dissatisfaction. However, superior design and

services at container terminal will differentiate enhance customer responsiveness and the ability to develop new innovative processes gives the KPA complete advantage that can allow it to lower its cost structure below that of their arrivals, competitors(Gunday et al, 2011)

### **Strategy evaluation**

Strategic evaluation is the assessment process that provides executives and managers performance information about programs, projects and activities designed to meet business goals and objectives (Verweire 2014). According to Njanja,( 2009) strategic management practices largely depends on the effectiveness of strategy evaluation .Strategy evaluation mainly examination and appraises intercessions at the level of key objectives.

Strategy evaluation and control process are aimed at serving as the mechanism for identifying and acting upon opportunities to improve the organization overall effectiveness by improving management systems and processes. Strategy evaluation process is vital on the grounds that simply subsequent to picking up an exhaustive comprehension of the methodology's quality would one be able to recognize what components of system ought to be changed and, similarly critical, which components of technique are sound and ought not be adjusted. Furthermore, the assessment procedure itself will recommend vital options. Technique of an enterprise is best assessed by looking at it through an assortment of focal points. Every focal point will give an alternate point of view and, perhaps, unique answers. It is just through the consolidated point of view that originates from taking a gander at past results, tentative arrangements, and the hazard inborn in an association's methodology that a strategist can survey the general nature of the company's vital push. Johnson and Scholes (2002) points out that, strategic evaluation is special focus is the separation between obvious current operating results and the



factors that underlie success or failure in the chosen domain of activity.

### **Strategic leadership**

One of the major role of managers is to use their knowledge, energy, and enthusiasm to provide strategic leadership for their subordinates that can lead to high-performing organization, some of the key characteristics that have been identified are; vision, eloquence and consistence. One of the tasks of leadership is to give a sense of direction as to where the organization should go and communicate eloquently and in a consistent manner until the vision becomes part of organization's culture (Verweire 2014)

A strategic leadership works and promotes development of network of both formal and informal sources to keep them well informed about what is going on within the organization at all levels and this is the best way to gather information. It is also believed that higher performance leaders are skilled at delegation. This willingness to delegate and empowering subordinates to make decision is motivation tool, that often results to decision being made are implemented by subordinates themselves with no resistance. This enhances performance and also helps managers to avoid being overloaded with responsibilities that can compromise their performance. Edward Wrap, in his article on leadership, argued that strategic leaders must play the power game with skill in order to attempt to build consensus for their ideas rather than using authority to force their way through, this was also in agreement with Jeffery Pfeffer views that power is about control of resources that is used to acquire other critical resources important to organization performance. (Pearce and Robinson, 2007)

### **Strategy implementation**

The strategy implementation is critical to any organization's success. It addresses how to reach the organizations desired goals and objectives. This

involves designing, delivering, and supporting products; improving the efficiency and effectiveness of operations which goes in hand with designing the organization's structure, control systems and culture. According to Jones and Hill (2009), implementation strategies are usually within the organization and emerge without prior planning. Being a fundamental tool in an organization, it meant to provide guidance and direction for the activities of the organization. The main aim of strategy is to provide directional signals to the organization that warrant it to achieve its objectives while responding also to opportunities and threats (Pearce and Robinson, 2007).

According to Johnson and Scholes (2002), views strategy as the direction and scope of an organization over the long-term, which achieves advantage for the organization through its configuration of resources within its environment with consideration of fulfilling the expectations of stakeholders. In trying to implement, several researchers have been able to identify problems that hinders organizations implementation of strategies which include; poorly documented strategy, misunderstanding of the strategy, lack of commitment to the strategy, lack of communication, insufficient time allocation for strategy implementation, unaligned organizational systems and resources, poor coordination and sharing of responsibilities, weak management role in strategy implementation, inadequate capabilities (of both managers and employees), poor reward system, competing activities, a lack of strategic thinking and implementation skills in middle management, poor cultural and structural alignment and other uncontrollable environmental variables (Aaltonen & Ikävalko, 2002; Alexander, Beer & Eisenstat, 2000; Higgins, 2005; Verweire (2014).

### Container Terminal Performance

Container terminals forms an integral part in operationalization of a port and is also an important function in the logistics chain. The infrastructure, and equipment such as quay cranes used in transshipment of containers in the container terminal plays a very significant role in determining the overall transport time, and its optimal productivity is paramount for efficiency performance of port operations where loading and unloading operations are performed in the quayside area by quay cranes (QCs). These QCs cranes offer high potential capacity, but also require a well-integrated terminal process to improve vessel transshipment time and also reduce dwell times.

Clearing a container at the port of Mombasa in Kenya is done by Kenya Ports Authority (KPA) & Kenya Revenue Authority (KRA), where all imports undergo various tasks through Kenyan customs and Kenya Port Authority (KRA).

Before the actual vessel arrival date in Mombasa, the shipping line has to lodge its manifest online using Simba Tradex system, and the manifest number is given to shipping line. A clearing agent will then prepare a customs entry against the uploaded manifest on the Simba Tradex online system. The manifest uploaded is crosschecked with duly endorsed Bill of Lading (BOL) by the consignee. Once verified, the shipping line issues a release order. At this point duty and taxes are paid and receipts are issued. Customs then issues Customs Release Order (CRO). (KPA 2017)

### METHODOLOGY

The study used descriptive research design to obtain information concerning the relationship between the strategic management practices and performance of container terminals at KPA. The study had a sample size of 229 respondents.

**Table 1: Innovation Strategy**

Innovation Strategy	Mean	Std. Deviation
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Multiple regression models were used to show the relationship between the dependent variable and the independent variables. The regression model to be used was:

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

Where Y = performance of container terminal (dependent variable)

$\beta_0$  = Constant of Regression

$\beta$  = The Beta coefficients for the corresponding X (independent) terms

$X_1$  = innovation strategy

$X_2$  = strategy evaluation

$X_3$  = strategic leadership

$X_4$  = strategy implementation

$\epsilon$  = Error of term

### RESEARCH FINDINGS

#### Influence of innovation strategy on performance of container terminals at KPA

The respondents were requested to indicate how innovation strategy influences performance of container terminal in a likert scale. The range was 'strongly disagree (1)' to 'strongly agree' (5). The scores of strongly disagree and disagree have been taken to represent a variable which had a mean score of 0 to 2.5 on the continuous likert scale; ( $0 \leq S.D < 2.4$ ). The scores of 'neutral' have been taken to represent a variable with a mean score of 2.5 to 3.4 on the continuous likert scale: ( $2.5 \leq N < 3.4$ ) and the score of both strongly agree and agree have been taken to represent a variable which had a mean score of 3.5 to 5.0 on a continuous likert scale; ( $3.5 \leq S.A < 5.0$ ). A standard deviation of  $> 0.7$  implies a significant difference on the impact of the variable among respondents. The results are presented in table 1.

Lack of train KPA has a budget for R&D	3.47	.509
Research and development spending at KPA improve the level of productivity	4.19	.568
Use of technology innovation promotes a friendly and helpful staff hence customer satisfaction is realized through high quality services given to customers	4.18	.842
Innovation at KPA is encouraged and rewarded	4.12	.643
KPA has well equipped latest technological infrastructure and machinery	4.07	.695
Reduction of costs and conformance to regulations contributes to profitability.	4.02	.645
Average Mean	4.008	

From the table 1 the results obtained from the survey on the respondents to find out the influence of innovation strategy on performance of container terminals show that the average mean was 4.008 which implied that innovation strategy has major influence on the operational performance of container terminals at Kenya Ports Authority. This is because the average mean ranged between  $3.5 \leq S.A. < 5.0$  which was rated "Strongly agree". The findings concurs with G.R. Jones and W.L. Hill (2009) observation that innovation is an act of creating new products or processes that are unique and, is the most essential and influential instrument in every organization that can be used explore new markets and gain competitive edge (Gunday et al, 2011). This is also in agreement with respondents' responses with highest mean of 4.19 that research and development spending at KPA improve the level of productivity.

### **Influence of Strategy Evaluation on Performance of Container Terminals at KPA**

The respondents were requested to indicate how strategy evaluation influence operational performance of container terminals in a likert scale. The range was 'strongly disagree (1)' to 'strongly agree' (5). The scores of strongly disagree and disagree have been taken to represent a variable which had a mean score of 0 to 2.5 on the continuous likert scale; ( $0 \leq S.D < 2.4$ ). The scores of 'neutral' have been taken to represent a variable with a mean score of 2.5 to 3.4 on the continuous likert scale: ( $2.5 \leq N < 3.4$ ) and the score of both strongly agree and agree have been taken to represent a variable which had a mean score of 3.5 to 5.0 on a continuous likert scale; ( $3.5 \leq S.A. < 5.0$ ). A standard deviation of  $> 0.7$  implied a significant difference on the impact of the variable among respondents. The results were presented in table 2.

**Table 2: Strategy Evaluation**

<b>Strategy Evaluation</b>	<b>Mean</b>	<b>Std. Deviation</b>
Strategies are reviewed periodically to improve on performance	4.18	.571
It results to efficient and effective decision making policies	4.17	.957
Enables employees to identify gaps in the strategy implementation	3.75	.654
Strategic evaluation and control ensures that the organization is implementing the relevant strategy to reach its objectives	4.02	.685

Strategic evaluation provides feedback to the management to take corrective measures before implementing strategies	4.10	.829
Strategy evaluation communicates the desired organization goals and objectives to the employees.	3.06	.871
<b>Average Mean</b>	<b>3.88</b>	

From the table 2 the results obtained from the survey on the respondents to find out the influence of strategy evaluation on operational performance of container terminals at KPA show that the average mean was 3.88 which implied that strategy evaluation has major influence on performance of container terminals. This is because the average mean ranged between  $3.5 \leq S.A. < 5.0$  which was rated "Strongly agree". Therefore strategy evaluation has a major influence on performance of container terminals at Kenya Ports Authority. This is in agreement with Verweire 2014). Findings that strategic evaluation provides executives and managers performance information about programs, projects and activities designed to meet business goals and objective.

### **Influence of Strategic Leadership on Performance of Container Terminals at KPA**

The respondents were requested to indicate how strategy leadership influence performance of container terminals in a likert scale. The range was 'strongly disagree (1)' to 'strongly agree' (5). The scores of strongly disagree and disagree have been taken to represent a variable which had a mean score of 0 to 2.5 on the continuous likert scale; ( $0 \leq S.D < 2.4$ ). The scores of 'neutral' have been taken to represent a variable with a mean score of 2.5 to 3.4 on the continuous likert scale: ( $2.5 \leq N < 3.4$ ) and the score of both strongly agree and agree have been taken to represent a variable which had a mean score of 3.5 to 5.0 on a continuous likert scale; ( $3.5 \leq S.A. < 5.0$ ). A standard deviation of  $> 0.7$  implies a significant difference on the impact of the variable among respondents. The results are presented in table 3.

**Table 3: Strategic Leadership**

<b>Strategic Leadership</b>	<b>Mean</b>	<b>Std. Deviation</b>
Strategic leadership provide a sense of direction towards the performance of an organization	4.15	.634
Development of network of both formal and informal sources enables managers achieve organization objective	4.05	.674
The willingness to delegate and empower subordinates to make decision motivates employees	3.89	.570
control of resources is critical to organization performance	3.92	.808
Different leadership styles are a good mix for organization performance	3.84	.639
Leaders knowledge and commitment to the organization is essential in meeting organization objectives and goals	4.09	.630
<b>Average Mean</b>	<b>3.99</b>	

From the table 3 above the results obtained from the survey on the respondents to find out the influence of strategic leadership on operational performance of container terminals show that the average mean was 3.99 which implied that strategic leadership has major influence on operational performance. This is because the average mean ranged between  $3.5 \leq S.A. < 5.0$  which was rated "Strongly agree". There were minor discrepancies among the respondents since all the standard deviations were less than 0.7. This could be associated with level of education among the respondents and those in the senior management. The result clearly showed that the respondents understood the influence of strategic leadership. The results revealed that strategic leadership plays a crucial role in performance of organization. This is in line with Verweire (2014) observation that leadership gives a sense of direction as to where the organization should go and communicate eloquently and in a consistent manner until the vision becomes part of organization's culture.

**Table 4: Strategy Implementation**

<b>Strategy Implementation</b>	<b>Mean</b>	<b>Std. Deviation</b>
Every department has its key performance indicators well-articulated to realize strategy implementation	4.12	.633
Achievement of key performance indicators are used as means of performance improvement	4.15	.875
knowledge is shared within the organization to support strategy execution	3.56	.566
Strategy execution is cascaded at all levels of the organization	4.12	.558
There are written policies that details expectations and the resulting intervention of strategy implementation	3.88	.757
The organization equips employees with relevant skills to enable them carry out strategic activities	4.76	.601
<b>Average Mean</b>	<b>4.098</b>	

From the table 4 above the results obtained from the survey on the respondents to find out the influence of strategic implementation on performance show that the average mean was

### **Influence of Strategy Implementation on Performance of Container Terminals at KPA**

The respondents were requested to indicate the influence of strategic implementation on performance of container terminals in a likert scale. The range was 'strongly disagree (1)' to 'strongly agree' (5). The scores of strongly disagree and disagree have been taken to represent a variable which had a mean score of 0 to 2.5 on the continuous likert scale; ( $0 \leq S.D < 2.4$ ). The scores of 'neutral' have been taken to represent a variable with a mean score of 2.5 to 3.4 on the continuous likert scale: ( $2.5 \leq N < 3.4$ ) and the score of both strongly agree and agree have been taken to represent a variable which had a mean score of 3.5 to 5.0 on a continuous likert scale; ( $3.5 \leq S.A. < 5.0$ ). A standard deviation of  $> 0.7$  implies a significant difference on the impact of the variable among respondents. The results are presented in table 4.

4.098 which implied that strategy implementation has major influence on operational performance. This is because the average mean ranged between  $3.5 \leq S.A. < 5.0$  which was rated "Strongly agree".

There were minor discrepancies among the respondents since four out of six standard deviations were less than 0.7. This could be associated with level of education among the respondents and the positions they hold in the organization. The employees tasked with the strategy implementation seem to be perfect and their skills well valued. Employees are involved in the decision making that is key to effective strategic implementation. With average mean score of 4.098, respondents were in agreement with statement that strategic implementation has influence on performance of container terminals at KPA. This is in support with (Pearce and Robinson, 2007) findings that the main aim of strategy is to provide directional signals to the organization that warrant it to achieve its objectives while responding also to opportunities and threats. The fact that organizations objectives were achieved and organization was able to respond to opportunities and threats, performance will be greatly affected positively.

**Table 5: Performance of Container Terminals**

<b>Performance of Container Terminals</b>	<b>Mean</b>	<b>Std. Deviation</b>
Strategic management practices aims at improving performance of container terminals	4.06	.826
Strategic management practices improves customer satisfaction	4.12	.657
Strategic management practices improves the planning and organization of the organization	4.05	.660
Strategic management practices improves the financial performance of the organization	3.92	.583
Strategic management practices motivates employees making them be productive	3.90	.662
strategic management practices provides an avenue for good governance and relationship with the outside environment	3.78	.762
<b>Average Mean</b>	<b>3.97</b>	

From the table 5 the results obtained from the survey on the respondents to find out the operational performance of container terminals show that the average mean was 3.97 which implied that operational performance of container

### **Performance of Container Terminals at Kenya Ports Authority**

This study sought to find out the performance of container terminals as a dependent variable and its relationship with the independent variables in a likert scale. The range was ‘strongly disagree (1)’ to ‘strongly agree’ (5). The scores of strongly disagree and disagree have been taken to represent a variable which had a mean score of 0 to 2.5 on the continuous likert scale; ( $0 \leq S.D < 2.4$ ). The scores of ‘neutral’ have been taken to represent a variable with a mean score of 2.5 to 3.4 on the continuous likert scale: ( $2.5 \leq N < 3.4$ ) and the score of both strongly agree and agree have been taken to represent a variable which had a mean score of 3.5 to 5.0 on a continuous likert scale; ( $3.5 \leq S.A. < 5.0$ ). A standard deviation of  $>0.7$  implies a significant difference on the impact of the variable among respondents. The results were presented in table 5.

terminals had a very high effect on KPA’s prosperity. This is because the average mean was between  $3.5 \leq S.A. < 5.0$  which was rated “strongly agree”. The standard deviation was less than 0.7, an indication that there were few discrepancies on

the impact of the variables among the respondents. Among the indicators of the strategic management practices, customer satisfaction was rated highest with a mean of 4.12 and the standard deviation of 0.657. With average mean of 3.97 as indicated in Table 6 below, respondents unanimously agreed that there is improvement in efficiency at container terminal this could be

associated with on going reforms and infrastructure improvements at the port of Mombasa, which according to the performance survey report of 2012. The report also indicated that corridor efficiency improved as a result of upgrading regional road infrastructure and elimination of nontariff barriers.

## Inferential Statistics

### Correlation Analysis

**Table 6: Correlation Analysis**

		Correlations				
		Innovation strategy	Strategy evaluation	Strategic leadership	Strategy implementation	Performance
Innovation strategy	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	218				
Strategy evaluation	Pearson Correlation	.681**	1			
	Sig. (2-tailed)	.000				
	N	218	218			
Strategic leadership	Pearson Correlation	.383**	.412**	1		
	Sig. (2-tailed)	.000	.000			
	N	218	218	218		
Strategy implementation	Pearson Correlation	.387**	.678**	.589**	1	
	Sig. (2-tailed)	.000	.000	.000		
	N	218	218	218	218	
Performance	Pearson Correlation	.414**	.438**	.698**	.503**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	218	218	218	218	218

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

The study indicated that, all independent variables had a positive effect performance of container terminals at Kenya ports Authority at significant level of 0.00. The p-value obtained was 0.000 which was less than 0.05. This implied that at 95% confidence level, the positive relationship was statistically significant. The correlation between Innovation strategy and performance of container terminals at Kenya ports Authority was 0.414

indicating a positive linear relationship with a p-value of 0.000 that is < 0.05. This implied that at 95% confidence level, the positive relationship is statistically significant. The correlation between Strategy evaluation and performance of container terminals at Kenya ports Authority indicated a coefficient correlation of 0.438 with a P-value of 0.000 which is less than 0.05 and giving a positive relationship between Strategy evaluation and

performance of container terminals at Kenya ports Authority

The coefficient of correlation between Strategic leadership and performance of container terminals at Kenya ports Authority was 0.698 also indicating a strong positive linear relationship where the p-value was 0.000 which was < 0.05. This implied that at 95% confidence level, the positive relationship was

statistically significant. Lastly the correlation between Strategy implementation and performance of container terminals at Kenya ports Authority was 0.503 indicating a positive and significant relationship between strategy implementation and performance of container terminals at Kenya ports Authority.

### Regression Analysis

#### Coefficient of Determination

**Table 7: Model summary**

Model	R	R Square	Adjusted Square	R	Std. Error of the Estimate	F-statistic
<b>1</b>	<b>.722<sup>a</sup></b>	<b>.521</b>	<b>.512</b>	<b>.26253</b>		

The R<sup>2</sup>, also called the coefficient of determination, is the percentage of the variance in the dependent variable explained uniquely or jointly by the independent variables and is 72.2 %.

This means that 72.2 % of the changes in the KPA's operational performance of container terminal are explained by the changes in the independent variables in the model. The remaining 27.8% of the

changes in the Y is explained by other factors not in the model. The C is the constant, where the regression line intercepts the y axis, representing the amount the dependent y will be when all the independent variables are 0. Here C is .633; the probability of the coefficient is significant. The F statistic is used to test the significance of R.

**Table 8: Analysis of Variance (ANOVA)**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	16.361	4	4.090	60.416	.000 <sup>b</sup>
	Residual	15.098	223	.068		
	Total	31.459	227			

a. Dependent Variable: Performance

b. Predictors: (Constant), strategy implementation, innovation strategy, strategic leadership, strategy evaluation

The study used ANOVA to establish the significance of the regression model. Statistical significance was considered significant if the p-value was less or equal to 0.05. The significance of the regression model has a P-value of 0.00 which is less than 0.05. This indicated that the regression model is statistically significant in predicting the strategic management factors influencing operational performance of container terminals at Kenya Ports Authority. The ANOVA results indicated that the model was significant at F = 60.416, and df of 4 with

p<.05. At 95% confidence level the analysis indicates high reliability of the results obtained thus indicating that the study was statistically determined.

#### Multiple Regression Analysis

The strategic management factors influencing operational performance of container terminals at Kenya Ports Authority were investigated from the results of the respondents.



**Table 9: Multiple Regression Analysis**

Model 1	Unstandardized		Standardized	t	Sig.
	Coefficients		Coefficients		
	B	Std. Error	Beta		
(Constant)	.633	.257		2.465	.014
Innovation Strategy	.135	.081	.113	1.676	.005
Strategy Evaluation	.083	.088	.079	.950	.343
Strategy Leadership	.572	.059	.586	9.678	.000
Strategy Implementation	.058	.071	.061	.813	.417

Multiple regression analysis was conducted to determine the relation between the independent variable and the dependent variable. The regression equation was

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

Where Y = Performance (dependent variable)

$\beta_0$  = Constant of Regression

$\beta_1 - \beta_4$  = The Beta coefficients for the corresponding X (independent) terms, representing the net effect the variable has on the dependent variable, as X's in the equation remain constant.

$X_1$  = Innovation Strategy

$X_2$  = Strategy Evaluation

$X_3$  = Strategy Leadership

$X_4$  = Strategy Implementation

$\epsilon$  = Error of term

Therefore the regression equation:

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

$$Y = 0.633 + 0.135X_1 + 0.083X_2 + 0.572X_3 + 0.058X_4 + \epsilon$$

This also indicates that taking all factors constant at zero performance will be at value of  $\beta_0 = 2.633$ . The findings showed that taking all independent variables at zero, a unit increase as a result of innovation strategy would give a value of 0.135 increases in performance. It also indicated that a unit increase as a result of strategy evaluation

would lead to a value of 0.083 increases in performance. A unit increase on strategy leadership would give a value of 0.572 increases on performance. The study also showed that a unit increase of strategy implementation would give an increase of 0.058 on performance of KPA terminals. The study showed that there was a positive and significant relationship between innovation strategy and performance (0.005) which is less than 0.005, leadership strategy and performance (0.000) which is less than 0.005. However there was no significant relationship between strategy evaluation and performance (0.343), strategy implementation and performance (0.417)

### Hypotheses Testing Summary

#### Hypothesis 1

The first research hypothesis,  $H_01$ : stated that there is no significant relationship between innovation strategy and performance of container terminals at Kenya ports Authority ( $\beta_1 = .113$ ;  $t = 1.676$ ;  $p \leq 0.05$ ) was rejected and conclusion made that innovation strategy has a statistically significant effect on performance of container terminals at Kenya ports Authority.

#### Hypothesis 2

The second research hypothesis,  $H_02$ : There is no significant relationship between strategy evaluation and performance of container terminals at Kenya ports Authority ( $\beta_2 = 0.079$ ;  $t = 0.950$ ;  $p > 0.05$ ) was accepted and conclusion made that strategy evaluation does not have a significant relationship

with performance of container terminals at Kenya ports Authority. The finding was inconsistent with

**Hypothesis 3**

The third research hypothesis, H<sub>03</sub>: There is no significant relationship between strategic leadership and performance of container terminals at Kenya ports Authority ( $\beta_3 = 0.586$ ;  $t = 9.678$ ;  $p \leq 0.05$ ) was rejected and conclusion made that strategic leadership has a significant relationship with performance of container terminals at Kenya ports Authority.

**Table 10: Hypotheses Testing**

Research Hypotheses	B	T	Sig.	Comments
H <sub>01</sub> : stated that there is no significant relationship between innovation strategy and performance of container terminals at Kenya ports Authority	0.113	1.676	0.005	Reject H01
H02: There is no significant relationship between strategy evaluation and performance of container terminals at Kenya ports Authority	0.079	0.950	0.343	Accepted H02
H03: There is no significant relationship between strategic leadership and performance of container terminals at Kenya ports Authority	0.586	9.678	.000	Reject H03
H04: There is no significant relationship between strategy implementation and performance of container terminals at Kenya ports Authority	0.061	0.813	.417	Accepted H04

**CONCLUSION**

The broad research questions relating to the strategic management factors influencing operational performance of container terminals at Kenya Ports Authority was studied and the findings were analysed so as to draw conclusions. The study established that operational performance was affected by various strategic management factors which include strategy implementation, innovation

**Hypothesis 4**

The fourth research hypothesis, H<sub>04</sub>: There is no significant relationship between strategy implementation and performance of container terminals at Kenya ports Authority ( $\beta_4 = 0.061$ ;  $t = .813$ ;  $p > 0.05$ ) was accepted and conclusion made that There is no significant relationship between strategy implementation and performance of container terminals at Kenya ports Authority.

strategy, strategy leadership and strategy evaluation.

In establishing the influence of innovation strategy on the operational performance, it was concluded that technology and research and development plays a very major role in determining better performance of container terminals. Lack of innovations leads to poor service delivery

translating to more cost incurred, wastages and this could mean loss of business to a competitor.

The research also indicated that the Kenya Ports Authority considers the involvement of employees in decision making and good communication hence becoming competitive with other ports in East Africa and other regions.

Strategy implementation influences performance in a way that the organization policies and employee skills are adhered to. Execution of the strategy is as well another indicator of better performance of the container terminals at Kenya Ports Authority.

Strategy implementation is a reserve of the top management hence it can be used to improve some of the dimensions of organization's performance. This is evident especially in resource allocation as contained in the annual management plans generated by every department. However, with the fluctuation in prices, increased number of ports in Africa and lack of support from the government, the institution is forced to evaluate its strategies most of the time.

## **RECOMMENDATIONS**

Based on the research findings, the following recommendations should be considered as Kenya Ports Authority work towards maximizing on the benefits of strategic management:

The study found out that operational performance of container terminals at KPA was influenced by factors like innovation strategy, strategy implementation, strategy leadership and strategy evaluation and it is therefore recommended that the KPA should have adequate training of all the senior employees involved in strategic management so that they can secure added value and continuous improvement.

The study established that the company is faced with issues to do with top management support, like lack of empowering employees, and those in management exercising their powers negatively and

lack of resources for implementation of strategic management. It is therefore recommended that the organization should put all measures in place to ensure that they do not face severe losses as a resulting from lack of managerial support. This is because strategy evaluation scored very low yet it's not possible to implement the strategies that has not been evaluated.

KPA should have policies to govern strategy evaluation and help in implementation of strategies formulated in order to provide an environment suitable for good performance of the container terminals at Kenya Ports Authority.

In order to have good performance at the container terminals in KPA, management should have policies governing the motivation and remuneration of those best performing staff to maintain a good performing practices at the container terminals in KPA.

## **Recommendations for Further Research**

The study was done at Kenya Ports Authority which is a government parastatal. This research therefore should be replicated in other government parastatals and the results be compared so as to establish whether there is consistency among different industries in Kenya on the strategic management factors influencing operational performance.

Future researchers should also embark on researching the impacts associated with strategic management and factors inhibiting implementing right strategies in both private and public sectors. Lastly future researchers should research on factors influencing implementation of strategic management in both private and public sectors.

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