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INFLUENCE OF ORGANIZATIONAL INNOVATION ON COMPETITIVE ADVANTAGE IN LOGISTICS FIRMS IN MOMBASA, KENYA

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ABSTRACT

The study sought assessed the effect of organizational innovation on competitive advantage of logistics firms. Specifically the study assessed the effect of process innovation, service innovation, product innovation and administrative innovation on competitive advantage in logistics firms in Mombasa County in Kenya. The research problem was studied through the use of descriptive research design. Probability sampling design was used based on the concept of random selection. Stratified proportionate random sampling technique was used to select the sample. The study targeted 82 branch managers of the selected logistics firms. Descriptive and correlation analysis was employed to analyze data. A structured questionnaire was used to collect the primary data which was administered using drop-pick-later method. The researcher administered questionnaires individually to employees of the five selected logistics firms. The quantitative data collected was analyzed by the use of descriptive statistics using SPSS and presented using tables. This was done tallying up responses, computing percentages of variations in response as well as describing and interpreting the data in line with the study objectives and assumptions through use of SPSS. The researcher conducted a multiple regression analysis so as to determine the relationship between competitive advantage and variables of the study. The study revealed that organizational innovation had a statistically significant effect on competitive advantage of logistics firms in Mombasa County. Process Innovation had a statistically significant effect on competitive advantage of logistics firms in Mombasa County. Service Innovation had a statistically significant effect on competitive advantage of logistics firms in Mombasa County. Product Innovation had a statistically significant effect on competitive advantage of logistics firms in Mombasa County. Administration Innovation had a statistically significant effect on competitive advantage of logistics firms in Mombasa County. The study concluded that implementation of process, service, product and administrative innovations results in an improvement in firm competitiveness

Key terms: *Competitive Advantage, Innovation, Marketing Innovation, Organizational Innovation, Process Innovation, Product Innovation, Service Innovation*

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INTRODUCTION

As world economies changes from industrial economies to the very dynamic and competitive global economies, it is becoming increasingly important for companies to maintain competitive advantage. In their response to this challenge, companies are therefore seeking unique organizational innovations that will enable them to meet an increasing variety of customer expectations while keeping costs, delays, problems, disruptions, and performance losses at or near zero to help them achieve the much desired competitive advantage and to enable them have rapid and cost-effective responses to specific customer demand. The companies that succeed and register remarkable growth therefore, are those that use and integrate in their daily operations, innovative solutions enabling them to generate a significant percentage of their income from selling new or quality improved products or services to their customers, Petrariu , Bumbac & Ciobanu, (2013). Survival of a company in the current turbulent business environment therefore depends on capability of the company in taking advantage of the opportunities in the market place to satisfy its customers (Porter, 2013).

Innovation is critical to the continued survival and success of firms in today's very complex and dynamic business environments (Rowley, 2015). The purpose of innovation is to add value to existing processes and create new customer value. Robinson and Pearce (2013) argue firms become profitable by making innovation their grand strategy and reap high initial profits associated with customer acceptance of a new or greatly improved product. Changes that lend competitive advantage can be external or internal. Internal change is generated by innovation while external changes can also be harnessed through innovation to achieve competitive advantage. Innovation not only provides a basis for overturning the competitive advantage of other firms but also creates competitive advantage (Grant, 2015). The organization that is not capable of introducing innovation on continuous basis risk lagging behind and being overtaken by other firms that will take the initiative. Schumpeter (2014) argues that firms attempt to use technological innovation like adoption of new product or service or perhaps a new process in the course of their production in order to gain a strategic competitive advantage. This in turn creates competition that does not diminish their profit margins or the outputs of existing organizations.

The relation between competitive advantage and innovation therefore lies in the ability of the organization to use its resources efficiently and manage them to generate innovations that are in turn subjected to achieve competitiveness, (Ito et al., 2014). This advantage is characterized by the market perception on the differentiation and the value creation of products and services that were previously not available to consumers. Flourishing firms like, Google Corporation, devote a substantial amount of resources to innovation (Iyer & Davenport, 2013). In innovation survey done in 2005 with business executives, the Boston Consulting Group found that 90 percent of the surveyed executives believe organic growth through innovation is essential and nearly three quarters of these executives are likely to increase their spending on innovation (The-Boston Consulting-Group, 2016). In a similar study, McKinsey surveyed top management and found that more than 70 percent to consider innovation as at least one of the top three key drivers of growth for their firms in the next three to five years (Barsh, Capozzi, & Davidson, 2013).

In Kenya, the logistics industry is poised for major changes as a result of the innovation strategies that can help attain sustainable competitive advantage. Turbulent business environments and stiff competition has also brought a need for logistics through movement of products and services across countries and continents to satisfy needs of both local markets as well as those that are far flung. As a

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globalization transforms the world into a global village, the need for firms to create unique methods of offering logistics services in the competitive and dynamic market has become paramount. To remain viable under such market environment calls for firms to ensure sustainability of such competitive environment as a guarantee for their continued survival. This without a doubt is a clear indication that the stakes are quite high in logistics industry with the business community ready to shift loyalties at the slightest innovative opportunity arising on the market (Sago, 2015).

The Kenya International Freight and Warehousing Association is the industry body that brings together all the players. Development and regulation of the sector is under the supervision of the Ministry of Transport. The World Bank's Logistics Performance Index ranked Kenya in position 122 overall out of 155 countries, with a score of 2.43, 45.9% of the highest performer, Singapore. The logistics market is also heavily involved broking services through selling of cargo space to shipping lines for a commission as well as selling to exporters for non -nominated volumes. In some instances the market players are targeting almost exclusively clearing agent via commission and lower costs. Similarly, there is hard selling to solicit business in Mombasa and Nairobi among importers in which the main weapons are free storage periods, commissions plus rebates. The Siginon market share currently stands at approximately 4% as at May 2011 while market leaders, Bollore, DHL Global, Andy Forwarders, Agility, control over 50% of the logistic market share (Federation of Freight Forwarders, 2012).

With increased competition in this era of globalization and knowledge economy, the role of organizational innovation as a source of competitive advantage has become important for the survival and sustainable growth of firms in both developed and developing countries. Regrettably in business today, most of management thinking has been misguided to focus on cost reduction and levering information technologies, yet service errors and bottlenecks in firms processes are key reasons companies are losing customers (Arungai, 2015). According to Ruth Bolton, Grewal, & Levy, (2011), firms that leverage on quality of their services have the capability of building strong relationships with customers that allow them penetrate barriers to competition, increase customer loyalty and switch costs. Struggling companies often turn to innovation as a means of increasing its sales revenue and market share to guarantee their survival chances. Through creation of competitive innovation strategy, competitive advantage is achieved that is aligned with trends in the firm's industry and suitable to the firm's resources and capabilities (Porter, 2013).

In Kenya, the logistics industry is highly competitive hence the need for individual logistic firms to think of unique ways of maintaining their products and services superior, serving their customers exceptionally well and processing value addition to remain competitive. In recent years, the logistics industry has witnessed changes that pose both competitive threat and competitive edge opportunities for some industry players depending on how they leverage their innovative capabilities to tap on the opportunities presented by the changes. The rolling of the single window system by the Kenya Revenue Authority, a system that was expected to interlink major players in the logistics sector has brought a lot of integration and an all inclusive approach in the sector enabling visibility for even importers; a change that puts at risk the jobs of clearing and forwarding agents. The introduction of the Standard Gauge Railway (SGR); a giant competitor that has not only managed to move huge volumes of cargo but also lowered the cost of transporting the same but and has driven small players into the edge. Mandatory local marine cargo insurance for all imported local cargo is yet another change that has brought both disruptions for local players and opportunities for local insurers. Additionally, the

recent green signal of direct flights between Kenya and the US has opened a new frontier in the logistics business offering new opportunities for business from the volumes of trade expected to grow between the two countries, (Logistics Africa Update Report, 2018).

Clulow *et al*. (2013) maintain that only through successful organizational innovation that a firm can outperform current or potential players and that superior performance lends the firm's a competitive advantage. Ren *et al*. (2010) studied market innovation and sought to develop an approach that Chinese firms can use as a springboard to identify sources of sustainable competitive advantage and found Market Innovation as a significant source of competitive advantage for Chinese firms that operated in dynamic and competitive economic environment. Livohi (2012) argue that to achieve and maintain competitive advantage firms have to explore innovative technologies and strategies in the current dynamic and competitive business environment. However, none of these studies focused on the effects of organization innovation on the competitive advantage of Logistics firms in Kenya. Despite the limited available studies in the sector, these firms have to look for creative methods to compete. There is need to put into focus how organizational innovation can be harnessed to gain competitive advantage among the logistics in the midst of heightened competition. It is against this background that this study examined the influence of organizational innovation on the competitive advantage of logistics firms in Kenya.

Objectives of the Study

- To examine the effect of process innovation on competitive advantage of logistics firms in Kenya
- To establish the influence of service innovation on competitive advantage of logistics firms in Kenya
- To find out the effect of product innovation on competitive advantage of logistics firms in Kenya
- To determine effect administrative innovation on competitive advantage of logistics firms in Kenya

The research sought to test following null hypotheses;

- Process innovation has no significant effect on competitive advantage of logistics firms in Kenya
- Service innovation has no significant influence on competitive advantage of logistics firms in Kenya
- Product innovation has no significant effect on competitive advantage of logistics firms in Kenya
- Administrative innovation has no significant effect on competitive advantage of logistics firms in Kenya

LITERATURE REVIEW

Dynamic Capability Theory

According to Teece (2013) the term dynamic refers to the level to which competencies can be renewed to adapt to changing of business environment. Capabilities on the other hand mirror the significance of strategic management in suitable adaptation, adoption and adjustment of organizational skills, both internal and external, resources and competences to synchronize such capabilities with the changes in the dynamic business environment (Poulis, Poulis & Jackson, 2013). The capacity of the firm to reinvent their resources in line with changes in its environment is focused by dynamic capability approach (Poulis *et al*, 2013). This theory is an related to resource based view which puts into suggestion that firm processes can be harnessed to develop, adopt, and utilize resources to suit the markets and hence create a change (Eisenhardt & Martin, 2014).

Resource Based View Theory

Resource Based Theory emphasizes the important role of a firm's internal organizational resources in determining the firm's strategy and performance (Barney & Clark, 2017). Internal resources of a firm consists of all its assets, capacities, competences, capabilities, firm attributes, organizational processes, information and knowledge, that are under the

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control of the firm and that are capable of making it develop strategies t improve its efficiency and effectiveness. The resource based view theory recognizes both the tangible and intangible resources of the firm as key determinants of its overall performance with emphases on the intangible skills in keeping the firm's resources in place (Alavi and Leidner, 2011).

Theory of the Innovator's

Christensen and Raynor's theory of the innovator's solution is a brilliant analysis of reasons behind failure of firms to innovate. It clearly elaborates why corporate management fail to learn about good ideas, and why managers succumb to inherent pressures to run away from the challenge of disruptive competition rather than stand and fight. The decisions made as a result of such pressure are only justifiable in the short run to the individuals involved, but in the long run they send the firm into an inexorable death spiral (Anthony, 2018).

According to Christensen and Raynor, corporate leaders should put up a wall between the innovation and the existing hierarchy. Leadership should create an independent business unit, which will provide a safe and protected environment for innovation. In such an environment, innovation can flourish without having to fight off the interferences and intrusions and anti-innovation attitudes of the hierarchy, Christensen (2013).But while their explanations on the causes of failure to undertake disruptive innovation are effective, their project for solving the dilemma of disruptive innovation is less helpful. The central premise of their thesis the innovator's solution is to accept the grim reality that big companies are inherently and constitutionally disinclined to tackle disruptive innovation.

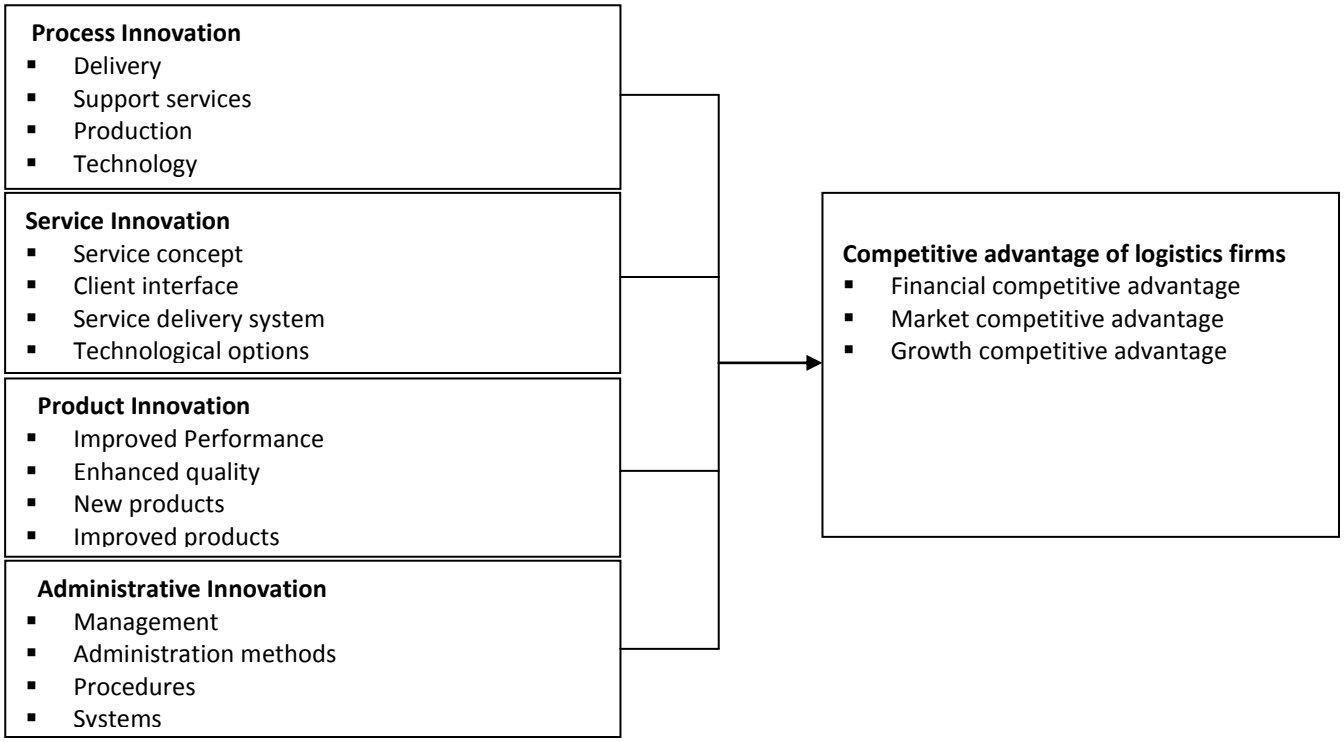

Figure 1: Conceptual Framework

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Review of literature on Study Variables

Davenport (2013) defines process innovation as a combination of structured way of doing expected job with an objective of achieving clear and better results. According to Oslo OECD Innovation Manual, a process innovation involves the implementation of a new or significantly improved production or delivery method. This includes significant changes in techniques, equipment or software (OECD, 2015). Process innovation entails examination of the overall business objective and making a decision on whether the current way of doing things is satisfactory in achieving those objectives and if not, making improvements in the current ways to ensure objectives are accomplished. Process improvement can distinguish process innovation, where a lower level of change is sought. Process innovation as a strategy entails different ways of job performance while process improvement involves doing the same business process but in a manner that increases efficiency and effectiveness. Business process reengineering and quality function deployments are key attributes embraced by product innovators (Cumming, 2017). Any firm that continuously works on improving the processes records better performances at reduced costs from efficient and effective processes. The improved process results in better ways of doing business with reduction in costs of products that is eventually passed on to consumers as value.

Service innovation in today's networked business environment is highly interactive and systemic in nature. Firms are interconnected through service value networks that comprise of a system of entities which include suppliers, intermediaries, customers and partners. According to Hacklin *et al*. (2015), networks are multi-layered in ways that promote opportunities to co-innovate and create systemic value in operations through horizontal, vertical, diagonal and complementary networks. Connections through the networks may be human to human, technical to technical or human to technical; highlighting the importance of both human-centricity and technology in the dynamics of service innovation. Service innovation across business networks are thus far from being only limited as linear transactional process; but are rather a multidimensional systemic and complex phenomenon that involves relational interactions between the business entities that result in the co-creation of innovation.

Product innovation entails introduction of a new good or service into the same markets with an objective of making the new product known to consumers or improving the attributes of the current goods or services already in the market, so that their intended use by customers, quality or association is improved compared to what existed before, Wan *et al.* (2015).Oslo Innovation Manual defines product innovation as the introduction of a good or service that is new or significantly improved in relation to its characteristics or intended functionality (OECD, 2015). Product innovation can be achieved through adoption of new technologies or the use of better material components that have a transformative influence on the features and attributes of the existing products.(Acquah & Mensah, 2015).

Administrative innovation refers to changes in ways of decision making, allocation of responsibilities, information and communication structures within the organization, (Greenan, 2013). It is the manner in which a firm puts up its structure and processes that are significantly different from the current practices within the firm to derive economic and financial gains (Schienstock, Rantanen & Tyni, 2016). It is defined as "the implementation of changes in operational practices that improve the capacity to innovate, as well as the firm performance (ISI, 2016). Administrative innovation is "the introduction of a new organizational method in the practices, in the workplace set up, or in the external relations for the organization (OECD, 2015).

Organization innovation refers to the cultivation of an organizational culture that is new or improved in terms of better business practices and processes, how work is done as well as improved external and internal relations, (OECD, 2015). Organizational innovation refers to an approach used through which firms adapt to the change conditions in their internal or external environment, competition, technology advances, by introducing newer products, techniques and processes (Razavi & Attarnezhad, 2013).Indeed, innovation relates to the firm's capacity to engage and corporate managers can devise solutions to business problems and challenges, allowing for the continued survival and success of the firm (Hult *et al,* 2014).

Wagner (2015) defines competitive advantage as the outcome of successful strategy implementation in a firm that is obtained through offering superior value derived from unique benefits that offset a high or lower price than competitors for the same offering. When a firm attains and maintains profits margins that exceed the average for its industry, then the firm is said to possess a competitive advantage over its competitors. The primary objective of many business strategies is to attain a competitive advantage and to sustain such over the years (Porter, 2013). Competitive advantage is derived from the value that firm creates for its customers when such value exceeds the cost of creating the same .Value refers to what buyers are willing to pay and superior value emanates from offering lower prices than competitors for equivalent benefits and from providing unique benefits that offset a higher price. It is an advantage over competitors attained through offering customers greater value, either by means of lower prices or through provision of greater benefits and services that justifies a higher price (Porter, 2013).

METHODOLOGY

This research problem was studied through the use of a descriptive research design. The design is useful in explaining the effect of innovation on firm competitiveness (Saunders, Lewis, & Thornhill, 2012). The study population for the study was composed of 82 branch managers of the selected logistics firms. This population was chosen since the branch managers of logistics firms were involved in the day to day running of the logistics affairs and thus are well conversant with the information sought by the study. The researcher perused completed questionnaires and document analysis recording sheets. The quantitative data collected was analyzed by the use of descriptive statistics using SPSS and presented using percentages, means, standard deviations and frequencies. The regression equation was

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

Whereby

Y = Competitive Advantage

B_o = Constant

$\beta_1, \beta_2, \beta_3, \beta_4$, = Coefficients of determination

X_1 = Process Innovation

X_2 = Service Innovation

X_3 = Product Innovation

X_4 = Administrative Innovation

ε = Error term

RESULTS

Process Innovation

The study sought to find the respondents level of agreement on the extent to which process innovation affects competitiveness of logistics firms. When asked whether the firm website had all the necessary requirements to place and order majority of respondents answered affirmative as shown by a mean of 3.08. The firm having availed multiple payment options which were fast and secure also attracted another strong mean of 4.10. Whether communication between the client and employees had improved due to installation of innovative communication apps attracted a mean of 3.69 while employees having been involved in assessing the quality programs to enhance process control in the

firm garnered a mean of 4.24. The customer relationship tool always being active and customized to customer needs attracted a mean of 3.39. Table 1 presented the descriptive results on process innovation.

Table 1: Process Innovation

Process Innovation	n	Mean	Std.
The firm website has all the necessary requirements to place an order	63	3.08	0.901
The firm has availed multiple payment options which are faster and secure	63	4.10	0.773
Communication between the client and the employees has improved due to installation of the innovative communication apps	63	3.69	0.689
Employees have been involved in assessing the quality programs that enhance process control in the firm	63	4.24	0.797
The customer relationship management tool is always active and customized to client's needs.	63	3.39	0.778
Process Innovation	**63**	**3.70**	**0.788**

Service Innovation

The study sought to find the respondents level of agreement on the extent to which service innovation affects competitive advantage of logistics firms. Majority (33%) of the respondents felt service innovation affects competitiveness of logistic firms to a very great extent, 29% to great extent, 16% felt it affects to a moderate extent, 15% to a little extent while another 7% felt it does not affect firm competitiveness at all. Logistics firms having effective customer satisfaction policy attracted a mean of 3.74 while the respective firms actively seeking customer feedback garnered a mean of 3.89. The respective firms having mechanisms in place to handle customer complaints attracted a mean of 4.28 while willingness of logistic firms to tailor services to suit customer needs got a mean of 3.64. The quality of services and products provided by the respective logistics firms having significantly improved over the years attracted a mean of 3.56. Table 2 presented the descriptive results on service innovation.

Table 2: Service Innovation

Service Innovation	n	Mean	Std.
Logistics firms have effective customer satisfaction policy	63	3.74	0.733
Your firm actively seeks customer feedback	63	3.89	0.913
Your firm has mechanisms in place to handle and address customer complaints	63	4.28	0.789
Logistics firms are willing to tailor make services that suit specific customer needs	63	3.64	0.675
The quality of services and products provided by your firm has significantly improved over the years	63	3.56	0.776
Service Innovation	**63**	**3.82**	**0.777**

Product Innovation

The study sought to find the respondents level of agreement on the extent to which product innovation affects competitiveness of logistics firms. When asked whether the logistic firms have differentiated services to suit customer needs attracted a mean of 4.08 while the same firms providing wide array of unique products to choose from attracted a mean of 3.10. Supplementation of the existing product and services with new features attracted a mean of 4.19 while existence of innovation team that reviews all products and services attracted a mean of 3.34. The innovation team taking into consideration of the

current market trends and incorporating customer feedback into the new offerings attracted a mean of 4.09. The results were as shown in table 3.

Table 3: Product Innovation

Product Innovation	n	Mean	Std.
Your firm has differentiated its products and services to suit customer needs	63	4.08	0.701
Logistics firms provides a wide array of unique products to choose from	63	3.10	0.663
Products and services offered are frequently supplemented with new features and specifications for the customers	63	4.19	0.678
There exists and innovation team that reviews all the existing products and services in the firm	63	3.34	0.689
The innovation team considers the current market trends and incorporates customer feedback into the new offerings	63	4.09	0.886
Product Innovation	**63**	**3.76**	**0.723**

Administration Innovation

The study sought to find the respondents level of agreement on the extent to which administrative innovation affects competitiveness of logistics firms. When asked whether the logistic firms continuously introduce new methods in the current organizational practices attracted a mean of 3.38 while constant trainings to transfer knowledge from the most experienced to new employees attracted a mean of 4.23. Decentralization of functions which blends both experienced and less skilled employees attracted a mean of 3.17 while the same structure reducing bureaucracy attracted a mean of 4.03. The organizational structure in your firm is constantly renewed to facilitate team work attracted a mean of 4.06. The results were as shown in table 4.

Table 4: Administration Innovation

Administration Innovation	n	Mean	Std.
Your firm continuously introduces new methods in the current organizational practices	63	3.38	0.881
There is constant training to transfer knowledge from the most experienced employees and the new entrants in your firm.	63	4.23	0.553
Functions in your firm are decentralized in way that blends experienced employees and the low skilled ones	63	3.17	0.698
The administrative structure in your firm reduces beaucracy and supports innovative thinking in other departments	63	4.03	0.889
The organizational structure in your firm is constantly renewed to facilitate team work	63	4.06	0.778
Administration Innovation	**63**	**3.77**	**0.760**

Competitive Advantage

The study also sought to find out the respondent's opinion on firm competitiveness. When asked whether their respective firms had significantly increased their market share over the years attracted a mean of 3.86. When asked whether the financial gains from the market share increase boosting the books attracted a mean of 3.84. When asked whether competitors find it difficult to copy their firm products owing to differentiation attracted a mean of 3.51. When asked on other competitors in the industry benchmarking with the respondents firms on innovative practices attracted a mean of 3.29. The results were as shown in table 5 below:

Table 5: Competitive Advantage

Competitive Advantage	N	Mean	Standard Deviation
Your firm has significantly increased its market share against its competitors over the years	63	3.86	1.342
The financial gains from the increased market share have significantly increased the books	63	3.84	1.285
Most of the competitors in the industry benchmark with your firm on innovation issues	63	3.29	1.447
Your firm continues to innovate to maintain the competitive edge it has over its competitors	63	3.51	1.549

Pearson Correlation Analysis

Pearson correlation analysis was used to determine the relationship between the independent variables and the dependent variable. The analysis showed coefficient of correlation, r equal to 0.272, 0.326, 0.312, and 0.397 for process innovation, service innovation, product innovation and administration innovation. According to the findings there was a positive correlation between the independent variables process innovation, service innovation, product innovation, administration innovation and the dependent variable competitive advantage. The results are shown in table 6.

Table 6: Pearson Correlation Analysis

Pearson Correlation Analysis		X_1	X_2	X_3	X_4	Y
Process Innovation (X_1)	Pearson Correlation	1				
	Sig. (2 - Tailed					
	n	63				
Service Innovation (X_2)	Pearson Correlation	.272*	1			
	Sig. (2 - Tailed	.031				
	n	63	63			
Product Innovation (X_3)	Pearson Correlation	.326**	.441**	1		
	Sig. (2 - Tailed	.009	.000			
	n	63	63	63		
Administration Innovation (X_4)	Pearson Correlation	.312*	.394**	.257*	1	
	Sig. (2 - Tailed	.013	.001	.042		
	n	63	63	63	63	
Competitive Advantage (Y)	Pearson Correlation	.397**	.487**	.391**	.595**	1
	Sig. (2 - Tailed	.001	.000	.005	.000	
	n	63	63	63	63	63

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

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

Regression Analysis

A standard multiple regression analysis was conducted so as to determine the influence of organizational innovation on competitive advantage in logistics firms.

Model Summary

The model summary sought to determine whether the correlation coefficient was significant at 5% significance level and also the extent that each independent variable explained the dependent variable through the coefficient of determination.

R shown in Table 7 was the correlation between the observed and predicted values of dependent variable implying that the association of 0.942 between the factors (Process Innovation, service innovation, product innovation and administrative innovation) and firm competitiveness was very good. R-Square is coefficient of determination and measures the proportion of the variance in the dependent variable firm competitiveness that is explained by variations in the independent variables process innovation, service innovation, product innovation and administrative innovation. This implied that 95.7% of variance or correlation between dependent and independent variables. That is, 95.1% of variations or changes in strategy implementation are caused by the study variables. However, it does not reflect the extent to which any particular independent variable was associated with firm competitiveness. Table 7 presented results on model summary.

Table 7: Model Summary

Model	R	R Square	Adjusted R Square	Std Error of the Estimate
1	.782[a]	.612	.585	2.12432

a. Predictors: (Constant), Process Innovation, Service Innovation, Product Innovation, and Administration Innovation

b. Dependent Variable: Competitive Advantage

Analysis of Variance

An Analysis of Variance (ANOVA) was tested so as to determine whether the model was significant at a confidence level of 95%. The significance value was 0.038 which was less that 0.05 thus the model was of statistically significance in predicting how process innovation, service innovation, product innovation and administrative innovation affect competitiveness among logistic firms. The F critical at 5% level of significance was 3.23. Since F calculated is greater than the F critical (value = 72.366), this shows that the overall model was significant. Table 8 below showed an analysis of variance.

Table 8: Analysis of Variance (ANOVA)

Model		Sum of Squares	Df	Mean of Squares	T	Sig
1	Regression	412.008	4	103.002	22.825	.000[b]
	Residual	261.738	58	4.513		
	Total	673.746	62			

Regression Coefficients

From the results, the following regression model was established:

$Y= 5.501 + 0.578X_1 + 0.673X_2 + 0.313X_3 + 0.201X_4$.

Where

Y= the dependent variable (competitive advantage),

X_1= Process Innovation

X_2= Service Innovation

X_3= Product Innovation

X_4= Administrative Innovation

The regression constant showed that when the independent variables (process innovation, service innovation, product innovation and administrative innovation) are held constant at zero, strategy implementation value would be 5.501. This shows that without the four factors, competitiveness of logistic firms would be dismal.

It was established that the success in strategy implementation would rise by 0.578 with every unit positive increase in process innovation provided that other factors (Service innovation, product innovation and administrative innovation) are held constant. This

statistics is significant at 95% confidence level (p = 0.000). Service innovation would likewise lead to success in firm competitiveness by factor of 0.673 with P value of 0.000 should other factors be held constant.

Additionally, holding other factors (process innovation, service innovation and administrative innovation) constant, a unit change in product innovation would lead to a 0.313 chances of success in firm competitiveness (p = 0.035). Administrative innovation would lead to success in firm competitiveness by a factor of 0.271 significant at p = 0.002 should process innovation, service innovation and product innovation be kept constant. This indicates that better innovative practices would positively influence firm competitiveness among logistic firms. Product innovation therefore remains the most significant variable of the four at 0.035 which is less than 0.05.

Table 9: Regression Coefficients

Model		Unstandardized Coefficients B	Std Error	Standardized Coefficients Beta	t	Sig
1	(Constant)	5.501	2.439		2.255	.028
	Process Innovation	.578	.111	.530	5.207	.000
	Service Innovation	.673	.149	.461	4.517	.000
	Product Innovation	.313	.145	.210	2.159	.035
	Administration Innovation	.271	.108	.194	2.509	.002

a. Dependent Variable: Competitive Advantage

Table 10: Results of Hypotheses Testing

Research Hypotheses		**ß**	**t**	**Sig.**	**Comments**
H_o1	Process innovation has no significant effect on competitive advantage of logistics firms in Kenya.	.530	5.207	.000	Reject the H_o1, because p ≤ 0.05
H_o2	Service innovation has no significant effect on competitive advantage of logistics firms in Kenya.	.461	4.517	.000	Reject the H_o2, because p ≤ 0.05
H_o3	Product innovation has no significant effect on competitive advantage of logistics firms in Kenya.	.210	2.159	.035	Reject the H_o3, because p ≤ 0.05
H_o4	Administration innovation has no significant effect on competitive advantage of logistics firms in Kenya.	.194	2.509	.002	Reject the H_o4, because p ≤ 0.05

CONCLUSSIONS

The general objective of this study was to examine the influence of organizational innovation on competitive advantage of logistics firms in Kenya. The study concluded that organizational innovation had significant influence on competitive advantage of logistics firms in Kenya. Logistics firms in Mombasa have embraced different kinds of innovation to stay ahead of their competitors in the market place. The study concludes that implementation of process,

service, product and administrative innovations results in an improvement in firm competitiveness. Logistics firms can therefore improve their competitiveness by implementing the different types of innovations. The combined effect of the four innovation types yields better results on firm competitiveness as compared to the result of just one single type of innovation being implemented on its own. The role of dynamism and seeking customer feedback and continuous effort to improve customer satisfaction goes along way in spurring the innovative spirit within the organization.

The first specific objective of this study was to examine the influence of process innovation on competitive advantage of logistics firms in Kenya. The study concluded that process innovation had significant effect on competitive advantage of logistics firms in Kenya. Process innovation was identified in the study as having profound effect in enabling customers place orders and availing multiple payment options to customers thus improving the customer experience hence firm competitiveness.

The second specific objective of this study was to examine the influence of service innovation on competitive advantage of logistics firms in Kenya. The study concluded that service innovation had significant effect on competitive advantage of logistics firms in Kenya. Service innovation was identified in the study as having profound effect in enabling customers place orders and availing multiple payment options to customers thus improving the customer experience hence firm competitiveness. Service innovation emerged as yet another factor with positive influence on competitiveness of logistic firms.

The third specific objective of this study was to examine the influence of product innovation on competitive advantage of logistics firms in Kenya. The study concluded that product innovation had significant effect on competitive advantage of logistics firms in Kenya. Product innovation was identified in the study as having profound effect in enabling customers place orders and availing multiple payment options to customers thus improving the customer experience hence firm competitiveness. Product innovation came out as perhaps the burning fuel and the engine that ignites firm competitiveness through their differentiation to suit customer needs and offering a variety to choose from.

The fourth specific objective of this study was to examine the influence of administration innovation on competitive advantage of logistics firms in Kenya. The study concluded that process innovation had significant influence on competitive advantage of logistics firms in Kenya. Administration innovation was identified in the study as having profound effect in enabling customers place orders and availing multiple payment options to customers thus improving the customer experience hence firm competitiveness. Finally, administrative innovation came out as the enabling environment through which all the other innovations thrive through the introduction of new methods in the workplace and trainings for knowledge transfer from the most experienced to the least experienced employees.

RECOMMENDATIONS

The general policy recommendation is that the government of Kenya should review organizational innovation policy to build on competitive advantage of logistics firms in Kenya. The first policy recommendation was that the government of Kenya should review process innovation policy to build on competitive advantage of logistics firms in Kenya. The second policy recommendation was that the government of Kenya should review service innovation policy to build on competitive advantage of logistics firms in Kenya. The third policy recommendation was that the government of Kenya should review product innovation policy to build on competitive advantage of logistics firms in Kenya. The fourth policy recommendation was that the

government of Kenya should review administration innovation policy to build on competitive advantage of logistics firms in Kenya.

The general managerial recommendation is that managers should identify for fostering organizational innovation strategies to build on competitive advantage of logistics firms in Kenya. The first managerial recommendation was that managers should identify strategies for fostering process innovation to build on competitive advantage of logistics firms in Kenya. The second managerial recommendation was that managers should identify fostering service innovation strategies to build on competitive advantage of logistics firms in Kenya. The third managerial recommendation was that managers should identify strategies for fostering product innovation to build on competitive advantage of logistics firms in Kenya. The fourth managerial recommendation was that managers should identify fostering administration innovation strategies to build on competitive advantage of logistics firms in Kenya.

Areas for Further Study

It was evident from the literature review of the study that out of the four variables discussed in the study, process innovation and product innovation had received a lot of research attention and hence has been thoroughly researched on their influence on firm competitiveness. The remaining two variables however had not received much focus and therefore remains very green in academic areas that needs to be researched further. This included service innovation and administrative innovation. Further replications of the same study covering not only logistic firms in Mombasa but in the entire country will also produce viable results worth considering before making policy decisions on firm competitiveness. The researcher also recommends that other scholars should research on the various strategies employed by logistic firms in their efforts to remain competitive in the industry. A study should also be undertaken on the types of innovation strategies that are employed by logistic firms in the industry.

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