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ROLE OF STRATEGIC PROCUREMENT INNOVATION ADOPTION ON SUPPLY CHAIN PERFORMANCE IN KENYA: A CASE OF MINISTRY OF EDUCATION

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ABSTRACT

The objective of the study was to establish the role of strategic procurement innovation adoption on supply chain performance in Kenya a case of Ministry of Education. The specific objectives were to establish the role of administrative innovation on supply chain performance, to analyze the role of process innovation on supply chain performance and to evaluate the role of product innovation on supply chain performance. The targeted population of the study was ministry of Education and the targeted population was 532. The sample of the target respondent were 160. The study issued questionnaire to a sample size of 160 respondents, out of which 35 questionnaires were not returned, and 125 were returned fully filled. The study only considered the fully filled questionnaires for analysis. The response rate is relatively good if the response rate is (70%) and above. The correlation showed a perfect positive linear relationship between variables. R Square (R^2) indicated that 0.720 which is 72% of the variation on performance. The p-value of the significance level indicated that the overall regression model was significant at 0.000 which was smaller than p-value 0.05 thus showing a strong significance level. The study concluded that administrative innovation has a very strong positive influence on supply chain performance. The study recommended that ministry should adopt administrative innovation to ensure the improvement of supply chain performance, the strategic procurement innovation should be adopted in the organization. The study recommended that further area of study to be conducted on role of strategic procurement innovation adoption on supply chain performance in Kenya using different variables and in other ministries and private sectors. The study recommended that the procurement team should prepare the supply chain platform design, the procurement to use e-tendering for the bidding and supply chain management and the procurement to evaluate the bids electronically to improve quality and efficiency.

Key Words: *Administrative Innovation, Process Innovation, Product Innovation, Supply Chain Performance*

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INTRODUCTION

Strategy in procurement and supply chain can be defined as the linking of resources with strategic goals and objectives in order to improve business performance and develop organizational culture that foster innovation, flexibility and competitive advantage (Sung and Choi 2014). Strategic procurement innovation adoption should be adopted and implemented in such a way that they promote a functional purpose whereby employees can judge in terms satisfaction as well as meeting standards of fairness of the organization (Parker & Turner 2012).

According to Johnson & Scholes (2019) strategy is the direction of an organization over the long term which achieves advantage through configuration of resources within a changing environment to meet the market needs and fulfill shareholders expectations. According to Mintzberg (1987) strategy means a plan, pattern, perspective and finally a play meaning a specific and careful move intended to outsmart a competitor.

According to Pearce & Robinson (2015), there are three critical ingredients recommended for the success of a strategy. First, the strategy must be consistent with conditions in the competitive environment by taking advantage of projected opportunities and minimize the impact of major threats. Second, the strategy must place realistic requirements on the firm's resources by understanding that the firm's pursuit of market opportunities must be based not only on the existence of external opportunities but also on competitive advantages that arise from the firm's key resources and the strategy must be carefully executed.

Procurement is one of the most critical components of supply chain success for many organizations as it deals with employees. Human resource practices are the primary means by which firms can influence and shape the skills, attitudes, and behavior of individuals to do their work thus achieve organizational goals (Collins & Clark, 2013). Researchers have pointed out that by matching human resource innovation practices with strategy, the critical human resources skills, attitudes, behaviors and performances that are needed to successfully implement strategies can be acquired, developed, motivated and maintained.

Innovative approaches would motivate the employees in any organization to utilize their set of skills, expertise and knowledge which is likely to contribute to improvement on the economic performance of the firm. Innovative arrangements also have the potential to increase employee morale, thereby improving employee performance through reduction in grievances.

Strategic innovation practices bridges business strategy, human resource practices and innovation. It provides a clear focus on implementing strategic change and growing the skill base of the organization to ensure that the organization can compete effectively in the future (Holbeche, 2014). Concept of strategic procurement innovation practices is crucial in today's business world in that it has to do with the benefits it generate for both a company's workforce and its human resource team. Strategic innovation practices create conducive environment for innovative activities. This is because they allow firms to discover and utilize knowledge, skills and expertise in the organization. Considering the above argument, strategic human resource innovation practices have to be applied in such a way that promote a functional purpose whereby employees can judge in terms of satisfaction as well as meeting standards of fairness (William, 2013).

Statement of the problem

The challenge for strategic procurement innovation is to acquire the right innovation and technology in a fierce competition for the brightest future and to continuously develop the skill-set and commitment of employees in a way that advances the growth of the individual and the growth of the organization (Achi & Sleilati 2016).

Salampasis, Mention and Torkkeli (2015) stated that many organizations fear pulling investment, resources or customer attention from existing offerings can be one of the biggest hindrances to future innovation in procurement process. Innovation adoption process is considered important in supply chain to enhance performance

Studies conducted in various sectors and industries are as shown; Shibin, Dubey, Gunasekaran, Luo, Papadopoulos and Roubaud, (2018) conducted a study on frugal innovation for supply chain sustainability in SMEs multi-method research design. Schniederjans (2018) conducted a study on business process innovation on quality and supply chains. Data were collected through a survey of manufacturing firms throughout the USA. Cherrafi, Garza-Reyes, Kumar, Mishra, Ghobadian and Elfezazi, (2018) studied on lean, green practices and process innovation a model for green supply chain performance. Silva, Gomes and Sarkis, (2019) conducted a study on the role of innovation in the implementation of green supply chain management practices. The study theorizes and tests the mediating effect of product and process innovation on the relationship between GSCM practices and sustainability performance. Sung and Choi (2014) organization lack understanding of the importance of investing in human innovation skills. Innovation not just able to improve things like customer service but also boost your employee engagement. Good HR management software can provide benefits from cutting cost to improving employee happiness. Technology does belong to the workplace it just needs to be adopted with care and thought. Thus this study was conducted to review studies on the role of strategic procurement innovation on supply chain performance in Kenya a case of Ministry of Education to fill the existing gap.

Research Objectives

To establish the role of strategic procurement innovation adoption on supply chain performance in Kenya a case of Ministry of Education. The specific objectives were;

- To establish the role of administrative innovation on supply chain performance
- To analyze the role of process innovation on supply chain performance
- To evaluate the role of product innovation on supply chain performance

LITERATURE REVIEW

Resource- Based View theory

Based on the work of Wernerfelt's (1984) articulation of the resource based view of the firm certainly signified the first coherent statement of the theory which served as the foundation that was extended. The resource based view refers to the concept that each organization is a collection of unique resources and capabilities which is the basis of a firm's strategy and its ability to earn above average returns. Resources are inputs into a firm's production process while capability is the capacity for a set of resources to perform a task or an activity in an integrative manner (Barney 1991).

Stakeholder Theory

Freeman (1984), over the course of his work entitled Strategic Management: a Stakeholder approach, generally accepted as launching the stakeholder theory concepts, defines how stakeholders with similar interests or rights form a group. What Freeman was seeking to explain was the relationship between the company and its external environment and its behavior within this environment. The author set out his model as if a chart in which the company is positioned at the center and is involved with stakeholders connected with the company. In this model, the company-stakeholder relationships are dyadic and mutually independent Frooman (1999).

The theory focuses upon management decision making, explains how stakeholders try and influence organizational decision making processes so as to be consistent with their needs and priorities. The stakeholder theory encourages

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on good management of the organizations and thus supports procurement contract management Gelderman and Brugman (2011).

Principal-Agency Theory

The Principal-Agency Theory is the underpinning theory used to establish the framework for this study. The Principal-Agent Theory is an agency model developed by economists that deals with situations in which the principal is in position to induce the agent, to perform some task in the principal's interest, but not necessarily the agent's Freeman (1984). Several studies Wernerfelt (1984) have contributed to the literature on principal agent theory. All these contributions have one main theme which is the relationship between a principal and an agent.

The Principal-Agent Theory concerns with the arrangement that exists when one person or entity (called the agent) acts on behalf of another (called the Principal). The principals contract with the agent to perform some services on the principal's behalf. These contracts require the agent to exert effort and make decisions. That is the management make operational decisions on behalf of the company shareholders for instance maximization of revenues and minimization of costs among other decisions. With this relationship, the principal engages the agent who acts and makes decisions on behalf of the principal Sang and Mugambi (2014).

The Institutional Theory

Institutional theory describes the effects of external institutional pressures on organizations and defines institutions as regulatory structures, government agencies, laws, courts, and professions, as well as interest groups and public opinion Wernerfelt (1984). The rules and norms set out by the institutions in an environment are endorsed by various actors. A strength attributed to institutional theory is its ability to explain non-choice behaviour of organizations how they conform to norms without questioning them and undertaking public function Lowell (1994). According to Nunnally (1978) institutions are composed of cultural-cognitive and regulative elements that together with associated activities and resources give meaning to life. The author explains the three pillars of institutions as regulatory (policy), normative and cultural cognitive. The regulatory (policy) pillar emphasizes the use of rules, laws and sanctions as enforcement mechanism with emphasis on compliance. The institution theory advocate on the economic procedure or approach chosen carefully as guidelines for bids evaluation thus supporting tender qualification and selection.

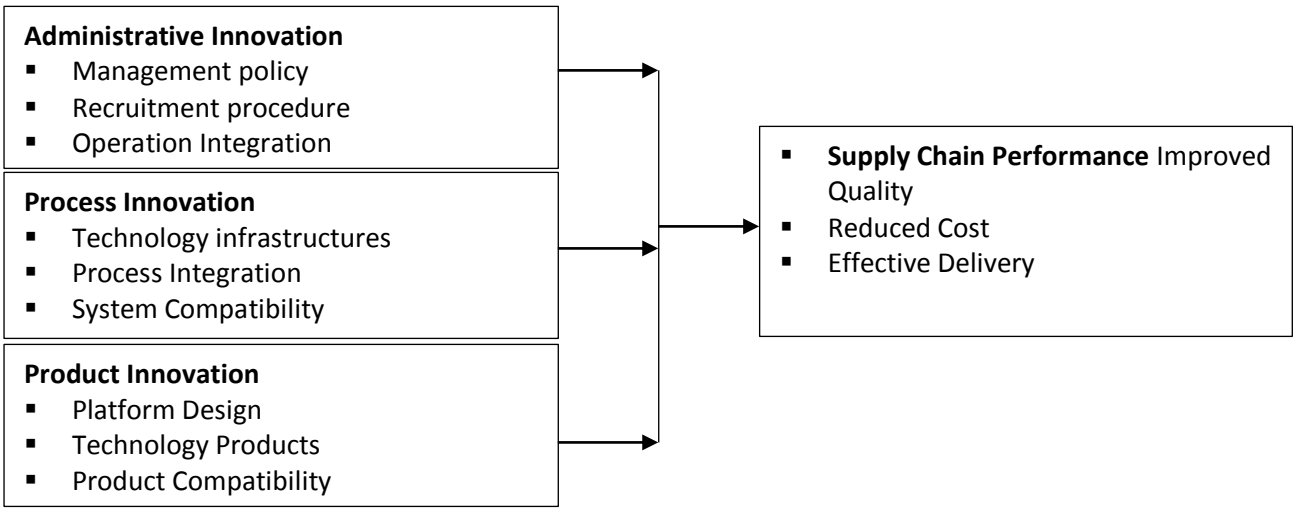

Figure 1: Conceptual Framework

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Empirical Review

Shibin, Dubey, Gunasekaran, Luo, Papadopoulos and Roubaud, (2018) conducted a study on frugal innovation for supply chain sustainability in SMEs multi-method research design. The extensive review of literature was complemented by 10 managers who are knowledgeable in the field of sustainable operations and frugal innovation to ensure the content validity of the enablers of the frugal innovation for sustainability in supply chain. The study further identified the enablers of the frugal innovation for sustainability. The study depicts the hierarchy and interlinks of the identified enablers in developing sustainability oriented frugal innovative capabilities in supply chains. Furthermore, study empirically validated theoretical framework using survey data. These findings extend the understanding of frugal innovation for supply chain sustainability using multi-method research design, while also providing theoretically guidance to managers in the development of frugal innovation capability to achieve sustainability in supply chain in resource constrained environment.

Rasool, Samma & Khan (2019) conducted a study to examine the effect of modern Human Resource Management (HRM) practices on organizational innovation (OI) in the banking sector of China. Questionnaire survey was used in this study. The correlation and regression analysis were used to test the hypotheses with a sample of 140. The results indicate that modern human resource management practices have a positive relationship with OI. The finding highlights among all modern HRM practices performance management has a strong, positive effect on OI. However our study indicates that a higher level of performance management provides a higher level of OI in the banking sector of China.

Cherrafi, Garza-Reyes, Kumar, Mishra, Ghobadian and Elfezazi, (2018) studied on lean, green practices and process innovation a model for green supply chain performance. Research is based on 347 manufacturing companies from 13 countries. Data were collected from 374 manufacturing firms and results analyzed using Structural Equation Modeling (SEM). The findings revealed a synergetic effect between process innovations, green and lean practices, which play a crucial role towards the improvement of GSC performance. Results suggest that lean and green positively affect GSC performance and process innovation. Results indicate that process innovation magnifies the positive effect of lean and green on GSC performance.

Silva, Gomes and Sarkis, (2019) conducted a study on the role of innovation in the implementation of green supply chain management practices. The study theorizes and tests the mediating effect of product and process innovation on the relationship between GSCM practices and sustainability performance. Survey data from 173 manufacturing firms were used to test the model hypotheses. Our findings show that product and process innovation mediate the relationship between GSCM practices and sustainability performance. The findings also suggest that the relevance of different innovation mechanisms depends on the stage of the operational lifecycle within which the practices are implemented. Our study provides insights for managers and scholars seeking to define innovation strategies to ensure the successful implementation of GSCM practices.

Ko, Liu, Ngugi and Chapleo, (2018) conducted a study on external supply chain flexibility and product innovation performance. This study used a cross-sectional questionnaire survey of 236 UK-based SME manufacturers. The study established that to promote product innovation performance, SME managers should focus on building good relationships with their suppliers rather than their logistics service providers. SME managers should be particularly aware of the different types of informal control mechanisms that govern their SC relationships and adjust their managerial approaches accordingly. This study distinguishes between ISF and OLF and examines their impacts on SMEs' product innovation performance. This

study recommends the differential effects of lead supplier influence and normative integration on the relationship between external SC flexibility and SMEs' product innovation performance.

Jimenez, Martínez and Rodriguez (2019) conducted a study on the mediating role of supply chain collaboration on the relationship between information technology and innovation. Structural equation modeling was used to check the research hypotheses with a sample of 200 manufacturing companies. The results show supply chain collaboration has a positive effect on technological innovation, showing that the collaboration with external agents foster both incremental and radical innovations. Furthermore, results show that IT directly enhances both types of product innovation (incremental and radical) indirectly through supply chain collaboration.

Osman, Shariff and Lajin (2016) conducted a study that investigated the relationship between innovation and employee performance at Tenaga Nasional Berhad (TNB), a utility company in Malaysia since TNB is unsure to place innovation as a 'nice to have' or 'must have' in their company. Responses from staff through a survey from selected management team were gathered. Two hundred and ninety-four respondents' feedback was used to analyze the impact of four types of innovation (product, process, technological and organizational) on employee performance. Through Factor Analysis the four types of innovation was reduced to three while another factor named attitude emerged. The three types of innovations (product, process, and technological and organizational) were found to influence employee performance with the exception of attitude.

Abdul-Hamid (2019) examined study on employee engagement strategies to increase innovation. The purpose of this qualitative multiple case study was to explore employee engagement strategies HRLs use to increase innovation. The participants included 5HRLs at small human resource management firms in the northeast area of the United States who used engagement strategies to increase innovation. Data were collected from interviews with the HRLs, company websites and social media pages. A thematic analysis was used to analyze the data. Four themes emerged: cross-team assessment, communication tools, measurement tools, and recognition strategies. The application of the findings from this study contribute to positive social change by providing insights for HRLs on employee engagement strategy implementation for talent retention that increases workplace stability and employees supporting their families as well as contributing positively to their communities.

METHODOLOGY

A descriptive research design was used in this study. The targeted population of the study was ministry of Education. The study used primary data. The primary data was collected using open-ended and closed-ended questionnaires. The study collected primary data based on the objectives of the study. Both open ended and close ended questionnaires were used. Quantitative data was analyzed by employing descriptive statistics and inferential analysis using statistical package for social science (SPSS) version 22 Coakes and Steed (2001). Both descriptive and inferential statistics was used to analyze the data collected.

FINDINGS

Descriptive Statistics

Administrative Innovation

The study sought to establish the extent to which respondent agreed with statement on administrative innovation on supply chain performance. The study established that majority of the respondents agreed that the administrative innovation ensured that the improvement of supply chain performance with a mean of 3.7120, the strategic procurement innovation is adopted in your organization with a mean of 3.7520, supply chain performance is influence by management policy with a mean of 3.60800, the recruitment procedure influences e-procurement adoption with a mean of 3.4880, the procurement team develops

the integrated strategies with a mean of 3.62400 and the procurement ensure operation integration with a mean of 2.288

Process Innovation

The study sought to establish the statement on process innovation on supply chain performance. The study established that majority of the respondents agreed with the research statement that the ministry provide process integration with a mean of 4.0080, to what extent are the process linked to supply chains with a mean of 3.3040, does the system compatibility capability improve supply chain with a mean of 4.19, does the recruitment procedure address on innovative supply chain process with a mean of 3.3840, does technology infrastructures influence on cost reduction with a mean of 4.2000, does technology infrastructures improve supply chain performance influence on quality service with a mean of 2.9440

Product Innovation

The study sought to establish the statement on product innovation on supply chain performance. The study established that majority of the respondents agreed with the statements on product innovation on supply chain performance that the product innovation with a mean of 4.6640, the procurement team prepares the supply chain platform design with a mean of 4.008, the procurement used e-tendering for the bidding and supply chain management with a mean of 3.5760, the procurement evaluated the bids electronically to improve quality and efficiency with a mean of 2.7120, the e-procurement had reduced cost on supply chain with a mean of 3.6080, there was product compatibility on integrated procurement system with a mean of 4.3440, and the modern technology products improved procurement and supply chain performance with a mean of 3.3440.

Supply Chain Performance

The study sought to establish the role of strategic procurement innovation adoption on supply chain performance in Kenya a case of ministry of education. The study findings were as presented in the table above. The study established that majority of the respondents agreed that the administration recruitment procedure plan improves supply chain performance with a mean of 3.8480, the procurement operation integration reduces the cost of services from the suppliers had a mean of 4.00800, the procurement technology infrastructures facilitate supply chain performance with a mean of 3.45, the procurement process integration influences supply chain performance with a mean of 3.9760

Correlations Analysis

Correlation is a term that refers to the strength of a relationship between two variables. A strong or high correlation means that two or more variables have a strong relationship with each other while a weak or low, correlation means that the variables are hardly related. Correlation coefficient can range from -1.00 to +1.00. The value of -1.00 represents a perfect negative correlation while a value of +1.00 represents a perfect positive correlation. A value of 0.00 means that there is no relationship between variables being tested Orodho (2003). The most widely used types of correlation coefficient is the Pearson R which is also referred to as linear or product-moment correlation.

This analysis assumes that the two variables being analyzed are measured on at least interval scales. The coefficient is calculated by taking the covariance of the two variables and dividing it by the product of their standard deviations. A value of +1.00 implies that the relationship between two variables X and Y is perfectly linear, with all data points lying on a line for which Y increases and X increases. Conversely a negative value implies that all data points lie on a line for which Y decreases as X increases (Orodho, 2003). In this study Pearson correlation is carried out to determine how the research variables related to each other. Pearson's correlation reflects the degree of linear relationships between two variables. It ranges from+1 to -1. A correlation of +1 means there is a perfect positive linear relationship between variables Young (2009).

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Table 1: Correlations

		Supply chain performance	Administrative Innovation	Process Innovation	Product Innovation
Supply chain performance	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	125			
Administrative Innovation	Pearson Correlation	.834**	1		
	Sig. (2-tailed)	.000			
	N	125	125		
Process Innovation	Pearson Correlation	.646**	.719**	1	
	Sig. (2-tailed)	.000	.000		
	N	125	125	125	
Product Innovation	Pearson Correlation	.517**	.485**	.257**	1
	Sig. (2-tailed)	.000	.000	.004	
	N	125	125	125	125

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

Supply chain performance and Administrative Innovation had a Pearson Correlation of .834** And Sig. (2-tailed) of .000. Supply chain performance and Process Innovation had Pearson Correlation of .646** and Sig. (2-tailed) of .000. Supply chain performance and Product Innovation had a Pearson Correlation of .517** and Sig. (2-tailed) .000. Thus a correlation of +1 or close to means there is a perfect positive linear relationship between variables.

Regression model Summary

R-squared is a statistical measure of how close the data are to the fitted regression Line. From the illustrated output below, the coefficient of determination R Square (R^2) indicated that 0.720 which was 72% of the variation on performance.

The remaining 28% of variation in can be explained by other variables not included in this model. This shows that the model has a good fit since the value is above 50%. This concurs with Kothari (2004) that R-squared is always between 0 and 100%: 0% indicates that the model explains none of the variability of the response data around its mean and 100% indicates that the model explains the variability of the response data around its mean. In general, the higher the R-

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squared, the better the model fits the data. The adjusted R square is slightly lower than the R square which implies that the regression model may be over fitted by including too many independent variables. Dropping one independent variable will reduce the R square to the value of the adjusted R square.

Table 2: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.849[a]	.720	.713	.47919

a. Predictors: (Constant), Product Innovation, Process Innovation, Administrative

ANOVA

Ronald Fisher ANOVA (2002) in his study on Fisher stated that Analysis of variance (ANOVA) defines ANOVA as a statistical models' collection used in analyzing differences among group means and their related procedures i.e variation among and between groups. The results of Analysis of Variance (ANOVA) for regression coefficients in table below reveals that F-statistics tabulated implied that the overall regression model was significant at the 0.05 significance level. Similarly, the F-statistics P-value=0.000[b] < 0.05 hence the regression model was significant at 0.000 significance level. The value of F is large enough to conclude that the set coefficients of the independent variables are not jointly equal to zero. This implies that at least one of the independent variables had an effect on the dependent variable. The p-value in the ANOVA shown above was used to test the overall regression model of the goodness of fit. The p-value of the significance level indicates that the overall regression model was significant at 0.000 which is smaller than p-value 0.05 thus showing a strong significance level. The p-value of is lesser than the zero and it's enough to conclude that Predictors: (Constant), was significant Product Innovation, Process Innovation, Administrative Innovation

Table 3: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	71.464	3	23.821	103.741	.000[b]
	Residual	27.784	121	.230		
	Total	99.248	124			

a) Dependent Variable: Supply chain performance

b) Predictors: (Constant), Product Innovation, Process Innovation, Administrative

Regression Coefficients Results

The prior step was to test on whether the fitted/regressed model was significant to the study or not. The result was that the regressed model was significant, the researcher narrowed down to test on the individual variables' significance in the model to the model on how they contributed towards the study.

Table 4: Coefficients[a] Regression

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.183	.295		4.014	.000
	Administrative Innovation	.468	.054	.665	8.593	.000
	Process Innovation	.112	.063	.126	1.796	.075
	Product Innovation	.170	.058	.162	2.910	.004

a. Dependent Variable: Supply chain performance, Independent Variables: Administrative Innovation, Product innovation and Process Innovation

Similarly, the F-statistics Pvalue=0.000[b] < 0.05 hence the regression model was significant at 0.000 significance level. The p-value is large enough to conclude that the set coefficients of the independent variables are not jointly equal to zero.

CONCLUSIONS AND RECOMMENDATIONS

Generally, the objective of the study was to establish the strategic procurement innovation adoption on supply chain performance in Kenya a case of Ministry of Education. The study therefore established the following as per the study factors:

The study sought to establish the role of administrative innovation on supply chain performance. The study therefore established that majority of the respondents agreed that the in administrative innovation ensures the improvement of supply chain performance, the strategic procurement innovation is adopted in the organization, supply chain performance is influenced by management policy, the recruitment procedure influences e-procurement adoption, the procurement team develops the integrated strategies and the procurement ensure operation integration.

The study established that majority of the respondents agreed with the research statement that the ministry provide process integration, the process are linked to supply chains, system compatibility capability improve supply chain, recruitment procedure address on innovative supply chain process, technology infrastructures influence on cost reduction, and technology infrastructures improve supply chain performance influence on quality service.

The study established that majority of the respondents agreed with the statements on product innovation on supply chain performance, the procurement team prepares the supply chain platform design, the procurement uses e-tendering for the bidding and supply chain management, the procurement evaluates the bids electronically to improve quality and efficiency, the e-procurement has reduced cost on supply chain, there is product compatibility on integrated procurement system, and the modern technology products improves procurement and supply chain performance.

The study concluded that administrative innovation has a very strong positive influence on supply chain performance. The statement on administrative innovation showed a strong mean

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in relation to supply chain performance. Also the correlation of administrative innovation has a very strong positive coefficient on supply chain performance

The study concluded that process innovation and supply chain performance have strong positive influence on supply chain performance. The process innovation and supply chain performance had a positive correlation.

The study recommended that ministry should adopt administrative innovation to ensures the improvement of supply chain performance, the strategic procurement innovation should be adopted in the organization, supply chain performance can influenced by management policy, the recruitment procedure should done consistently to improve e-procurement adoption, the procurement team should develop the integrated strategies for procurement to ensure operation integration.

The study recommended that the procurement process should be linked to supply chains, improvement of system compatibility capability should be done to improve supply chain, recruitment procedure should be done to address on innovative supply chain process, technology infrastructures should be put in place to help on cost reduction, and technology infrastructures should be integrated to improve supply chain performance and quality service.

The study recommended that the procurement team should prepare the supply chain platform design, the procurement to use e-tendering for the bidding and supply chain management, the procurement should evaluate the bids electronically to improve quality and efficiency. The e-procurement to be adopted to reduce cost on supply chain product integration with procurement system to improve supply chain and the modern technology products used to improve procurement and supply chain performance.

Areas for further Research

The study recommended that further area of study to be conducted on role of strategic procurement innovation adoption on supply chain performance in Kenya using different variables in other ministries and private sectors.

REFERENCES

Abdul-Hamid, I. (2019). *Employee Engagement Strategies to Increase Innovation* (Doctoral dissertation, Walden University).

Achi, S. E., & Sleilati, E. (2016). The effect of coaching on employee performance in the human resource management field: the case of the Lebanese banking sector. *International Journal of Trade and Global Markets*, *9*(2), 137-169.

Appelbaum, E., Bailey, T., Berg, P.,& Kalleberg, A. (2000). *Manufacturing advantage: Why high-performance work systems pay off*. Ithaca, NY: Cornell University Press.

Asrar-ul-Haq, M., & Kuchinke, K. P. (2016). Impact of leadership styles on employees' attitude towards their leader and performance: Empirical evidence from Pakistani banks. *Future Business Journal*, *2*(1), 54-64.

Barney, J. (2001). Is the resource- based view a useful perspective for strategic management research? *Academy of Management Review*. Vol. 26 (1), Pp. 4156.

Camp, W. (2001). Formulating and evaluating theoretical frameworks for the career and technical education research. *Journal of Vocational Educational Research*. Vol. (3)2,Pp. 26-30.

Cherrafi, A., Garza-Reyes, J. A., Kumar, V., Mishra, N., Ghobadian, A., & Elfezazi, S. (2018). Lean, green practices and process innovation: A model for green supply chain performance. *International Journal of Production Economics*, *206*, 79-92.

Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/ correlation analysis for the behavioral sciences,* (2nd Ed.). Hillsdale, NJ: Lawrence Erlbaum Associates.

Collins, C. J.,& Clark, K. (2003). The role of human resource in creating organizational competitive advantage. *Academic Management journal*. Vol 46 (6), Pp. 740-771.

Cooper, D. R. & Schindler, P.S. (2006). *Business Research Methods,* (9th Ed.): New Delhi- India: McGraw-Hill Publishing, Co. Ltd.

Corbett*, A.C., O'Connor, G.C., & Peters, L. (2014). Designing the organization for corporate entrepreneurship and institutionalizing the innovation function (interactive paper).*

Danneels, E. (2002). The dynamics of product innovation and firm competences. *Strategic management journal*, *23* (12), 1095-1121.

Davenport, T. H. (1993). *Process innovation: reengineering work through information technology*. Harvard Business Press.

Do, B. R., Yeh, P. W., & Madsen, J. (2016). Exploring the relationship among human resource flexibility, organizational innovation and adaptability culture. *Chinese Management Studies*.

Field, A. (2009). *Discovering statistics using SPSS*. London: Sage Publishers.

Freeman, R. E. (1984). Strategic management: *A Stakeholder Approach*, MA: Pitman, Marshfield. Freeman,

R. E. (2004). Stakeholder theory of modern corporation in T. Donaldson & P. Werhane, (eds.): *Ethical Issues in Business*: A *Philosophical Approach* (7th Ed.), Englewood Cliffs, NJ: Prentice Hall,

Freeman, R.E & Philips R. A. (2002). Stakeholders Theory: A libertarian defense. *Business Ethics Quarterly*, (12), 331-349.

Gall, M. D., Gall, J. P., & Borg, W. R. (2007) *Educational Research: An introduction*. Boston: Pearson Education

Garret, G & Rendon, G (2015). *Contract Management: Organisational Assessment Tools.* National Contract Management Association. 105 Harlow/Essex: Pearson Education Ltd.

Holbeche, L. (2014). *Aligning human resources and business strategy*. Oxford: Elsevier Butterworth-Heinemann.

Jimenez-Jimenez, D., Martínez-Costa, M., & Rodriguez, C. S. (2019). The mediating role of supply chain collaboration on the relationship between information technology and innovation. *Journal of Knowledge Management*.

Johnson, G.,& Scholes, K. (2019). *Exploring Corporate Strategy.* (5th Ed.).

Kossek, E. E. (1989). The acceptance of Human resource innovation by multiple constituencies. *Personal psychology*. Vol. 42 (2), Pp. 263-281.

Kothari, C.R. (2008). Research Methodology: *Methods and Techniques.* (2nd Ed.). New Dehli: New Age International Publishers.

Kothari.C.R. (2004). *Research Methodology: Methods and Techniques.* New Delhi: New Age International (P) Ltd.

Kreitner, R.,& Kinicki, A. (2007). Organizational behaviour. (7th Ed.). Mcgraw-hill Irwin: New York.

Landy, F. J., & Farr, J. L. (1980). Performance rating. *Psychological bulletin*, *87*(1), 72.

Malcolm, (2014). Procurement innovation and SMEs: *Paper presented at the Kenya institute of supply management 5th annual conference held in Kigali Rwanda: Building effective procurement systems* Nairobi: KISM.

Mazzei, M. J., Flynn, C. B., & Haynie, J. J. (2016). Moving beyond initial success: *Excellence*, *8*(4), 433-457.

Mugenda, O. & Mugenda, A. (2009). *Research Methods Dictionary:* Nairobi: Applied Research & training Services Press.

Mulero, A. W., & Emeka, O. E.(2018) Developing Organizational Innovation Capabilities

Through Human Resources Management Practices: Evidence From Nigeria's Brewery Industry.

Mulero, A. W., & Emeka, O. E.(2018) Developing Organizational Innovation Capabilities Through Human Resources Management Practices: Evidence From Nigeria's Brewery Industry.

Osman, S., Shariff, S. H., & Lajin, M. N. A. (2016). Does innovation contribute to employee performance. *Procedia-Social and Behavioral Sciences*, *219*, 571-579.

Pearce, J. A.,& Robinson, R. B. (2015). *Strategic Management: Formulation, Implementation and Control.* Boston: Irwin/ Mcgraw-Hill.

Pilbeam, S.,& Corbridge, M. (2006). *People resourcing: Contemporary HRM inpractice.* Harlow: Financial Times Prentice Hall.

PPRA (2004).The Public Procurement Act No.21, Dar es Salaam; Government Printer.

PPRA. (2008). Procurement Audit Results: Key Findings and Recommendations for Audited Procuring Entities. *Tanzania Procurement Journal,* pp 5-12.

Promoting innovation in small businesses through high-performance work practices. *Business Horizons*, *59*(1), 51-60.

Rasool, S. F., Samma, M., & Khan, T. M. (2019). Relationship between modern human resource management practices and organizational innovation: empirical investigation from banking sector of China.

Republic of Kenya, (2011). Ethics and Anti-corruption Commission: *Annual Report* 2010- 2011, Nairobi: Government Press.

Republic of Kenya, (2012). *Constitution of Kenya, 2010*, National council for law reporting, 4th Upper Hill Close, off Ngong Rd, Nairobi: Government Press.

Republic of Kenya, (2012). Ethics and Anti-corruption Commission: *Annual Report* 2011- 2012, Nairobi: Government Press.

Republic of Kenya, (2013). Report of the presidential taskforce on parastatals reform. Nairobi: Government Press.

Sabri, Y., Micheli, G. J., & Nuur, C. (2018). Exploring the impact of innovation implementation on supply chain configuration. *Journal of Engineering and Technology Management*, *49*, 60-75.

Salampasis, D. G., Mention, A. L., & Torkkeli, M. (2015). Human resources management and open innovation adoption in the banking sector: a conceptual model. *International Journal of Business*

Schniederjans, D. G. (2018). Business process innovation on quality and supply chains. *Business process management Journal*.

Shahnaei*, S., & Long, C.S. (2015). The Review of Improving Innovation Performance through Human Resource Practices in Organization Performance.*

Shibin, K. T., Dubey, R., Gunasekaran, A., Luo, Z., Papadopoulos, T., & Roubaud, D. (2018). Frugal innovation for supply chain sustainability in SMEs: multi-method research design. *Production Planning & Control*, *29*(11), 908-927.

Shipton, H., West, M. A., & Patterson, M. (2016). HRM as a predictor of innovation. *Human resource management journal*, *16*(1), 3-27

Silva, G. M., Gomes, P. J., & Sarkis, J. (2019). The role of innovation in the implementation of green supply chain management practices. *Business Strategy and the Environment*, *28*(5), 819-832.

Sinaga, O., Lis, M., & Razimi, M. S. A. (2019). Education and core skills in the performance with mediating role of employee innovation. *Polish Journal of Management Studies*, *19*.

Stevens, G. C. (1989). Integrating the supply chain. *international Journal of physical distribution & Materials Management*.

Sung, S. Y., & Choi, J. N. (2014). Do organizations spend wisely on employees? Effects of training and development investments on learning and innovation in organizations. *Journal of organizational behavior*, *35*(3), 393-412.

Teece, D. J. (1980). The diffusion of an administrative innovation. *Management science*, *26*(5), 464-470.

Tuuli, M., & Rowlinson, S. (2009). Performance consequences of psychological empowerment. *Journal of construction engineering and management*. Vol. 135 (12) Pp. 1334-1347.

Uddin, M. (2018). Knowledge Management: Tool for Enhancing HRM Practices and Organizational Innovation. *IJHSS .NET*, 31.

Vroom, V. H. (1960). *Work and motivation*. New York: John Wiley.

Wernerfelt, B. (1984). A Resource-based View of the Firm. *Strategic Management Journal*, Vol. 5(2), Pp.171-180.

William, T. (2013). The Business Innovation: An interview with Paul Cook. *Harvard Business Review*. Vol. 68(2), Pp. 97-106.