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INFLUENCE OF KNOWLEDGE CREATION ON ORGANIZATIONAL PERFORMANCE OF STATE OWNED COMMERCIAL ENTERPRISES IN KENYA

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Abstract

Purpose: The purpose of this was to analyze the influence of knowledge creation on organizational performance of state owned commercial enterprises in Kenya.

Methodology: This study was based on explanatory and descriptive research designs since they were more appropriate to test the hypotheses. The target population comprised of 275 members of top management team of 55 state-owned commercial enterprises in Kenya, as at 31st October 2016. The study utilized simple random sampling to select a sample of 268 members of top management team in the 55 state-owned commercial enterprises.

Results: Response rate of 71% was obtained and analytical tests conducted were Pearson correlation coefficients, One Way ANOVA, and Multiple linear regression. The correlation coefficients for return on equity was ($r = -0.035$, $p=0.635$) and return on asset was (r = 0.063, $p = 0.388$). One-Way ANOVA results was $F_{(14, 173)} = 2.483$, p=0.003. The regression for coefficient based on return on equity for knowledge creation was: unmoderated models; $\beta = -1.044$, t (-1.657), p=0.1 and for moderated model; $\beta = -7.317$, t (-4.505), p=0.000 respectively.

The regression coefficient based on return on asset model for knowledge creation was: unmoderated models; $\beta=0.134$ t (0.608) p = 0.544 and for moderated models; $\beta = -0.335$, t (-0.533), p = 0.595. The study concludes that there is no significant influence of knowledge creation on performance based on return on assets but there is significant influence of knowledge creation on organizational performance based on return on equity of state owned commercial enterprises in Kenya.

Contribution to Practice, Theory and Policy: Based on the findings that knowledge creation influences the organizational performance of state owned commercial enterprises in Kenya, the study recommends that organizations should encourage the collaboration, practice, education, and interaction as ways of creating knowledge.

Key Words: *Knowledge creation, Return on Assets (ROA), Return on Equity (ROE)*

1.0 INTRODUCTION

1.1 Background of the Study

Knowledge creation is an arm of knowledge management. In order to understand the background, knowledge management is a key component for discussion. Wigg (1993) cites knowledge management as the process of generating, organizing, storing, distributing and applying knowledge in organizations, while according to Pearlson and Saunders (2004) knowledge management comprises of four processes, namely: knowledge generation; knowledge capture; knowledge codification and knowledge transfer. These are briefly elaborated as: Knowledge generation*,* which includes all activities that discover ''new'' knowledge or knowledge creation; knowledge capture, which involves continuous scanning, organizing, and packaging of knowledge after it has been generated; knowledge codification, which is their presentation of knowledge in a manner that can easily be accessed and used; and knowledge transfer, involves transmitting knowledge from one person or group to another person or group, and the absorption of that knowledge. This paper focusses on knowledge creation.

Throughout the world, organizations are facing a universal challenge consequential from rapid change in a new knowledge economy (Zwain, Teong & Othman, 2012). The resultant effect is that organizations that fail to keep up with this rapid change will be left behind to grope in its unpreparedness. Many organizations accept Knowledge Management (KM) as a management paradigm worldwide in order to cope with the changing expectations of the organization (Zwain *et* al., 2012). Organizations appreciate that the creation and control of knowledge is the crux of tomorrow's worldwide struggle for power in every human institution. Knowledge creation throughout the organization enhances existing organizational business processes, introduces more efficient and effective business methods and removes redundant processes (Bhojaraju, 2005).

Kovasic, Bosity and Loncar (2006) views the whole idea of knowledge management as improving the process of acquisition, integration and usage of knowledge. More, Carroll and Foss (2009) showed that knowledge management plays a key role in enhancing organizational performance of organizations and the role of knowledge management in improving performance of a company cannot be overemphasized.

Hevani, Helms and Sarkis (2005) posits that various studies that have been done to investigate the universal principle of performance measurement and found that measurement systems may have either tangible or intangible measures. The authors concluded that such measures should be dynamic and universally available at all levels of organization including embedding in the products, services, systems and processes and must be developed and implemented with a team approach that should link compensation, rewards and recognition to performance measurement. The need for public service reforms is to assure citizens of better service delivery whilst ensuring return on investment to Government. Further, the public sector in sub-Saharan Africa is still bureaucratic, rigid in nature and more, so knowledge creation and management is yet to be appreciated within the civil service.

In Kenya, the state corporations Act was enacted through an Act of Parliament to control and regulate state corporations. True to the spirit, it created an institutional framework with a multiplicity of actors, a reality that tends to undermine the effectiveness and efficiency in the sector. The Act created roles for the Presidency, Parent Ministry, the Treasury, Board of Directors, State Corporation Advisory Committee, and the Inspectorate of State Corporations. Multiplicity of challenges arose such as; the absence of clear criteria and procedure for the appointment of Boards of Directors, bloated membership of board of directors, lack of proper understanding and appreciation of duties and responsibilities of the board, lack of clear procedure for board succession, and inadequate mix of skills, relevant experience and exposure (Government of Kenya, 2013). It is though this act that state owned commercial entities were formed as profit making entities for the government. However, since their establishment, state owned commercial enterprises have had notable successes, failures and missed opportunities in development.

1.2 Statement of the Problem

The link between knowledge creation in management and organizational performance has been empirically explored, but rarely through assessing the state of knowledge management practice and comparing it with direct indicators of financial performance. Namely, some empirical studies focus only on specific aspect of knowledge management, not the whole knowledge management structure for instance, Lee, Lee, and Kang (2005) assessed the performance of an organization with respect to its knowledge, and Harlow (2008) was assessing the level of tacit knowledge within organizations and its effect on organizational performance. There is a gap caused by scarcity of literature on the adoption of knowledge creation and how such knowledge if available influences performance of organizations.

Performing organizations are the bedrock of a country's economic growth hence Kenya's state-owned enterprises plays a critical role in accelerating economic growth and development, indigenizing the economy, building capability of the state, improving the delivery of public services, creation of employment opportunities and building of international partnerships (Government of Kenya, 2013a). Since their establishment, some of these state-owned commercial enterprises have failed to meet their financial goals and hence missed opportunities for development. Noteworthy is the fact that 34 percent of all state owned commercial enterprises have been making losses.

This represents nearly a quarter of the state owned commercial enterprises (Government of Kenya, 2013b). This calls for research on how presence of knowledge creation influences organization performance.

1.3 Purpose of the Study

Purpose of this study was to analyze the influence of knowledge creation on organizational performance of state owned commercial enterprises in Kenya based on return on equity and return on assets.

1.4 Research Questions

What is the influence of knowledge creation on organizational performance of state owned commercial enterprises in Kenya?

2.0 LITERATURE REVIEW

2.1 Theoretical Review

Resource Based View (RBV) theory was used in this study. Developed by Penrose (1959), the theory rests on the premise that an organization is a broader set of resources and the growth of an organization involves the exploitation of existing resources and the development of new ones. Penrose (1959) posits that human capital is not entirely specialized and can therefore be redeployed to allow the firm's diversification into new products and services. This theory points out that an organization's success is due to joint assets, resources and capabilities which it owns. These resources and capabilities enable the organization to achieve a competitive advantage including creating environment for knowledge creation.

The Resource Based View of the firm focuses specially on the inside of the firm, its resources and capabilities, to explain the profit and value of the organization (Penrose, 1980; Wernerfelt, 1984; Grant, 2002; Peteraf, 1993; Makhija, 2003). This theory is applied to explain differences in performance within an industry (Hoopes, Madsen & Walker, 2003). The Resource Based View of the firm states that differences in performance happen when well successful organizations possess valuable resources that others do not have, allowing them to obtain a rent in its quasi-monopolist form (Wernerfelt, 1984). Valuable company resources and capabilities must be difficult to imitate, and not acquired or replaced easily by competitors. Resources that are valuable and unique to the organization enable the enterprise to develop the best environment for knowledge creation.

In a study of this nature, the state owned commercial enterprises' resources include capital, equipment, talent, knowhow, skills and knowledge. However, the resource-based theory is silent on how knowledge should be acquired and retained in the organization. Such weaknesses leave Nonaka and Takeuchi's (1995) organizational knowledge creation theory unparalleled as the most preferred foundation for knowledge management. However, the strategic line of thought that analyses the organization's strengths and weaknesses also creates an environment for knowledge creation. The organization's attributes that allow it to conceive of and implement value-creating strategies are resources. Such resources, assets and capabilities the firm possesses are used to build its competitive advantage and, as a consequence, economic wealth (Dess, Gupta, Hennart &Hill, 1995).

2.2 Conceptual Framework

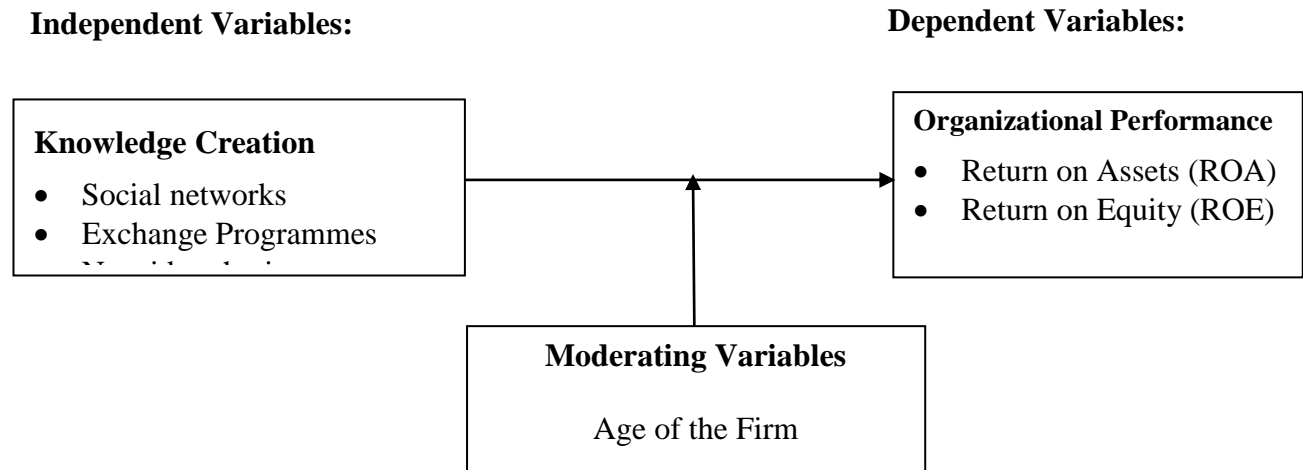The research was guided by the following conceptual framework

Independent Variables: **Dependent Variables:**

Figure 1: Conceptual framework

2.3 Empirical Review

The process of knowledge creation points to the ideas and actions undertaken towards the generation of new ideas or objects (Mitchell & Boyle, 2010). It is an organization's capability to build new ideas and solutions related to various dimensions of organizational activities. In the creation and acquisition phase of the Knowledge Management Life Cycle, information is acquired internally by knowledge workers, externally through outsourcing or purchased from an outside source, and the mechanisms for this phase include self-reporting, documentation, programming, instrumentation, network, knowledge engineering (Bergeron, 2003), hence affecting the overall organizational performance through self-reporting.

Langeroodi (2014) studied the effect of the knowledge management and Intellectual capital on organizational performance in state banks of Rasht, Naragh, Iran. The results from casual modelling indicated that factors such as efficiency, innovation and dynamic capabilities affect organizational performance directly and furthermore has indirect effect on organizational performance through efficiency, innovation and dynamic capabilities. It is also considered that the culture of learning and knowledge creation has a positive effect on intellectual capital and performance.

Forghani and Tavasoli (2017) undertook a study to test the relationship between knowledge management dimensions and organizational performance in lean manufacturing companies in Iran. The model tested the impact of knowledge function, creation, acquisition, sharing and registration on organization's performance. The study findings indicated that a significant relationship exists between knowledge creation, knowledge acquisition, knowledge sharing and knowledge registration and organizational performance in lean manufacturing.

Bihamta, Nowzari, Eghtebasi, Subramaniam, Salimi and Salehi (2012) carried out a descriptive study of the impact of knowledge creation mechanism on organizational performance, focusing on Malaysian automotive industry. The study found positive relationship between knowledge management and organizational performance. The study concluded that the process of continuous improvement is one of the significant and predominant programs in most of the manufacturers all over the world.

Cheruiyot, Jagongo and Owino (2012) investigated the Institutionalization of Knowledge Management in selected manufacturing enterprises in Kenya. The study concludes that the organizational practices that include knowledge creation, distribution have the highest influence in creating value for the organization. Further, Chweya, Ojera, Ochieng, and Riwo-Abudho (2014) study targeting commercial banks in Kisumu city, Kenya revealed that there is significant relationship between knowledge creation and organizational performance (r=0.614, p<0.001).

3.0 RESEARCH METHODOLOGY

This study used positivist research philosophy. This study was based on explanatory and descriptive research designs since they were more appropriate in enabling the researcher to test the hypotheses.

The target population for this study comprised of 275 members of top management team of 55 commercial state-owned enterprises in Kenya, as at 31st October 2016. The respondents in each of the organizations comprised of 5 members of top management that is; human resources manager, information technology manager, finance manager, administration manager/corporate communication and marketing/customer service relationships manager

Sample size was obtained by Yamane (1967) sample size formula: total population 275, precision error 0.01.

$$n = N/\{1 + N\varepsilon^2\}$$
$$n = 275/\{1 + 275(0.01)^2\}$$

The study collected data from 268 members of top management team from the 55 commercial state-owned enterprises in Kenya.

The study utilized simple random sampling to select a sample of 268 members of top management team. Response rate of 71% was obtained and analytical tests conducted were Pearson correlation coefficients, One Way ANOVA, and Multiple linear regression.

4.0 RESULTS AND FINDINGS

The findings are presented as follow:

Normality test: The study sought to determine normality of the independent variables. Based on results on Shapiro-Wilk, the knowledge creation variable was statistically significant (p=0.05), this implies that the data deviates from a normally distribution.

Multicollinearity: this was tested by using Pearson correlation coefficient. The test established that there was absence of collinearity since the Pearson correlation for knowledge creation was less than 0.8.

Factor analysis: There four items on knowledge creation. To reduce the number of items and develop an appropriate measure for knowledge acquisition. The value of KMO was 0.783, Bartlett's test had a chi square of 205.246 that was significant at $p<.05$.

The results for total variance explained for knowledge creation extracted only one component that explained 61.396% of the total variables. The derived factor 'knowledge creation' was used in the study.

Correlation: Correlation analysis was conducted to determine the relationship between knowledge creation and organizational performance of state owned commercial enterprises. The correlation coefficients for return on equity and return on asset on knowledge creation were ($r = -0.035$, $p=0.635$) and ($r = 0.063$, $p = 0.388$) respectively. The r value shows a weak association indicating that there's no relationship between knowledge creation and organizational performance of state owned commercial enterprises.

ANOVA: One-Way ANOVA test was conducted to examine the differences in mean of knowledge creation across two segments of commercial state owned enterprises. The study established that there was significant difference, $F (14, 173) = 2.483$, $p=0.003$, in mean of knowledge creation for pure and strategic commercial state owned enterprises in Kenya.

Regression Analysis

Multiple regression analysis was conducted for both moderated and unmoderated model in order to establish the effect of knowledge creation on organizational performance. Model 1 presents the unmoderated and model 2 presents the moderated model. The moderation was age of the firm.

Regression for Knowledge Creation on Return on Equity

In model 1, established that 2.8% of the variations in return on equity can be explained by knowledge creation (Adjusted $R^2=0.028$) while 18.5% of the variations in the return on equity in model 2 can be explained by knowledge creation based on age as moderating variable (Adjusted $R^2=0.185$) as shown in table 1.

Table 1: Model summary for Knowledge Creation on Return on Equity

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.243	.059	.028	7.30958
2	.491	.241	.185	6.69487

ANOVA table 2 shows Model 1 was statistically insignificant, $F (5,153) =1.912$, $p=0.095$, implying that the model was not a good fit for the data. Model 2 was statistically significant, $F (11,147) = 4.253$, $p = 0.000$, implying that the model was a good fit for the data.

Table 2: ANOVA for Knowledge Creation on Return on Equity

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	510.895	5	102.179	1.912	.095
	Residual	8174.773	153	53.430		
	Total	8685.669	158			
2	Regression	2096.938	11	190.631	4.253	.000
	Residual	6588.730	147	44.821		
	Total	8685.669	158			

The regression coefficient for model 1 were statistically insignificant, β = -1.044, t (-1.657), p=0.1, implying that knowledge creation was insignificant in predicting return on equity. The coefficient for model 2 were statistically significant, β = -7.317, t (-4.505), p=0.000, implying that knowledge creation was statistically significant in predicting return on equity as indicated on table 3.

Table 3: Coefficients for Knowledge Creation on Return on Equity

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-4.296	3.008		-1.428	0.155
	Knowledge Creation	-1.044	0.63	-0.164	-1.657	0.10
2	(Constant)	-27.545	9.383		-2.936	0.004
	Knowledge Creation	-7.317	1.624	-1.148	-4.505	0.00

Regression Analysis for Knowledge Creation on Return on Asset

In model 1, 1.4% of the variations in the return on asset can be explained by knowledge creation (R^2=0.014) while in model 2, 2.0% of the variations in the return on asset can be explained by knowledge creation (R^2=0.020) as shown in table 4.

Table 4: Model Summary for Knowledge Creation on Return on Asset

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.117	.014	-.019	2.54864
2	.141	.020	-.053	2.59188

Analysis of Variance (ANOVA) examines the goodness of fit of the moderated model 2. In model 1, $F_{(5, 153)} = 0.423$, p=0.832, indicating that the model was statistically insignificant and not a good fit for the data. Model 2 had the $F_{(11, 147)} = 0.271$, p=0.990, implying that the model was statistically insignificant and therefore not a good fit for the data.

Table 5: ANOVA for Knowledge Creation on Return on Asset

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	13.735	5	2.747	.423	.832
	Residual	993.820	153	6.496		
	Total	1007.555	158			
2	Regression	20.032	11	1.821	.271	.990
	Residual	987.523	147	6.718		
	Total	1007.555	158			

The coefficients shows: Model 1 had a coefficient of β=0.134 t (0.608) p = 0.544, implying that knowledge creation was statistically insignificant in predicting return on asset. Model 2 had a coefficient of β = -0.335, t (-0.533), p = 0.595, implying that the model was also statistically insignificant in predicting return on asset as indicated in table 6.

Table 6: Coefficient for Knowledge Creation on Return on Asset

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-0.14	1.049		-0.134	0.894
	Knowledge Creation	0.134	0.22	0.062	0.608	0.544
2	(Constant)	0.07	3.632		0.019	0.985
	Knowledge Creation	-0.335	0.629	-0.154	-0.533	0.595

5.0 DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Discussions

Knowledge creation was significantly associated with organizational performance of state owned enterprises in Kenya as measured by Return on Equity. This implies that the continuous transfer, combination, and conversion of the different types of knowledge, as users practice, interact, and learn positively and significantly influence the performance of State owned organizations based on Return on Equity but not as determined by Return on Asset.

The findings of this study are in agreement with the results established by Bihamta, Nowzari, Eghtebasi, Subramaniam, Salimi and Salehi (2012) who carried out a descriptive study of the impact of knowledge creation mechanism on organizational performance on Malaysian automotive sector and found that knowledge creation was positively related with organizational performance. In this study, Bihamta et *al.* (2012) evaluated the profound roles of knowledge creation in terms of socialization, externalization, combination and internalization as a model on quality process.

The findings confirm the research conducted by Cheruiyot, Jagongo and Owino (2012) that investigated the Institutionalization of Knowledge Management in selected manufacturing enterprises in Kenya. The study concludes that the organizational practices that include knowledge creation, distribution have the highest influence in creating value for the organization and therefore when a comprehensive view is taken in instituting KM practices, organizational practices be considered first and technological infrastructure second.

These findings are in agreement with Langeroodi (2014) study of the effect of knowledge management and Intellectual capital on organizational performance in state banks of Rasht, Naragh, Iran. The results from casual modelling showed that factors such as efficiency, innovation and dynamic capabilities affect organizational performance directly and furthermore has indirect effect on organizational performance through efficiency, innovation and dynamic capabilities. It is also indicated that the culture of learning and knowledge creation has a positive effect on intellectual capital and performance. Further, the findings confirm the studies conducted by Chweya, Ojera, Ochieng, and Riwo-Abudho (2014) targeting commercial banks in Kisumu city, Kenya.

5.2 Conclusion

Results from data analysis showed that Knowledge creation was significantly associated with organizational performance of state owned enterprises in Kenya as measured by Return on Equity. The study concludes that Knowledge creation influences the organizational performance of state owned commercial enterprises in Kenya based on Return on Equity as measure of organizational performance.

5.3 Recommendations

Based on the findings that knowledge creation influences the organizational performance of state owned commercial enterprises in Kenya, the study recommends that organizations should encourage the collaboration, practice, education, and interaction as ways of creating knowledge.

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