

Strategic Choice and Performance of Universities in Kenya: The Mediating Role of Organizational Learning

Angeline Mukokho Ayuya¹, Zachary B. Awino², Vincent N. Machuki³, Gituro Wainaina⁴

ABSTRACT

Scholars and practitioners argue that organizational performance is important for both empirical and conceptual research in strategic management. Strategic choice is a major connection between the organization and the environment and involves decisions on the mix of business portfolio. Organizational learning, on the other hand, involves a process of change which evolves around improving the organizational capability through new knowledge. However, different scholars conceptualize organizational learning differently depending on their interests. This empirical research sought to contribute to knowledge by assessing the extent to which organizational learning influences the relationship between strategic choice and performance of universities in Kenya. The study premised on the view that establishing the role of organizational learning maximizes the capabilities and competitive advantage in the performance of universities in Kenya. The study was anchored in the industrial organizations economics theory as the main theory. The study adopted a positivistic orientation and used a cross sectional survey. This study used a sample of fifty two and got responses from forty three private and public universities. Primary data was collected using semi structured questionnaires. An analysis was done using correlation and regression analysis to test the hypotheses. The study objective confirmed mediation of organizational learning confirmed significant results on non-financial performance. The findings of this study are consistent with most of the previous studies. This study therefore extends the knowledge frontiers in strategic management through the finding that strategic choice influences organizational performance both directly and indirectly through mediation of organizational learning. The findings of this study provide a diversity of implications on theory, policy and practice. Policy makers will utilize the findings from this study as a guide in the policy formulation and implementation of strategic choices aimed at improved performance of the universities in Kenya with focus on strategic choice and organizational learning.

Key Words: Strategic Choice, Organizational Learning, Organizational Performance

¹Doctoral Student, School of Business, University of Nairobi

²Associate Professor, School of Business, University of Nairobi

³Senior Lecturer, School of Business, University of Nairobi.

⁴Associate Professor, School of Business, University of Nairobi.

Introduction

Technological advancements have led to Organizations to continuously look for strategic choices which distinguish them from competitors so that they can secure sustainable competitive advantage through sustainable superior performance. The organizations make strategic choices by developing the capacity of individuals to learn at individual, group and institutional levels (Senge, 1990). Senge (1990) also posits that the organization that will succeed in having a sustainable competitive advantage is one that is able to learn faster than its competitors. Dutton and Duncan (1987) however, posit that if organizations have to achieve improved performance and have a competitive advantage over their competitors, strategic choices on the right mix of business portfolio have to be made. This may be done after interpretation of the prevailing environmental strategic issues through organizational learning.

There has been a raging debate by strategic management scholars and practitioners, over the years, who have continued to argue as to why organizations in the same industry differ in performance since they may use the same performance measures (Krager, 1996; Barney, 1991). Other scholars argue that this is attributed to the use of different measures which keep changing as they are aligned to the strategic choices which are developed by organizations. Measuring organizational performance is therefore, difficult especially when the indicators of measure keep changing (Hubbard, 2009). Therefore, the debate on why some organizations in the same industry perform better than others

using different performance measures continue to attract empirical studies.

Most researchers also argue that both financial and non-financial measures should be used since financial measures fail to explain what really contributes to improved performance in organizations (Cooper & Aouad, 2000; Bourne, Mills, Wilcox, Neely & Platts, 2000). This study conceptualized organizational performance as an independent variable and adopted the Sustainable Balanced Score Card framework as a performance measurement tool which incorporates financial performance measurements in terms of surplus/deficit, research grants and endowment funds. The non-financial organizational performance was operationalized using customer perspective, new business processes, learning and growth which are relevant to universities in Kenya.

The study focused on universities in Kenya and one of the major objectives of these institutions is to contribute to the success of the Kenya Vision 2030 and be able to survive and compete in the regional and global markets. The demand for higher education in Kenya has increased tremendously despite the challenges of underfunding, lack of adequate teaching facilities and the fluctuating economic environment. These institutions promote national economic growth by providing employment opportunities which improve the living standards. They provide a leading edge in research activities that lead to innovation (Kenya Vision 2030).

There has been an increase of universities in Kenya since independence from one public

university to 70 including constituent colleges. These institutions have continued to struggle for survival in order to maintain sustainability in growth and competitiveness which has led to rivalry in the higher education sector. All the universities are therefore focusing on having a competitive edge and be a market leader. Some scholars argue that if universities have to sustain relevance and competitiveness in the economy, they should embrace strategic choices with focus on the changing technological advancements (Eshiwani, 1999; Munyoki, Kibera & Ogutu, 2011; Orucho, 2014). It is therefore important that a review of strategic choices is made through continuous organizational learning at all levels in the institutions aimed at improved performance.

According to Leroy and Ramanantsoa (1997) organizational learning is the acquiring, developing and disseminating knowledge and skills within the organization so as to influence organizational performance. The definition underscores the role of organizational learning on shaping organizational performance. Such conceptualization sees organizational learning as a significant antecedent of organizational performance, how efficient it is and how it gains a competitive edge over its competitors (Templeton et al., 2002). Organizational learning has also been defined by some scholars as a process which influences organizational behavior by developing new potential insights.

According to Cummings and Whorley (2009), organizational learning involves a process of change which evolves around

improving the organizational capability through new knowledge. They also posit that organizational learning begins at the individual level in the organization and culminates into group and institutional levels. Senge (1990) therefore contends that continuous tests and transforming experiences into relevant knowledge translates to the core objectives of the organization. As a process, an outcome and a link between cognition and action, organizational learning therefore enables organizations to make strategic choices which aim at improved performance (Levitt & March, 1988; Crossan & Lane 1999; Crossan & Bedrow, 2003; Namada, 2013).

It is through organizational learning that organizations understand and interpret the environment when making and implementing the organization's strategic choices (Daft & Weick, 1984). Organizational learning is therefore a strategy that has been adopted by most organizations in problem resolutions and enhancement of the organization's position during variations in performance (Kim, 2003, Namada, 2013). When this knowledge is embodied in the strategies and the way things are done in an organizational setup, it forms the basis of cultural norms and practices of groups and individuals in the learning process. Huber (1984) posits that organizational learning is a four faceted process that combines the way information is acquired, distributed and interpreted as a pointer to the memory of an organization.

Argyris and Schön (1996) contend that organizational learning takes place in organizations during the acquisition of

information in the form of knowledge in various ways using different types of technology. Some researchers however argue that in order to develop a dynamic approach in the creation and distribution of information and knowledge in the organization, it must have a link with the environment in which it operates (Nonaka & Takeuchi, 1994, Bustinza et al, 2010).

Learning is an important factor for competition since it has a connection with how an organization acquires knowledge and attains better performance. Accordingly, an organization contains a lot of knowledge acquired over time and continues to look for ways of searching for more knowledge with improved technology in order to attain and sustain better performance over its competitors. This study conceptualizes organizational learning at three levels of individual learning, group learning and institutionalization according to Senge (1990).

Organizational performance is the efficiency and effectiveness of the firm in converting inputs into outputs (McCann, 2004). An organization's performance can be assessed in terms of the level of expected customer-related results which could be measured by customer satisfaction level, their loyalty, frequency of purchase and repurchase of an organization's products (Kaplan & Norton, 1996). In the context of universities in Kenya, organizational performance is a measure of capabilities in research and innovation, number of quality degree programmes offered, growth in number of students who have graduated, growth and expansion of schools and faculties. Different

methods are used to measure organizational performance as it remains a complex multidimensional phenomenon in strategic management (Balta, 2008).

Sabina (2009) argues that it is imperative to measure organizational performance so that managers and researchers can evaluate the position of the organization against its rivals. It has however, been realized that measurement of organizational performance has posed a major challenge to both researchers and practitioners. Due to the inefficiencies of the financial measures, Kaplan and Norton (1992) introduced the balanced score card (BSC) as a tool to measure organizational performance. It measures performance using four perspectives: financial perspective, customer perspective, learning and growth and internal business processes. Over the years, organizations are using Sustainable Balanced Score Card (SBSC) which includes corporate social responsibility and environmental perspectives (Hubbard, 2009). Organizations should endeavour to make use of both financial and non-financial indicators to measure their organizational performance (Velcu, 2009).

The universities in Kenya have been increasing over the years and have become complex entities which have to contend with the ever changing environment and scarce resources. The World Bank (2006) attributed the increase in higher education admissions to the advances made in primary and secondary school enrolments leading to the growth in the number of universities and constituent colleges around the country. These universities have to position

themselves in the market as institutions of higher learning. They operate in a turbulent environment and therefore they have to formulate strategies at corporate, business and functional levels in their quest to improve performance and compete in national, regional and the global market. The international exchange of knowledge has also continued to increase opportunities in a wide range of disciplines which has led to new partnerships and collaborations with great improvements in higher education globally (Varghese, 2009). The higher education sector is therefore seen as a strategic area of focus within the universities in Kenya.

Some of the major challenges facing the universities in Kenya and the constituent colleges are to increase access to higher education. At the same time, they should cater for the ever increasing number of those who require university education, while maintaining quality, ensuring equity and affordability. Expansion and modernization of universities in Kenya is paramount to increasing access and making training relevant and adequate to the demands of the economy. There is also the challenge of enhancing equity in universities in Kenya—gender, regional, ethnic social disparities and inequalities. Quality assurance is compromised due to inadequate and outdated facilities, frequent student disturbances and low staff morale. There is increased competition to meet the demand for higher education while at the same time maintaining continual improvement in research, innovation, technology and capacity building. Based on their survival, sustainability and growth and improved

performance, universities are competitively being ranked through performance contracting and webometric rankings, among others. This research therefore investigated the effect of organizational learning on the relationship between Strategic choice and performance of the universities in Kenya as they strive for sustainability and growth in future.

Literature Review

Strategic choice as a contemporary contribution to organizational performance derives from its potential to integrate some of the different perspectives in organizational studies (Child, 1997). Organizational outcomes such as learning, strategies (diversification, strategic alliances and internal restructuring) and their effectiveness in organizations are considered as reflections of the values and cognitive bases of the powerful actors in the organizations (Hambrick & Mason, 1984; Namada, 2013). The most dynamic higher education institutions in the market place are those that are techno-intensive and they depend on the capacity to generate, adapt and utilize knowledge as the foundation. However, organizations have a challenge of production, dissemination and utilization of knowledge and technological innovations which affect performance (Kinyanjui, 2007).

Organizational learning capability is considered as one of the mechanisms that produces new knowledge, and this enables organizations to understand better the new situations which make it possible for changes in the processes and routines in the organizations operations (Namada, 2013). Senge (1990) posits that the organization

which will succeed in having and sustaining a competitive advantage is one that is able to learn at a faster pace than its competition. Namada (2013) posits that although organizational learning leads to capability development, very few studies have been carried out to address this linkage.

Different scholars have conceptualized organizational learning differently depending on their interests of at both single and double loop learning levels in organizations. Organizational learning was conceptualized in terms of single loop learning and double loop learning (Argyris & Schon, 1978) whereas Fiol and Lyles (1985) conceptualized organizational learning as lower and higher level learning. The lower level learning or single loop learning results in behavioral outcomes. The organization aligns to changes in the environment at this level of learning. Higher level learning however, aims at changing/adjusting the rules and regulations which have long term implications for the organization. Huber (1984) however, conceptualized organizational learning as acquisition of knowledge, distribution of information, interpretation of information and organization memory which relates to storage and retrieval using information technology. Deutro learning is about learning how to learn which involves the discovery of gaps between the desired situation and actual and finding solutions.

Organizational learning has also been defined in terms of process and organizational outcomes. The dynamic capabilities theory views organizational learning as a process through which an

organization achieves competitive advantage in the global arena (Bustinza, Molina & Aranda, 2010). It is defined by the 4i framework of intuition, integration, interpretation and institutionalization. Learning takes place at three levels in an organization. It begins at the individual level (Levitt & March, 1988). These individuals possess expert perspectives which are considered as tacit knowledge (Nonaka, 1991). This individual intuitive expert knowledge cannot be transferred between individuals. Individual learning is eventually transformed into group learning where the interpretation and integration take place (Daft & Weick, 1984, Morgan & Berthon, 2008). As Daft and Weick (1984) point out, interpretation process gives meaning to insights while integration is the development of shared understanding and coordinated actions.

Crossan, Lane and White (1999) pointed out that the process of institutionalization takes place when the learning is embedded from individuals and groups into the organization. When there are uncertainties in the environment, the organization has to manage the embedded learning gained through intuition, interpretation and integration. Fiol and Lyles (1985) found out that organizational learning is influenced by structure, strategic choice and culture and that there is a performance improvement through the ability to learn. Studies by various scholars (Namada 2013; Bustinza, Mollina & Aranda, 2010; Tippins & Sohi, 2003) argue that organizations which possess the ability to learn about their competitors, customers and regulatory

authorities align to the environmental uncertainties.

Organizations which embrace organizational learning can therefore be seen with structures which function along networks and teams where knowledge is acquired and shared, a high capacity of human resource that account for improved long term performance. Such organizations have a strong culture that culminate into openness, creativity and social support (Senge, 1990; Cummings & Whorley, 2009). This study therefore examines the interrelationships between strategic choice, organizational learning, and performance.

Methodology

This study used a descriptive cross-sectional survey in order to establish the relationship between and amongst the study variables and performance of the universities in Kenya. The cross-sectional approach provides credence of results with conclusions on data at a given point in time. The unit of analysis was universities in Kenya. The Commission for University Education (CUE) has listed 70 universities (CUE, 2015) which include public and private universities with their constituent colleges and institutions with letters of interim authority. The population of the study was, however, 52 universities in Kenya listed by Commission for University Education which are autonomous and have been in operation for the last five years – an adequate period for strategic plans. At the time of the study, out of the 52 universities, 30 were public universities while 22 were private universities. This constituted 74 percent of the population which was more

than adequate since 10 percent and above is required for a homogeneous population.

The study collected both primary and secondary data. Primary data was collected using structured and unstructured questions. Stiles and Taylor (2001) argue that both primary and secondary data complement each other. Primary data was therefore collected by administering questionnaires to the Deputy Vice-Chancellor (Administration and Finance) or their equivalent (Deputy Vice-Chancellor, Research, Registrar, Administration assisted by the Finance officer/Director) in each university. This is because these are the top management staff in the institutions that are endowed with the responsibility of running the institutions by setting and implementing strategies and are also in a position to provide useful information for this study.

Results

The main objective of this paper was to establish the influence of, organizational learning on the relationship between Strategic Choice and performance of universities in Kenya. The t-test and p-values were used to determine individual significance of the study variables. The assessment of overall robustness and significance of the regression models was done using F-test and p-values. If p-value was less than or equal to 0.05 ($p\text{-value} \leq 0.05$) the null hypothesis was rejected. For each hypothesis, a model equation of the variables relationship was computed which showed the magnitude and relationships of the independent variables and dependent variable. Pearson's product moment

correlation and multiple regression analyses were done at 95 percent level of confidence.

The mediation test was done using Baron and Kenny (1986) stepwise method. These results were interpreted by assessing the change in standardized beta coefficient. There are several techniques which can be used for mediation testing. These include causal steps approach which entail a series of steps (stepwise) (Baron and Kenny, 1986). Another approach to mediation testing is determining the difference in coefficients which is based on comparisons of the relationship between predictor and outcome variables before and after adjusting for the mediating variable. The third approach to mediation testing uses the product of coefficients by multiplying the coefficients of the paths in path model and tests the significance of the moderating effect. The Baron and Kenny (1986) causal steps model was used to test mediation in this study. Despite its weakness in statistical power to detect small mediating difference, the reliability of organizational learning as the mediator was high (Cronbach's alpha of .943) and therefore justified for its use in the study.

H₀₁: There is no significant intervening (mediating) effect of Organizational learning on the relationship between Strategic choice and Performance of universities in Kenya.

The data testing the mediating influence of organizational learning was analyzed using the 4 step process by Baron and Kenny (1986). In step one, organizational performance was regressed on strategic choice to establish the direct relationship. The results obtained were statistically significant ($R^2 + .599$, $p\text{-value} \leq 0.05$). The second step regressed organizational learning on strategic choice to estimate the relationship between the independent variable and the mediator. The results obtained were statistically significant where R^2 was .624 with a $p\text{-value} \leq 0.05$. The third step involved regressing the non-financial performance on organizational learning. The results were statistically significant where R^2 was .654 with a $p\text{-value} < 0.05$. The fourth step was to interpret the results of the relationship between strategic choice, organizational learning and performance of universities in Kenya. The results are shown in Table 1.

Table 1: Relationship between Strategic Choice, Organizational Learning and Performance of Universities in Kenya

Model Summary ^c										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.774 ^a	.599	.589	1.89446	.599	59.686	1	40	.000	
2	.841 ^b	.708	.693	1.63749	.109	14.539	1	39	.000	1.701
ANOVA ^a										
Model	Sum of Squares		df	Mean Square	F	Sig.				
1	Regression	214.212	1	214.212	59.686	.000 ^b				
	Residual	143.559	40	3.589						
	Total	357.770	41							
2	Regression	253.197	2	126.598	47.214	.000 ^c				
	Residual	104.574	39	2.681						
	Total	357.770	41							
Coefficients ^a										
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.				
		B	Std. Error	Beta						
1	(Constant)	7.954	1.580		5.034	.000				
	Strategic Choice	.589	.076	.774	7.726	.000				
2	(Constant)	5.642	1.494		3.776	.001				
	Strategic Choice	.265	.108	.348	2.466	.018				
	Organizational learning	.468	.123	.539	3.813	.000				

- a. Dependent Variable: Non-financial performance
- b. Predictors: (Constant), Strategic Choice, Organizational learning
- c. Predictors: (Constant), Strategic Choice

No mediation is a situation where the intervening variable is not significant but the independent variable has a significant influence on the dependent variable. Full mediation is a case where the influence of independent variable on the dependent variable ceases/stops upon the introduction of the intervening variable.

The results in Table 1 show that there is partial mediation. Both the independent and intervening variables have a significant influence on the dependent variable with a significant value of .000 for Strategic choice and Organizational learning respectively. The results show that Strategic choice explained 59.9 percent of the variation in non-financial performance. However, when Organizational learning was introduced in

Model 2, the explained variation improved from 59.9 percent to 70.8 percent implying that the influence of Organizational learning on non-financial performance is significant. ***The null hypothesis H_{01} was not accepted since there is a significant mediating effect of organizational learning and performance of universities in Kenya.***

In addition to the stepwise regression analysis a correlation matrix was computed to confirm existence of mediation in order to assess the influence of organizational learning on the relationship between strategic choice and non-financial performance. The first step was to assess the correlation between strategic choice and organizational learning (Table 1). In step two, the correlation between organizational learning and non-financial performance was

tested. The results for step one are shown in Table 2.

Table 2: Correlation between Strategic Choice and Organizational Learning

		Strategic Choice	Organizational learning
Strategic Choice	Pearson Correlation	1	.790**
	Sig. (2-tailed)		.000
	Sum of Squares and Cross-products	616.976	426.815
	Covariance	15.048	10.410
	N	42	42
Organizational learning	Pearson Correlation	.790**	1
	Sig. (2-tailed)	.000	
	Sum of Squares and Cross-products	426.815	479.288
	Covariance	10.410	11.412
	N	42	43

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

The results in Table 2 show that there was a positive and significant correlation (R = .790) between Strategic choice and organizational learning implying that there was a strong relationship between strategic

choice and organizational learning. Table 3 shows the results of correlation analysis between organizational learning and non-financial performance.

Table 3: Correlation between Organizational Learning and Performance

		Organizational learning	Non-financial performance
Organizational learning	Pearson Correlation	1	.809**
	Sig. (2-tailed)		.000
	Sum of Squares and Cross-products	479.288	334.853
	Covariance	11.412	7.973
	N	43	43
Non-financial performance	Pearson Correlation	.809**	1
	Sig. (2-tailed)	.000	
	Sum of Squares and Cross-products	334.853	357.773
	Covariance	7.973	8.518
	N	43	43

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

The results in Table 3 indicate that there was a significant and positive correlation (R = .809) between organizational learning and non-financial performance. In comparing the correlation results in Tables 2 and 3 it shows that in both cases the coefficient signs are positive and significant. This implies

that the mediating influence of organizational learning on the relationship between strategic choice and performance was supported.

Research and endowment funds was an indicator of financial performance of

universities in Kenya. Strategic choice was conceptualized as the independent variable and organizational learning as the mediating variable. Research and endowment funds was conceptualized as the dependent variable. The results are shown in Table 4.

Hypothesis H₀₂: There is no relationship between strategic choice, organizational learning and research and endowment funds.

Table 4: Relationship between Strategic Choice, Organizational Learning and Research and Endowment Funds

Model Summary ^c											
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson	
					R Square Change	F Change	df1	df2	Sig. F Change		
1	.320 ^a	.102	.077	1197255520.68652	.102	4.105	1	36	.050	2.289	
2	.324 ^b	.105	.054	1212271063.91826	.003	.114	1	35	.738		
ANOVA ^a											
Model	Sum of Squares			df	Mean Square	F	Sig.				
1	Regression	5884001805957096400.000			1	5884001805957096400.000	4.105	.050 ^b			
	Residual	51603148145316910000.000			36	1433420781814358780.000					
	Total	57487149951274010000.000			37						
2	Regression	6051110316801217500.000			2	3025555158400608800.000	2.059	.143 ^c			
	Residual	51436039634472790000.000			35	1469601132413508350.000					
	Total	57487149951274010000.000			37						
Coefficients ^a											
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.					
		B	Std. Error								
1	(Constant)	-1261874939.212	1022785387.104		-1.234	.225					
	Strategic Choice	99585134.852	49152426.837	.320	2.026	.050					
2	(Constant)	-1108709973.465	1130841993.774		-.980	.334					
	Strategic Choice	122305153.307	83764839.917	.393	1.460	.153					
	Organizational learning	-32384574.784	96037015.116	-.091	-.337	.738					

a. Dependent Variable: research and endowment funds

a. Predictors: (Constant), Strategic Choice

b. Predictors: (Constant), Strategic Choice, Organizational learning

The results in Table 4 show a p-value of .738 which was >0.05 implying that the model supported the null hypothesis that there is no significant effect of strategic choice and organizational learning on research and endowment funds.

The objective of this paper was to establish the intervening influence of organizational learning on the relationship between strategic choice and performance of universities in Kenya. A corresponding hypothesis H₀₃ was stated. One sample t-tests which were carried out on various levels of learning revealed varying results in the universities in Kenya. However, the

Conclusion

mediating influence of organizational learning on the relationship between strategic choice and performance of universities in Kenya was statistically significant.

The results show that both the independent variable and dependent variable had a significant influence on the dependent variable with a p-value <0.05 respectively. Strategic choice explained 59.9 percent of the variance in non-financial performance. When organizational learning was introduced in model 2 the explained variance improved from 59.9 percent to 70.8 percent implying that the influence of organizational learning on non-financial Performance of Universities in Kenya was significant. Therefore the moderation of organizational learning improves the relationship of strategic choice and non-financial performance of universities in Kenya and thus, the null hypothesis was rejected since there is a significant mediating effect of organizational learning on the relationship between strategic choice and non-financial performance of universities in Kenya. From the findings, it was concluded that organizational learning had a strong mediating effect on the relationship between strategic choice and non-financial performance of universities in Kenya.

The study also examined the mediating influence of organizational learning on the relationship between strategic choice and performance of universities in Kenya. The results supported partial mediation. The results showed that when organizational learning was introduced, the explained variation improved. This shows that organizational learning had a strong positive contribution to the variation in organizational performance. Organizational learning is a dynamic resource capability

that takes place through individuals and groups in an organization. These individuals acquire skills and knowledge for aligning the organization to the environment to enhance organizational performance. As Senge (1990) points out that organizations that embrace organizational learning are usually well prepared with networks, teams and structures with a high capacity of human resource which result in improved performance.

This study therefore draws conclusions based on theory, concepts and contextual orientation which serve to link strategic choice, organizational learning and performance of universities in Kenya that have been inconclusive. The most significant finding of this study is establishing regression models for predicting organizational performance in the context of universities in the higher education sector in Kenya.

References

- Argyris, C., & Schon, D.A. (1978). *Organizational learning*. Reading, Wesley.
- Argyris, C., & Schön, D. A. (1996). *Organizational learning II. Theory, method, and practice*. Reading, MA: Addison-Wesley.
- Balta, M.E. (2008). *The impact of business environment and boards of directors on strategic decision-making: A case study of Greek listed companies. Unpublished PhD Thesis*, Bruneri Business School.
- Baron, R.M., & Kenny, D.A., (1986). The moderator-mediator variable in social psychological research: conceptual, strategic and statistical considerations. *Journal of personality and social psychology* 51 (6), 1173 – 1182.
- Bourne, M., Mills, J., Wilcox, M., Neely, A., & Platts, K. (2000). Designing, implementing and updating performance measurement systems. *International Journal of Operations Management*, 20(7), 754-771.

- Bustinza, O.F., Molina, L. M., & Aranda, D.A. (2010). Performance and relationship between the dynamic and operational capabilities of the firm. *African Journal of Business Management*, 4(18), 4067-4078.
- Child, J. (1997). Strategic choice in the analysis of action, structure, organizations and environment: Retrospect and prospect. *Organization Studies*, 18(1), 43-76.
- Commission for University Education (2015).
- Cooper, M.K., & Aouad, G. (2001). Performance management in construction: A conceptual framework. *Construction Management in Economics*, 19(1), 85-95.
- Crossan, M. M., & Bedrow, I. (2003). Organizational learning and strategic renewal. *Strategic Management Journal*, 24(11), 1087-1105.
- Crossan, M. M., Lane, R.E., & White, R.E. (1999). An organizational learning framework: from intuition to institution. *Academy of Management Review*, 24(3), 522-537.
- Cummings, T.G., & Whorley, C.G. (2009). *Organizational development and change*. Cenga Learning, Boulevard.
- Daft, R. L., & Huber, G. P. (1987). How organizations learn: A communications framework. *Research in the Sociology of Organizations*, 5, 1-36.
- Daft, R. L., & Weick, K. E. (1984). Towards a model of organizations as interpretation systems. *Academy of Management Review*, 9, 284-295.
- Dutton, J. E., & Duncan, R.B. (1987). The creation of momentum for change through the process of strategic issue diagnosis. *Strategic Management Journal*, 8, 279-296.
- Dutton, J. E., & Duncan, R.B. (1987). Strategic issue diagnosis and its relationship to organizational change. *Strategic Management Journal*, 4, 307-323.
- Eshiwani, G. S. (1999). *Education in Kenya since independence*. East African Educational Publishers.
- Fiol, C. M., & Lyles, M.A. (1985). Organizational learning. *Academy of Management Review*, 10(4), 803-813.
- Goransson, B., & Brundenius, C. (2011). *Universities in transition: The changing role and challenges for academic institutions*. Springer Publishers, New York.
- Hambrick, D. C., & Mason, P. A. (1984). Upper echelons: The organization as a reflection of its top managers. *Academy of Management Review*, 9, 193-206.
- Hubbard, G. (2009). Measuring organizational performance: Beyond the triple bottom-line. *Business Strategy and the Environment*, 19, 177-191.
- Huber, G.P. (1984). The nature and design of post-industrial organization. *Management Science*, 30, 928-951.
- Irungu, M.S. (2007). Effect of top management teams on performance of publicly quoted companies in Kenya. *Unpublished PhD thesis*, University of Nairobi.
- Kaplan, R.S., & Norton, D.P. (2008). Mastering the management systems. *Harvard Business Review*, 1 – 17.
- Kaplan, R. S., & Norton, D.P. (1996). *The balanced scorecard: Translating strategy into*
- Kennerly, M., & Neely, A. (2003). Measuring performance in a changing business environment. *Journal of Operations and Production Management*, 2, 213-229.
- Kenya Vision 2030.
- Kinyanjui, K. (2007). The transformation of higher education in Kenya: challenges and opportunities. *Paper presented at the 'mijadala on social policy, governance and development in Kenya' Nairobi*.
- Krager, J., & Parnell, J. A. (1996). Strategic planning emphasis and planning satisfaction in small

- firms: An empirical investigation. *Journal of Business Strategies*, 120, 131-139.
- Leroy, F., & Ramanantsoa, B. (1997). The cognitive and behavioral dimension of organizational learning in mergers: An empirical study. *Journal of Management Studies*, 34(6), 871-880.
- Levitt, B., & March, J.G. (1988). Organizational learning. *Annual Review of Sociology*, 14, 319-340.
- McCann, J. (2004). The changing definition of organizational effectiveness. *Human Resource Planning*, 27(1), 17-30.
- Morgan, J., & Berthon, A. (2008). Market orientation, generative learning, innovation, strategy and business performance inter-relationships in bioscience firms. *Journal of Management Studies*, 45(8), 1467-1486.
- Munyoki, J., Kibera, F., & Ogutu, M. (2011). Extent to which university-industry linkage exists in Kenya: A case study of medium and large manufacturing firms in selected industries in Kenya. *Prime Journal of Business Administration and Management*, 4, 163-169.
- Namada, J. M. (2013). Strategic planning systems, organizational learning and performance of firms in export processing zones in Kenya. *Unpublished PhD thesis*, University of Nairobi.
- Nonaka, I. (1991). The knowledge creating company. *Harvard Business Review*, 69, 96-104.
- Nonaka, I., & Takeuchi, H. (1996). A theory of organizational knowledge creation. *International Journal of Technology Management*, 11(7/8), 833-846.
- Orucho, M. N. (2014). Higher education-economic sector linkage strategies, competitive forces and performance of the public and private universities incorporated in Kenya. *Unpublished PhD thesis*, University of Nairobi.
- Oyewobi, L.O., Windapo, A.O., & Rotimi, J.O.B. (2002). The effects of business environment on corporate strategies and performance of construction organizations. *Association of Researchers in Construction Management*, 691-701.
- Republic of Kenya (2005a). State corporations ranking evaluation. Nairobi: Government printers.
- Senge, P. M. (1990). *The Fifth Discipline: The Art and Practice of Learning Organization*. New York: Currency Doubleday.
- Sifuna, D.N. (1998). The governance of Kenyan public universities. *Research in Post-secondary Education Review*, 3, 2-8.
- Stiles, P., & Taylor, B. (2001). *Boards as work: How directors view their roles and responsibilities*. Oxford: Oxford University Press.
- Templeton, G. F., Lewis, B. R., & Snyder, C. A. (2002). Development of a measure for the organizational learning construct. *Journal of Management Information Systems*, 19(2), 173-218.
- The Universities Act No. 42, 2012.
- Tippins, M.J., & Sohi, R.S. (2003). Information technology competency and firm performance: Is organizational learning a missing link? *Strategic Management Journal*, 24, 745-761.
- UNESCO (2014). *Rankings and accountability in higher education: Uses and advances* (UNESCO publishing 7, Place de Fontenoy, 75352 07 SP, France).
- Varghese, N. W. (2009). Institutional restructuring of higher education within commonwealth independent states. *IIEP Research Paper*, 1-28.
- Velcu, N. (2009). Exploring the effects of ERP systems on organizational performance: Evidence from Finnish companies. *The Journal of Industrial Management and Data Systems*, 9, 1316-1334.