DBA AFRICA MANAGEMENT REVIEW

VOLUME 12 NO 1

2022

HOW KNOWLEDGE MANAGEMENT AFFECTS PERFORMANCE OF RETAIL PHARMACEUTICAL FIRMS IN NAIROBI CITY COUNTY: THE MODERATING EFFECT OF OPERATING ENVIRONMENT

JESSE KANGETHE MUKURIA
PROF. ZACHARY AWINO
DR. KENNEDY. O. OGOLLAH
PROF. NJIHIA JAMES MURANGA

A Quarterly publication of the Department of Business Administration,
Faculty of Business and Management Sciences
University of Nairobi

ISSN NO: 2224-2023

http://uonjournals.uonbi.ac.ke/ojs/index.php/DBAAMR
April 2022 Vol 12 No 1 Pgs 134-144

ISSN - 2224-2023

DBA Africa Management Review

Received Date
28/10/2021
Accepted Date
15/04/2022

HOW KNOWLEDGE MANAGEMENT AFFECTS PERFORMANCE OF RETAIL PHARMACEUTICAL FIRMS IN NAIROBI CITY COUNTY: THE MODERATING EFFECT OF OPERATING ENVIRONMENT

Jesse Kangethe Mukuria[1], Prof. Zachary Awino[2], Dr. Kennedy. O. Ogollah[3], Prof. Njihia James Muranga, PhD[4]

Abstract

Most companies survival is highly influenced and relates to the existing operating environment and their performance solely depends on the knowledge management practices they adopt. The objective of the study was to establish the effect of operating environment on the relationship between knowledge management and performance of retail pharmaceutical firms in Nairobi County, Kenya. There has been growing concern amongst strategic management researchers and practitioners alike in attempting to understand why some firms achieve higher levels of performance than others albeit operating in the same or similar business environments. The research was anchored on Knowledge-Based View theory and the industrial organization economics theory. The study applied positivism philosophy and descriptive research design. The population of the study was all 720 registered retail pharmaceutical firms in Nairobi County out of which a sample of 116 retail pharmaceutical firms was considered for the study. Primary data was collected using semi-structured questionnaires. Data was analyzed using descriptive statistics and inferential statistics. The results of the study showed that knowledge management significantly influences firm performance. The results also provided evidence to support the moderating influence of operating environment on the relationship between knowledge management and firm performance. A theoretical argument followed in this study observed operating environment in which a firm operates dictates the strategy to be chosen by a firm thus influencing performance. The study will enable stakeholders and owners of the retail pharmaceutical firms to develop policies that facilitate knowledge management process in their firms and having processes for applying knowledge learned from experience. Future studies could explore relevant factors that were not discussed in this study like the role of technology and innovations that could further influence retail pharmaceutical performance.

Key words: Knowledge Management, Operating Environment, Firm Performance, Retail Pharmaceuticals

[1] Faculty of Business and Management sciences, University of Nairobi - Email:mukuriaj2@gmail.com
[2] Professor, Faculty of Business and Management sciences, University of Nairobi
[3] Senior Lecturer, Faculty of Business and Management sciences, University of Nairobi
[4] Associate Professor, Faculty of Business and Management sciences, University of Nairobi

Introduction

Firms in an operating environment characterized by rapid technological changes, increased competition, globalization, high degree of complexity, and the rise of time-based competition have to rethink on how to outsmart their rivals and achieve superior performance (Hayfa, Abraddous, Abdullah, Sokkar, Blaqees, 2018). This is supported by Sidik (2012) who suggest that accurate information from the operating environment enable firms to undertake effective knowledge management capabilities and models of competitive strategies so as to achieve organizational goals. Different scholars have defined knowledge management differently and argue that knowledge management depends on different contexts and on the specific organization purpose.

Hemmati and Hosseini (2016) referred to KM as that needed and necessary knowledge that is paramount in achieveing firm's objectives which involves deep and critical analysis. KM has also been defined as a process of obtaining, keeping, comprehending, giving out(splitting), implementing knowledge and all actions taken in the learning process keeping in line with strategies of the organizations concerned (Nikabadi, Bagheri & Mohammadi, 2016). Knowledge management (KM) as a notion is paramount due to growth of realization of the need of knowledge for the firm to prosper continually and beating the odds of economic survival. Because of that, knowledge has been associated with two paramount characteristics, namely, Implicit (tacit) and Explicit knowledge (Chib & Sehgal, 2019). Ndwiga, Gichohi and Nkaabu (2019) further explained, implicit knowledge is the kind of knowledge that is complex and difficult to transfer to another person since it is complex in comprehension. It's comprehended in the form of capabilities and skills, and ideas which individuals may possess mentally.

Knowledge Based Theory suggests that KM practices, such as knowledge acquisition, knowledge creation, knowledge sharing, knowledge storage and knowledge implementation play a critical role in achieving outstanding performance (Uddin, Fan & Das, 2016). Managing knowledge resources is the key to remaining competitive thus businesses that aim to maintain this have no choice than to put more effort into this so as the increase more revenue, increased sales and market share. For superior performance to be achieved, firms should adopt an effective knowledge management model that supports best combination of competitive strategies and alignment of the firm to the operating environment conditions (Dekoulou & Trivellas, 2015). Ombaka (2014) defines environment as a set of conditions defined by the surroundings that dictates how the firm adjusts to survive in relation to its competitors. Hitt, Ireland and Hoskinson (2011) defines operating environment as the factors that a firm interacts with when conducting their day to day operations and which can be the source of constraints, contingencies, complications and opportunities affecting the terms on which firms transact business.

Firm performance is highly influenced and relate to the existing operating environment and its survival entirely depends on devising appropriate responses to any changes that may arise from such factors constituting operating environment (Machuki & Aosa, 2011). The operating environment can either be perceived to pose a threat or offer opportunities necessary to steer the performance as firms that effectively implement strategies and best knowledge management practices in place may find even the most perceived environmental turbulence to be the source of opportunities as opposed to threats (Herbane, 2009). The capacity of firms to adapt successfully to its surrounding environment is therefore greatly facilitated by their ability to predict the future of operating environment.

Several operating environment dimensions have been identified to be critical contingencies for effective strategic management. According to Pearce, Robinson and Mital (2012) these factors are threat of new entrants, power of suppliers, the threat of product substitutes and the intensity of rivalry among competitors. These factors determine a firm's long-run performance because the forces shape the division of value among industry actors whether performance is constrained by substitutes or new entrants, influenced by customers or suppliers, or competed away by rivals.

By studying these factors, a firm finds a position in an industry where it can influence the factors in its favor or buffer itself from the power of the operating environment factors (Hitt, Ireland & Hoskisson, 2011). The arena in which competition takes place is the industry in which a firm and its rivals vie for business. Each firm has distinctive ways or strategies in place that shapes the nature of competitive interaction that unfolds the required operating environment. The capacity of firms to adapt successfully to its surrounding operating environment is therefore greatly facilitated by their ability to interact more with the factors constituting the operating environment.

Retail pharmaceutical firms comprise pharmacies and chemists where the retail firms provide consumers with over the counter medicines, nutritional products and prescription drugs among other products to support the health sector, in many instances acting as a first line in healthcare needs (PPB, 2016). The majority fall under small and medium enterprises, a sector that is key for economic development of Kenya. The definition of small and medium enterprises in this context is guided by the MSE bill, the Sessional Paper No 2 of 2005 as those with between 1-100 employees and a capital investment of not more than Kshs 30 million. Majority of the retail pharmaceutical firms in Kenya fall within this definition. According to Micro and Small Enterprises Authority (MSEA, 2017) the sector provides about 70% of total employment and contribute about 45% to the Kenyan gross domestic product (GDP). These firms are characterized by variation in performance with some performing well and others performing poorly and some suffering closure (PPB, 2016). This therefore requires a study to establish factors that results to variations in performance which could be attributed to combination of knowledge management, operating environment as well as competitive strategies adopted by different retail pharmaceutical firms. Further most of existing empirical studies on knowledge management have focused on large firms with the assumption that small firms may not have the same need for knowledge management as larger firms (Darroch & McNaughton, 2002; Hutchinson & Quintas, 2008). In addition, there are limited studies examining knowledge management issues relating to small businesses despite the role they play in an economy (Pillania, 2006).

Materials

This study was anchored on the Dynamic Capabilities Theory (DCT) which is further supported by the industrial organization economics theory. The Dynamic Capabilities Theory (DCT) was advanced by Teece, Pisano and Shuen (1997). The theory emphasizes on the firm's ability to integrate, build, and reconfigure internal and external competencies and skills to address rapidly-changing environments for performance to be realized. The theory explains that activities such as development of strategies and knowledge management are driven by discussions on how organizations are well managed in discontinuous and dynamic environments (Denrell & Powell, 2016). The theory argues and explains why some firms within a certain dynamic environments and market niches differ in performance with some being more successful in building competitive edge than others (Eisenhardt & Martin, 2000).

The theory indicates that dynamic capabilities approach presents knowledge management as a

fundamental strategic initiative which guarantees firms competitive edge and performance (Batko, 2017). It is argued that knowledge management provides the necessary skills and competencies to managers in creation, retention, transferring and usage of firm's tacit and explicit knowledge and also formulates best combination of strategies (Cepeda & Vera, 2005). The theory tries to link empirically how dynamic capabilities are facilitated by management of knowledge in a quest to create competitive strategies to establish a theoretical link between these constructs and performance (Lin, Hsu, & Yeh, 2015). This study therefore seeks to apply dynamic capabilities theory to understand how knowledge management, operating environment and competitive strategies can converge to provide a theoretical account of the overlaps and how these constructs can be complimented to provide a theoretical link and the overall firm performance.

The industrial organization economics theory (Bain, 1951) which informs the operating environment as an industry structure, strategy and performance relationships in this conceptualization postulates that an environment or the industry in which a firm operates dictates the strategy to be chosen by a firm thus influencing performance (Barney, 1991). This theory has received a lot of criticism especially when the industry or operating environment alone or the external side of the organization could not explain variations in organizational performance. The theory sheds light in the current study in the sense that performance of the firms cannot be realized without first looking at the operating environment.

In any industry, it is the operating environment that will dictate the application of the necessary strategies, depending on the laid down goals and objectives of the firm, for desired performance to be achieved. In the case of firm performance perspective, a well-developed KM capability will be required in order to understand the operating environment and thus enable the owners or managers come up with best combination of strategies that are competitive in the market to foster superior performance. The starting point for developing a strategy is through understanding the operating environment in an industry since it exposes the most aspects of the competitive environment that are important and also the crucial limitation to the performance in overall. Sedighi and Zand (2017) in cross-sectional study used a convenience sampling method and sampled 35 pizza selling outlets in Pakistan on how operating environment influence firm performance. The study revealed that the operating environment significantly influences performance.

The operating environment exposes the changes in the industry that shows the threats and opportunities that are greatest; it asks and answers questions like where the company stands with its buyers, its suppliers, its entrants, its competitors and its power of substitute products (Ogolla, Bolo & Ogutu, 2011). Firms operate in an open system that is competitive and ever changing. Neill and Rose (2006) put in position the lack of consensus on the performance results where the operating environment is the moderating variable. Management decisions through proper knowledge management therefore depend on the operating environment to steer the firm's goals and objectives. Mbithi, Muturi and Rambo, (2017) used a descriptive cross sectional research design to establish the moderating effect of operating environment on the relationship between strategy and performance of eight sugar companies in Kenya. The study used questionnaires, face to face interviews and secondary data. The research findings established that the operating environmental factors moderate the relationship between strategy and performance in varying degrees.

Ogolla, Bolo and Ogutu (2011) in their conceptual analysis established that the strategy, structure, environment and corporate performance linkage is complex. Whereas the positive relationship between KM and performance is well documented, the relationship is not a straightforward link. Moreover, there are limited studies linking the knowledge management, operating environment and firm performance. The retail pharmaceutical industry in Kenya operate in an operating environment and the way they adopt the operating environment may influence their performance differently in relation to how each firm manages its knowledge management.

Most of the studies have been carried out in developed economies, in large firms and in different contextual setups ranging from manufacturing firms (Liao and Wu, 2009), universities (Amodu et al., 2014), export companies (Matin & Sabagh, 2015), service organizations (Olaima et al., (2015) agriculture, construction, fishing, wholesale and retail trade, accommodation and food service (Rasula et al., 2012). Moreover, scholars have noted that knowledge management research in small firms particularly in developing countries, are few and suggested further research to enrich empirical knowledge management research in small firms (Durst & Edvardsson, 2012; Tee et al., 2012). Whereas previous studies have addressed variations in knowledge management and performance measurement, studies on the influence of operating environment on the relationship between knowledge management and firm performance are limited in the retail pharmaceutical firms in a developing economy like Kenya. The study therefore sought to determine the role of moderating of operating environment on the KM and performance relationship.

Methodology

This study adopted a positivist philosophy and a descriptive cross-sectional survey design. The population of the study was all registered retail pharmaceutical firms in Nairobi County as at 2019. A total of 116 retail pharmaceutical firms were considered in the study (Pharmacy and Poison Board, 2019). To determine the sample size, the study employed Cochrans sample size formula recommended by Zikmund et al. (2010) and Almalki, (2016). The authors argue that the formula is more critical since it can be used to calculate both the sample of population greater than 10,000 and population less than 10,000.

$$n = \frac{z^2 pq}{d^2}$$

Where: n is a representative size of the sample of 10,000 and above, whereas *p* is the estimated population proportion deemed having necessary information. According to International pharmaceutical Federation (2017) approximately 90% of the managers in retail pharmaceutical firms have necessary information. This was also confirmed by Bates, John, Bruno, Fu and Aliabadi (2016). This study took (0.9) 90% and *q* as *1-p* which means that population proportion with characteristics not measured (1-0.9) = 0.1 and *pq* as dispersion sample and *d* the population standard error. The study applied 95% level of confidence.

$$n = \frac{z^2 pq}{d^2} = \frac{(1.96)^2(0.9)(0.1)}{(0.05)^2}$$

n =138 which represents the size of the sample with greater than 10,000

In the event of 10,000 and less, the formula: $nf = \frac{n}{1+n/N}$ with nf = the size of the sample desired (at <10,000 population). n = the size of desired sample (at>10,000). N = the size of the population estimate.

$nf = \frac{138}{1.192}$=115.80

A total of 116 retail pharmaceutical firms are considered in the study with the help of the systematic sampling method where K^{th} variable

was used to select population until they are exhausted. The 4th firm was taken in to consideration to come up with 116 firms out of the total of 720 firms in retail pharmaceutical in Nairobi County Kenya. These ensured chances of inclusion for each unit.

The collected data was analyzed using descriptive and inferential statistics. Descriptive statistics included scores of mean, standard deviation, percentages and coefficient of variation. Inferential statistics technique was used to test hypotheses. The general model for predicting firm performance was represented by the following models:

$FP_2 = \alpha + \beta_1 KM_1 + \varepsilon$

$FP_3 = \alpha + + \beta_2 ME + \varepsilon$

$FP_4 = \alpha + \beta_1 X + \beta_2 ME + \beta_3 X*Z + \varepsilon$

α =constant (intercept), $\beta_1, \beta_2, \beta_3$= regression coefficients

FP_2, FP_3 and FP_4 = composite index of Performance ; KM_1= composite index Knowledge management, ME= composite index Operating Environment

ε= Error term; X*Z= Knowledge management and Operating environment interaction term

Results

The study sought to establish the effect of operating environment on the relationship between knowledge management and performance of retail pharmaceutical firms in Nairobi County. To test this relationship, the following hypothesis was tested;

H_0: *Operating environment has no significant moderating effect on the relationship between knowledge management and performance of retail pharmaceutical firms in Nairobi County*

The hypothesis was tested through stepwise regression analysis using three steps as proposed by Baron and Kenny (1986). The first step involved testing the influence of knowledge management on performance. The second step involved introduction of the moderator into the first regression hence testing the influence of knowledge management and operating environment on performance. The third step includes the introduction of the interaction term and regressing it against the dependent variable.

As suggested by Iraya (2014), there is a possibility of generating multicollinearity resulting from creation of a new variable by multiplying the scores of knowledge management and operating environment which is the independent variable. To solve this challenge, the study converted two factors to standardized (Z) scores that have mean zero and standard deviation one. This aids in maintaining the main effects of regression coefficients. The two standardized variables (knowledge management and operating environment) were then multiplied to create the interaction variable. Regression results for the influence of operating environment on the relationship between knowledge management and performance is contained in Table 1.

Table 1: Regression Results showing Moderation Effect of Operating Environment on Relationship between Knowledge Management and Firm Performance

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	.742[a]	.551	.546	.18965	.551	115.206	1	94	.000	
2	.799[b]	.638	.630	.17110	.088	22.497	1	93	.000	1.713

a. Predictors: (Constant), Knowledge management

b. Predictors: (Constant), Knowledge management, Operating Environment_Knowledge Management interaction

c. Dependent Variable: Firm Performance

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	4.144	1	4.144	115.206	.000[b]
	Residual	3.381	94	.036		
	Total	7.525	95			
2	Regression	4.802	2	2.401	82.024	.000[c]
	Residual	2.723	93	.029		
	Total	7.525	95			

a. Dependent Variable: Firm Performance

b. Predictors: (Constant), Knowledge management

c. Predictors: (Constant), Knowledge management, Operating Environment_Knowledge Management interaction

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.863	.214		8.702	.000		

	Knowledge management	.562	.052	.742	10.733	.000	1.000	1.000
2	(Constant)	1.176	.241		4.871	.000		
	Knowledge management	.466	.051	.615	9.069	.000	.845	1.184
	Operating Environment_Knowledge Management interaction	.293	.062	.322	4.743	.000	.845	1.184

a. Dependent Variable: Firm Performance

Source: Primary data, (2019)

The results in Table 1 shows that model 1 is significant (p-value < 0.05, R^2 = .551) implying that knowledge management and operating environment jointly explain 55.1% of variation in performance. Further, upon introduction of the interaction term, coefficient of determination (R^2) changed from .551 in model 1 to .638 in model 2 therefore giving a variation change of .087 which is significant at 95% confidence level (p=0.000<0.05). Further the change in p-value in model 2 is 0.00 which is also significant (p-value<0.05) implying that operating environment significantly moderate the relationship between knowledge management and firm performance.

The results further depicts that F-value for both models were high and significant (F=115.206 for model 1; F=82.024 for model 2) implying that the overall models for direct and moderating relationships are significant and have explanatory value in explaining performance. The results further shows that knowledge management and operating environment individually are significant in explaining performance (t=10.733, p<0.05) and for model 2 when interaction term is introduced it is also significant (t=4.743, p<0.05). Therefore based on the results of the test, the hypothesis that there is no significant moderating effect of operating environment on the relationship between knowledge management and performance was rejected. This implies that operating environment is key to management of knowledge and how performance of the firm is achieved.

This was guided by the following model; $Y = a + \beta_1 X + \beta_2 Z + \beta_2 XZ + \varepsilon$

Where: Y_i is Firm performance

X is knowledge management

Z is operating environment (Moderating variable)

XZ is knowledge management and operating environment (interaction)

ε = Error term

β = the beta coefficients of independent variables after the regression analysis results, the model became $Y = 1.863 + .742X_1 + .615Z + .322XZ$

The study found that managing knowledge dependent majorly on operating environment for performance to be achieved. The findings concur with Mashhadi and Rehman (2012) who revealed that operating environment significantly influences performance. Ogolla, Bolo and Ogutu (2011) argument forms basis of how strategy in any firm is dependent of the ability to knowing well the operating environment. Additionally, Mbithi, Muturi and Rambo (2017) established that operating environmental factors moderate the relationship between strategy and performance in varying degrees. Management decisions through proper knowledge management therefore depend on

the operating environment to steer the firm's goals and objectives. Sedighi and Zand (2017) revealed that the operating environment does no significantly influences the relationship between knowledge management and performance which suggestion that operating environment must be combined in the right proportion for significant results to be achieved.

Conclusions

On testing the effect of operating environment on the relationship between knowledge management and performance of retail pharmaceutical firms in Nairobi City County, the study established that operating environment dimensions significantly influence the relationship between knowledge management and performance. The importance of Knowledge management processes is assisting the firm in enhancing its business performance by having up-dated knowledge and information. For knowledge to be of greater impact to the performance of the organization it has to be used to support the processes of the firm. Thus, it is through utilization of knowledge that can be transformed directly to influence firm performance. In addition, knowledge acquisition done through valuing of employee attitudes and opinions, incorporating a proper developed plan of finance reporting system, being market oriented by actively and purposely acquiring clients and information of the industry, having a keen eye and being sensitive to information about change dynamics in the market and acquiring information from market surveys. All these contribute to affirmative firm performance. Additionally, sharing of knowledge behavior has enabled learning among employees and helped them into solving problems that are similar to situations encountered by others in the past, thus enabling feedback to clients since by knowledge sharing, individuals are in a position in realizing and experiencing harmonious results more than those achievable by a sole individual. Sharing of knowledge was thus considered an essential part of an organization's learning activities, which leads to market improvements in market sensing innovative activities thus greater efficiency in operationalities' study as well concluded that knowledge management practices in general influences organization performance in various ways including, knowledgeable employees, better decision making in the organization, improved service offering to client, reduced operational costs, improved organizational competitiveness. This is mainly so since there is increased awareness of information that is important to achieving the organization's mission. The starting point for developing a strategy is to understand the environment it operates from. Previous studies revealed the most salient aspects of the competitive environment and the crucial constraints to overall performance. Management decisions through proper knowledge management therefore depend on the operating environment to steer the firm's goals and objectives. The study also established that competitive strategies intervened the relationship between knowledge management and performance of pharmaceutical firms in Nairobi City County.

Recommendations

The study reveals that operating environment had a statistically significant moderating effect on the relationship between knowledge management and performance. A theoretical argument followed in this study observed operating environment in which a firm operates dictates the strategy to be chosen by a firm thus influencing performance. In any industry, it is the operating environment that will dictate the application of the necessary strategies, depending on the laid down goals and objectives of the firm, in order to achieve the desired performance. In the case of retail pharmaceutical firms in Kenya, a well-developed KM capability will be required in order to understand the operating environment

and thus enable the owners or managers come up with best combination of strategies that are competitive in the market to foster superior performance.

An operating environment dictates the application of the necessary strategies, depending on the laid down goals and objectives of the firm, in order to achieve the desired performance. Hence in this case of retail pharmaceutical firms, owners and managers of the firms need to understand the environment their firms are operating in to enable them develop a knowledge management capability as well as come up with best combination of strategies that are competitive in the market to foster superior performance.

References

Batko, K. (2017). Relation between dynamic analytical capabilities and competitive advantage: theoretical approach. *Ekonomia i Prawo. Economics and Law*, *16*(3), 259-273.

Cepeda, G., & Vera, D. (2005). Knowledge management and firm performance: examining the mediating link of dynamic capabilities. In *4th International Meeting of the Iberoamerican Academy of Management, Lisbon, Portugal*.

Chib, K. S., & Sehgal, G. (2019). A Conceptual Framework for Measuring Organisational Performance Through Knowledge Managements SECI Model: A Mediating Role of Innovation. *International Journal of Knowledge Management and Practices*, *7*(1), 55.

Darroch, J. & McNaughton, R. (2002). Examining the link between knowledge management practices and types of innovation. *Journal of Intellectual Capital*, 3(3), 210-222.

Dekoulou, P. & Trivellas, P. (2015). Measuring the impact of learning organization on job satisfaction and individual performance in Greek advertising sector. *Social and Behavioral Sciences.* 17 (3), 367-375.

Denrell, J., & Powell, T. C. (2016). Dynamic capability as a theory of competitive advantage: contributions and scope conditions.

Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic capabilities: what are they? *Strategic management journal*, *21*(10-11), 1105-1121.

Hayfa, Y., Abraddous, Abdullah, A. M, AL Sokkar, Blaqees, I. (2018). The Impact of Knowledge Management on Organization Performance, *International Journal of Advanced Computer Science and Applications*, 9(4), 204-208

Hemmati, M., & Hosseini, H. (2016). Effect of IT application on project performance focusing on the mediating role of organizational innovation, knowledge management and organizational capabilities. *Engineering, Technology & Applied Science Research*, *6*(6), 1221-1226.

Herbane, B. (2010). The evolution of business continuity management: a historical review of practices and drivers, *Business History*, 52(6), 978-1002

Hitt, M. A., Ireland, R. D., & Hoskisson, R. E. (2011) *Strategic Management: Competitiveness and Globalization.* Boulevard: South Western Cengage Learning.

Hutchinson, V. & Quintas, P. (2008). Do SME's do knowledge management? Or simply manage what they know? *International Small Business Journal*, 26(2), 131-154.

Lin, W. S., Hsu, J. W., & Yeh, M. Y. (2015). Developing the capability of marketing intelligence: A subjective dynamic capability study. *Benchmarking: An International Journal*, *22*(7), 1341-1359.

Machuki, V. N. & Aosa, E. (2011). The Influence of macro environment on the performance of publicly quoted companies in Kenya. *Business Administration and Management Journal*, 1(7), 205-2018

Mbithi, B., Muturi, W., & Rambo, C. (2017). Macro environment moderating effects on strategy and). Effects*: The Saudi Journal of Life Sciences*, 2(5), 197-209

Nikabadi, M. S., Bagheri, S., & Mohammadi-Hoseini, S. A. (2016). Effects of knowledge management strategy and organizational learning capability on innovation-driven performance in an oil company. *Knowledge Management & E-Learning: An International Journal*, *8*(2), 334-355.

Ogolla, K., Bolo, A. Z. & Ogutu, M. (2011). Strategy, structure, environment and corporate performance: a conceptual overview. *Business Administration and Management*, 1(3), 101-103

Ombaka, B. E. (2014) *Resources, external environment, innovation and performance of insurance*

companies In Kenya. Unpublished PhD Thesis, University of Nairobi

Pearce II, J.A., Robinson, R. B., & Mital, A. (2012) *Strategic management: Formulation, implementation and control*, 12th Edition. New Delhi: Tata McGraw Hill Education Private Ltd.

Pillania, R. K. (2006), Leveraging knowledge for sustainable competitiveness in SMEs. *International Journal of Globalisation and Small Business*, 1(4), 393-406.

Sedighi, M., & Zand, F. (n.d). Knowledge management: Review of the Critical Success Factors and development of a conceptual classification model. In *2012 Tenth International Conference on ICT and Knowledge Engineering* (pp. 1-9). IEEE.

Sidik, I. G. (2012). Conceptual framework of factors affecting SME development: Mediating factors on the relationship of entrepreneur traits and SME performance. *Procedia Economics and Finance*, 4 (2012), 373-383

Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic management journal*, *18*(7), 509-533.

Uddin, M. A., Fan, L., & Das, A. K. (2016). The Impact of Transformational Leadership, Organizational Learning, and Knowledge Management on Organizational Innovation. *Innovation and Management*, 22(4), 145-182