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THE JOINT INFLUENCE OF DYNAMIC CAPABILITIES, STRATEGIC ORIENTATION AND FIRM INNOVATION ON COMPETITIVE ADVANTAGE OF COMPANIES LISTED AT NAIROBI SECURITIES EXCHANGE

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Abstract

Despite competitive advantage being identified as an important concept in management, exclusive factors as well as definitive ways of attaining it remain unclear. Recent studies show that dynamic capabilities, strategic orientation as well as firm innovation enable a firm to create economic value from its efficient operations and thereby realize a competitive advantage. The purpose of this study was to examine the joint effect of dynamic capabilities, strategic orientation and firm innovation on competitive advantage of companies listed at Nairobi Securities Exchange. The study used cross sectional descriptive survey as its research design and all the sixty-three firms listed at the Nairobi Securities Exchange formed the study population. In order to ascertain the joint influence, the hypothesis was tested using multiple regression analysis. The study established that dynamic capabilities, strategic orientation and firm innovation jointly and significantly influence competitive advantage of companies listed at Nairobi Securities Exchange. The study recommends that the listed firms should not only develop dynamic capabilities, embrace strategic orientation but also invest in firm innovation in order to attain a competitive advantage. The results contribute to theory development, policy and management practice from the importance of dynamic capabilities, strategic orientation and firm innovation in achieving competitive advantage. The limitation of the study is that it focused only on companies listed at Nairobi Securities Exchange and they include few companies from various sectors of the Kenyan economy. Some sectors are robust with many companies but few have decided to be publicly listed. The study encourages further research, especially conducting longitudinal studies of the aforementioned variables while expanding the population to include companies that are not listed at Nairobi Securities Exchange.

Key Words: Dynamic Capabilities, Strategic Orientation, Competitive Advantage, Firm Innovation, Sensing, Seizing, Integration, Nairobi Securities Exchange

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Introduction

Over the recent years, the external environment has been turbulent and can be seen from the extensive and intense technological changes, shortening of the product lives, intense competition, changing customer preferences as well as industry structure (Sandor et al., 2019). Therefore, firms should develop and deploy dynamic capabilities, adopt a strategic orientation as well as invest in firm innovation in order to outperform their rivals in the market place. Dynamic capabilities, as high order capabilities, enable firms to orderly, efficiently and systematically update their processes and routines in order to curb the adverse effects of environmental changes (Karman & Savaneviciene, 2021; Schilke, 2014).

Teece (2007) elaborated on dynamic capabilities as sensing, seizing and integration capabilities. Sensing capabilities enable a firm to identify favorable opportunities and potential threats with the aim of coming up with strategies for dealing with these external factors (Li & Liu, 2014; Sivusuo, 2019). Seizing capabilities on the other hand enable a firm to make strategic choices and investment decisions on externally sensed opportunities (Teece, 2012) while integration capabilities help in the combination and synchronization of information, assets, routines, processes and operations in order to attain a competitive advantage (Pavlou & El Sawy, 2011).

Strategic orientation can be described as principles that create behaviors which enable firms to remain profitable and viable in a long time (Pehrsson, 2016) and guide the direction managers take in responding to various external stimuli in their respective industries (Hakala & Kohtamäki, 2011). Balodi (2014) observed that strategic orientation of a firm comprises of market, entrepreneurial and learning orientations. In this way, the firm not only focuses on satisfying customer requirements and competitor actions but also autonomously and proactively look for better ways of gaining advantage. Further, encouraging learning within the organization with distinct learning goals ensures that the best practices of completing a task is disseminated across the organization (Hakala & Kohtamäki, 2011).

The role of firm innovation in survival of firms is essential. Firm innovation can be described as the overall formation of products (new and improved), processes, procedures and markets that enable a firm outperform its competitors in a given industry (Osamu, 2015; Wang & Feng, 2019). Therefore, organizations that do not invest in the creation and introduction of products or use improved processes lose their competitive positions in the industry (Klingebiel & Rammer, 2014). Firm innovation can be delineated in terms of product, process and market innovations (Sandor et al., 2019) will consequently lead to a competitive advantage.

Listed companies are blue chip companies and represent key sectors of the Kenyan economy (Omondi & Muturi, 2013). The declining competitiveness of listed firms could be attributed to the turbulent environment which can be seen from the extensive and intense technological changes, shortening of the product lives, intense competition, changing customer preferences as well as industry structure (Karman & Savaneviciene, 2021). This implies that the listed firms can reverse the adverse environmental effects by developing dynamic capabilities, creating new products, processes and markets as well as embracing strategic orientation which will lead to the attainment of a competitive advantage.

Literature Review

This section encompasses the theoretical foundation of the study as well as the empirical literature review. The dynamic capabilities and the contingency theory formed the theoretical foundation of the study. Empirical studies on dynamic capabilities, strategic orientation, firm innovation and completive advantage were equally reviewed in this section.

Dynamic Capabilities Theory

This theory is relevant to this study as it recognizes the importance of management capabilities in coordinating and reconfiguring internal and newly externally sourced competences (Teece & Pisano, 1994). According to this theory, the creation, modification, transformation and redeployment of highly valuable resources enable an organization achieve a competitive advantage in the industry. These resources are tradable, not easily found and cannot be easily substituted (Augier & Teece, 2007).

Despite the fact that firms are continuously developing new combinations of competences, resources and capabilities, rivals in the market place are similarly improving their resources or imitating processes that are perceived as profitable by the market leaders. There is need, therefore to focus on internal processes like sensing, seizing and integration while improving the capabilities of management in coordinating routines and other processes (Teece, 2018).

This theory, as the anchor theory, describes how dynamic capabilities relate with competitive advantage. Firm's ability to thrive in an environment characterized by stiff competition can be estimated by looking at its resource reconfiguration strength. The dynamic capabilities theory vastly identifies, characterizes and analyses the rate of change of resources that enable organizations avoid the development of core rigidities and consequently organizational inertia (Augier & Teece, 2007).

Contingency Theory

This theory was coined by James Thompson in 1967 with the aim of explaining the apparent interrelationships amongst organizational systems and their environment. It has its roots in general systems theory and open systems view where the organization is seen as a composition of interdependent parts. The firm segments are characterized by adaptation to each other and environment with equifinality in realizing set objectives (Boulding, 1956). The firm in this case is a multivariate collection of subsystems and operates under different conditions. Therefore, it is assumed that no one strategy of effectively managing a firm exist (Child, 1974).

The theory assumes that the external environment cannot be influenced by organizational factors and that firm actors are rational with clear goals. Thus, a concise fit of contingent variables explains better performance and competitive advantage of firms (Dessler, 1976). This theory is essential to the study since the appropriateness of different strategic orientations adopted by a given firm is dependent on organizational and environmental contingencies. Furthermore, its premise on organizations constantly assessing their environments before crafting appropriate strategies is important in understanding dynamic capabilities and achieving competitive advantage (Pratono, 2016). Contingency theory has been heavily criticized for its inability to provide managerial prescriptions to address environmental uncertainties. A course of action chosen by the manager can equally fail or the returns could be lower than competitors who might not have incurred any cost in switching to the course of action. Additionally, the theory accounts for only a small variance in competitive advantage between firms and has

not explained the interaction between contingent variables (Schoonnoven, 1981).

Dynamic Capabilities, Strategic Orientation, Firm Innovation and Competitive advantage

Dynamic capabilities, strategic orientation and firm innovation are important factors that can influence a firm's competitive position in an industry (Ferreira & Coelho, 2019). Despite the consensus of the need to create dynamic capabilities in order to address drastic environmental changes, prior empirical studies show that other extraneous factors influence competitive advantage (Helfat & Peteraf, 2015). According to Teece (2012) dynamic capabilities include organizational processes which are dependent on the asset positions of organizations and directed by its historical journey, that is, prior investments of the firm and future investment opportunities. Firms that are able to reconfigure their resource base gain competitive advantage (Teece, 2012) and enjoy market superiority either from weakening their competitors' positions or from the growing industry (Purkayastha & Sharma, 2016).

Prior empirical studies have tested the effect of dynamic capabilities, strategic orientation and firm innovation on competitive advantage jointly (Ferreira & Coelho, 2019; Gomes, Seman, Berndt & Bogoni, 2021; Tresna & Raharja, 2019) or individually (Balodi, 2014; Jiao et al., 2011; Kamboj & Rahman, 2017). Ferreira and Coelho (2019) conducted an empirical study on 387 Portugal's Small and Medium Enterprises and used structural equation modeling to ascertain the influence of dynamic capabilities, entrepreneurial orientation and firm innovation on competitive advantage. From the findings, the results were positive and significant. Further, the study found out that entrepreneurial orientation positively and significantly moderates the relationship between dynamic capabilities and competitive advantage. The same study explored whether firm innovation is a mediator in dynamic capabilities-competitive advantage relationship. The study concluded that dynamic capabilities enable the SME to develop new products that enables them to outperform their competitors. Similarly, explorative capabilities of dynamic capabilities expand the firm's relationships in new markets and hence competitive advantage.

According to Tresna and Raharja (2019), dynamic capabilities, entrepreneurial orientation and firm innovation positively and significantly influence competitive advantage of Indonesian creative industries. The study was conducted on 585 companies and data analyzed using structural equation modeling. Further, the study concluded that product innovation does not influence competitive advantage while entrepreneurial orientation led to a competitive advantage. This implies that entrepreneurial orientation as a dimension of strategic orientation is important in the attainment of a competitive advantage. Their findings of non-existing relationship between product innovation and competitive advantage are different from those of Norman and Verganti (2012) that established a positively significant relationship between product innovation and competitive advantage. Gomes et al. (2021), using partial least squares path modeling, concluded that entrepreneurial orientation as well as innovation drives organizational competitiveness of 159 Brazilian architectural firms. In China, Cui and Jiao (2011) in their survey of 227 manufacturing firms and using structural equation modeling the empirical investigation concluded that dynamic capabilities strongly impact competitive advantage in stable as well as high velocity market conditions. Tseng and Lee (2014), using multiple regression, found a positive correlation on dynamic capabilities-competitive advantage relationship of SMEs, specifically in service, technology and manufacturing industries in Taiwan.

A study by Darawong (2018) concluded that

dynamic capabilities give rise to radical innovation and consequently increased project effectiveness and efficiency of selected large manufacturing firms in Thailand. Using structural equation modeling, dynamic capabilities construct was operationalized and analyzed in terms of sensing, learning, integration and coordination capabilities. Eidizadeh, Ashrafi and Chitsaz (2016) established that organizational innovation influences competitive advantage of 213 Iranian export companies. The study employed structural equation modeling to analyze the data and concluded that export companies outperform their rivals and thrive in the global arena by innovating their products, processes and organizational systems.

Research Methodology

This study was grounded on positivist philosophical approach as it is based on theory before research, hypotheses testing and conclusions from statistical justification (Cooper & Schindler, 2014). Positivism emphasizes on knowledge being based on real facts and not abstractions. This would enable predictions based on existing theory. The observer in this case is independent from the phenomenon/phenomena being observed (Alharahsheh & Pius, 2020). This study utilized a descriptive cross-sectional survey research design since the study sought to not only describe relationships among key study variables but also establish the extent of these relationships (Kothari, 2009). The study's target population comprised all firms listed at the NSE which were sixty- three (63) in number at the time of the study. These firms were preferred for the study as they are diverse in nature, operations and by sector. This study employed the use of primary data which was obtained through a structured questionnaire.

The study targeted the top management whereby the Chief Executive Officers or the key managers in charge of departments like operations, marketing, manufacturing and finance filled the questionnaires.

Kaiser- Meyer- Olkin (KMO) as well as Barlett's Test of Sphericity was used in establishing validity of results. Field (2009) points out that data having a KMO value greater than 0.5 and Barlett's Test of Sphericity statistically significant is good for statistical analysis. KMO statistic ranges from 0 to 1. This study employed the use of Cronbach's alpha (α) that indicates a group of test items measuring one latent variable (Cronbach & Shavelson, 2004). Cronbach's coefficient alpha measures actual variance in respective variable. The coefficient alpha of 0.7 and above indicated an acceptable internal consistency as pointed out by Creswell and Clark (2017). For construct and criterion validity, five questionnaires filled by five managers of selected firms were used for pilot study. The firms that took part in this pilot tests did not take part in the main survey.

Dynamic capabilities construct was measured using its three dimensions, namely sensing capabilities, seizing capabilities and integration capabilities as put forth by Teece (2014). Strategic orientation was measured using its three dimensions market orientation, learning orientation and entrepreneurial orientation as used by Fereeira et al. (2019), Chahal *et al.* (2016) and Balodi (2014). Firm innovation was operationalized as product innovation, process innovation and market innovation as used by Sandor et al. (2019), Darawong (2018) and Sharma and Rai (2015). Competitive advantage as the dependent variable was measured in terms of the ability of the firms to have low costs of operation, differentiate their products, delivering value to the customer, efficient systems and structures and a higher market share as compared to their competitors as used by Fereeira et al. (2019) and Purkayastha and Sharma (2016).

Data results and analysis

This section presents the findings of the study and include the analysis of the response rate and the results after testing the hypothesis on the joint effect of dynamic capabilities, strategic orientation and firm innovation on competitive advantage of firms listed at Nairobi Securities Exchange.

Response Rate

The study's target population comprised of all the 63 companies listed at Nairobi Securities Exchange. The total number of questionnaires distributed amongst the respondents was 58. This is because five (5) companies had taken part in the pilot study and did not form part of the main study. Forty (40) questionnaires were filled correctly and later returned by the respondents and formed 68.9% response rate. Karman and Savaneviciene (2021) pointed out that a 50% response rate is adequate, 60% good and above 70% very good. The returned questionnaires where therefore adequate to be analyzed and derive inferences for the study.

Test of Hypothesis

In order to determine the joint effect of dynamic capabilities, strategic orientation and firm innovation on competitive advantage of firms listed at Nairobi Securities Exchange, the study's hypothesis was tested using multiple regression analysis. The study's hypothesis was: dynamic capabilities, strategic orientation and firm innovation have a significant joint effect on competitive advantage of companies listed at NSE. The independent variables were dynamic capabilities, strategic orientation and firm innovation while competitive advantage was the dependent variable. The joint effect was determined by regressing predictor variables on competitive advantage.

Table 1 shows the regression results of the joint effect of dynamic capabilities, strategic orientation and firm innovation on competitive advantage

Table 1: Regression Results of the joint effect of Dynamic Capabilities, Strategic Orientation and Firm Innovation on Competitive Advantage

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.754[a]	.569	.545	.26622	.569	24.183	3	35	.000

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.142	3	1.714	15.441	.000[b]
	Residual	3.898	35	.111		
	Total	9.040	38			

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	-.213	.483		-.441	.661	-1.182	.755
	Dynamic Capabilities	.271	.167	.219	1.624	.110	-.063	.606
	Strategic Orientation	.412	.186	.313	2.222	.030	.040	.784
	Firm Innovation	.374	.134	.328	2.784	.007	.105	.643

a. Dependent Variable: competitive advantage

b. Predictors: (Constant), Dynamic capabilities

c. Predictors: (Constant), Dynamic capabilities, firm innovation

Source: Research Data (2021)

From Table 1, the regression results show that the joint influence on competitive advantage was significant where R^2 = 0.569, F= 15.441, P < 0.05. The relationship between the predictor variables and competitive advantage was strong as given by R = 0.754. Further, the results suggest that jointly, dynamic capabilities, strategic orientation and firm innovation explain 56.9% of variation in competitive advantage. The model was appropriate and significant since the F ratio was 15.441 and statistically significant at P < 0.05. The model was fit for analysis from the R^2 value of 0.569 and F ratio.

The hypothesis' regression model is as follows:

Initial model: $CA = \alpha + \beta_1 DC + \beta_2 SO + \beta_3 FI + \varepsilon$

Resulting model: CA= -0.213 + 0.271 DC + 0.412 SO + 0.374FI

Where, CA= Competitive Advantage DC=Dynamic Capabilities SO= Strategic Orientation FI= Firm innovation ε= Error/disturbance, β_1, β_2, β_3 = beta coefficients of Dynamic Capabilities, Strategic Orientation and Firm innovation respectively

From the model, an observation could be made that companies listed at Nairobi Securities exchange could be competitively disadvantaged in case dynamic capabilities, strategic orientation and firm innovation are absent. However, for an increase in the adoption of dynamic capabilities and firm innovation while employing strategic orientation in their daily processes will increase their competitiveness and hence achieve competitive advantage. This comes from the positivity of coefficients of 0.271 for dynamic capabilities, 0.412 for strategic orientation and 0.374 for firm innovation.

Moreover, it is evident from the model's findings that competitive advantage of companies listed at NSE is influenced greatly by the combination of dynamic capabilities, strategic orientation and firm innovation, whose beta coefficients were all positive. Dynamic capabilities, strategic orientation and firm innovation was found to jointly, positively and significantly influence

competitive advantage of companies listed at NSE (R=0.754, R^2 =.569, P = 0.000). The findings of this study are in agreement with Ferreira and Coelho (2019), where they asserted that dynamic capabilities, strategic orientation and firm innovation have a significant influence on competitive advantage. However, the findings of Tresna and Raharja (2019) are contrary to the findings of this study where dynamic capabilities, strategic orientation and firm innovation did not jointly influence competitive advantage.

Conclusion, Implications of the study and Recommendation

The findings supported the hypothesis that dynamic capabilities, strategic orientation and firm innovation influence competitive advantage of companies listed at NSE. This study advances research and literature on dynamic capabilities, strategic orientation and firm innovation in realizing competitive advantage. The study observes that firms should develop dynamic capabilities, embrace strategic orientation and invest in firm innovations that will enhance the products or services they are offering as well as process efficiency for a competitive advantage (Fereeira et al., 2019). The study adds into the empirically tested research findings on dynamic capabilities, strategic orientation, firm innovation and competitive advantage relationship, thus contributes to knowledge. Also, the findings of the study enhance the replication of similar studies in a different context, thus fostering comparative study. The research contributes to dynamic capabilities theory by establishing that dynamic capabilities influences competitive advantage as well as contingency theory on the role of strategic orientation and firm innovation in the attainment of a competitive advantage. The research thus supports dynamic capabilities theory and contingency theory.

The study outcomes are significant in influencing government policy. The government will benefit in formulating policy on the listed firms from the understanding of dynamic capabilities, strategic orientation and firm innovation effects on competitive advantage. The various sectors represented by these companies are important to economic development of the country and contributes significantly to the gross domestic product. The Government of Kenya, in its Vision 2030 development policy, endeavors to transform the country into a middle-income economy. Dynamic capabilities influence on competitive advantage is evidenced by the large number of listed companies using their sensing, seizing and integration capabilities in their operations and thereby lower their costs while producing high quality and differentiated products.

The results of this study demonstrate that jointly, dynamic capabilities, strategic orientation and firm innovation positively and significantly influence competitive advantage of companies listed at NSE. This implies that dynamic capabilities, creation of new products, adoption of new processes and venturing into new markets while proactively and autonomously implementing strategies enable it to gain competitive advantage. Firm managers and owners, should therefore recognize this interaction and formulate firm policies and procedures accordingly. Managers should not only acquire dynamic capabilities and adopt a given strategic orientation but also invest in the creation of new products, processes as well as expand their market reach. The study therefore recommends that policymakers should advocate the development of dynamic capabilities, adoption of strategic orientation and firm innovation for the attainment of Kenya's Vision 2030.

Limitations of the Study

The study sought to determine the joint effect of dynamic capabilities, strategic orientation and firm innovation on competitive advantage of companies listed at NSE. Despite meeting this objective, the study had some limitations. The cross-sectional survey used only one respondent for each of the researched firms.

The study targeted respondents in management; individuals who understand the workings of the firm and able to discern the various aspects of the operations. Focusing only on companies listed at NSE was another apparent limitation. These include few companies from various sectors of the Kenyan economy. Some sectors are robust with many companies but few have decided to be listed at the NSE. Questionnaires were administered to only one respondent who were not obliged to fill them and hence a less than excellent response rate.

Suggestions for Further Study

Longitudinal studies could be carried out to test causal effects in future studies and to show whether the findings vary over time. Prospective research studies should focus on other companies beside the companies listed at the NSE in order to ascertain the applicability of this study's conclusions to other contexts of Kenya's economic units. For instance, future research should include coverage of firms operating in various sectors, both listed and non- listed. Moreover, a study in a bigger context extending to many industries should be considered.

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Theory: Testing Assumptions Hidden with m the language ASQ 26