THE MODERATING ROLE OF BOARD COMPOSITION ON THE RELATIONSHIP BETWEEN ASSESSMENT CAPABILITY AND PERFORMANCE OF SUGAR FIRMS IN KENYA

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ABSTRACT

The sugar industry in Kenya has faced tough times recently. This has led to cut throat competition between the sugar firms and forced a rethink of strategy by the players to survive the tough times as each one is constantly in the race to better performance in the industry. This study sought to determine the influence of assessment capability on the performance of sugar firms in Kenya. The study utilized a descriptive survey research design that incorporates quantitative and qualitative approaches. The target population for this study consisted of all management-level employees of the nine sugar firms in the western sugar belt. Using Yamane's formula to determine the size of the sample, 204 respondents were sampled using random sampling from the population from which primary data was collected using questionnaires administered through drop and pick method. The collected data was coded and analysed using quantitative methods with the help of descriptive and inferential statistics. The results of this study are useful to sugar companies as a guide in the formulation of strategies to enhance their market position and performance. The study is also useful to strategic management practitioners in the sugar industry in the formulation and implementation of strategies and plans to promote growth. The study also builds on existing knowledge in the area of strategic flexibility and therefore, is of benefit to scholars and researchers as it can be used to stimulate farther research to develop a better understanding of assessment capability as a concept of strategic flexibility, its adoption and implementation. The study concluded that board composition has a statistically significant moderation effect on the relationship between the assessment capability and performance of sugar firms in Kenya. Based on the findings of the study the researcher recommends that organizations should put in place proper and adequate mechanisms to constantly monitor their operating environment with the aim of sensing any changes that may need readjustment of the firm in order to cope in the industry.

Keywords: Board Composition, Assessment, Performance.

INTRODUCTION

The business environment is increasingly becoming unpredictable and complex. Rapid changes increase the volatility of the business environment and require flexible and creative strategies (Khodammi, 2016). Brozovic (2016) asserts that as modern society is characterized by irregularity, increased levels of complexity and uncertainty, and reduced levels of predictability (Nowotny, Scott & Gibbons, 2001), it is necessary for the actors in the marketplace to develop the ability to navigate complex business environments. He suggests therefore that, strategic flexibility, defined as the ability to handle change (Wright & Snell 1998; Zhou & Wu 2010), has emerged as a crucial organizational requirement in order for actors to thrive in such environments.

Teece, Pisano and Shuen (1997) have defined dynamic capabilities as the firm's ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments. She suggests that because of a deep transformation of the competitive landscape, where change has become both faster and more complex to predict and manage than was the case only 10 years ago, strategic agility has grown in importance and it now ranks very high on the agenda of both strategic management scholars and practitioners (Minin, Frattini, Bianchi, Bortoluzzi & Piccaluga, 2014).

Strategic Flexibility

Globalization has shrunk the world, and increasingly complex manufacturing, distribution and information patterns have emerged. Subsequently, politics, culture, social life, peoples' demands and expectations have reformed firms' surrounding environment (Dicken, 2011). Technological changes, increased competition, large variations in customer demands, changing market trends and new regulations cause organizations to experience problems when operating in demanding business environments (Alarcon & Caruso, 2013; Singh, Oberoi & Ahuja, 2013). In the face of this, firms are pushed to pursue alternative strategic responses in order to remain afloat. These responses are majorly aimed at cushioning firms from the turbulence and mitigating them against the unforeseen changes in the environment

The Sugar Industry

Globally, the sugar industry has over the years been delicate resulting from the dynamics of the operating environment. Out of the total white crystal sugar production in the world, approximately 70 percent comes from sugarcane and 30 percent from sugar beet (Sharpe, 1998). The argument he presents is that though the normal benchmarks and standards of competitiveness in the industry are difficult to define, a policy that exposes any market to sugar at the residual free market price would be a disaster to even the most stable economy enjoying high efficiencies in sugar production. Despite ultimately turning out as a net importer of sugar, Africa prides itself in consistently producing five producers who are known among the lowest cost producers globally. Only Brazil (lowest cost producer) and Australia (same level) can compare to the five which include Zimbabwe, Malawi, Zambia, Swaziland and South Africa.
The Kenyan sugar industry is credited with the cash circulation the rural families and households depend on. The sustenance of many of the rural towns around the sugar belts and the surrounding market places heavily rely on the industry (Government of Kenya (GOK), 2010). The industry is complexly knotted into the rural economies of most areas in Western Kenya. Imbambi, Oloko & Rambo (2017) assert that the sugar firms in Kenya have technology capability limitations and yet there is a positive relationship between technology capability and competitive advantage.

Statement of the problem

With the liberalization of the sugar industry, high level competition has been realized both at local and international level (Kennedy & Harrison, 1999). This has resulted to closure of many firms which are not able to sustain the high competition (GOK, 2021; Sugar Directorate, 2018). The domestic industry has faced numerous challenges arising from its external environment such as increased debt portfolio, high cost of production, delayed payments to farmers due to

poor financial performance, high cost of inputs, high processing costs, and unpredictable rainfall pattern among others (KSB, 2018) leading to massive job losses, constrained business activities in the sugar growing areas, loss of revenues in taxes for the government, and the farmer and the farming community also suffering loss of income and livelihood. Sugar firms that have been exhibiting unsatisfactory performance (Ojera, Bulitia & Ogutu, 2017) and fighting imminent closure include, Muhoroni Sugar Company, South Nyanza Sugar Company, Chemelil Sugar Company as well as the giant Mumias Sugar Company. This business environment has obligated players in the market to adapt to the fast dynamics of the market. Consequently, for survival purposes, some have been forced to realign their strategies to achieve and sustain performance in the industry. This study, therefore, sought to shed light on the moderating role of management style on the relationship between assessment capability and performance of sugar firms in Kenya

Research objective

The study sought to establish the effect of Assessment capability on performance of sugar firms in Kenya.

LITERATURE REVIEW

The study was anchored on the following theories:

Dynamic Capabilities Theory

The dynamic capabilities theory was initially introduced by David Teece and Gary Pisano in 1994. The theory sets out to explain the genesis of competitive advantage in organizations. According to Teece and Pisano (1994), traditionally prosperous firms relied on the resource-based strategy of defensively acquiring vital technological resources to fight out their rivals in the market. Teece, Pisano and Shuen, (1997) defined dynamic capabilities as the capacity of businesses to incorporate, construct, and reorganize internal and external proficiencies to respond to the ever-changing business environment. In this study, this theory explains the need and pursuit of Assessment capability during disruption for performance of sugar firms in Kenya. Accordingly, dynamic capabilities theory is thought to provide a solid theoretical base for the main objective as well as specific objectives one to four of this study.

Stakeholder Theory

This theory was proposed by Freeman (1984) who argued that several parties besides the shareholders have a stake in a business and that the firm exists to create wealth for its shareholders and value or its other stakeholders through provision of goods and services. Clarkson (1995) in defining this theory adds that an organization is a network of stakeholders who hold various interests in the firm. The stakeholders operate in a context of society which makes available the required legal and market resources or the firm's operations. By this the firm should therefore identify its true stakeholders and seek to meet their expectations of the firm. In this study, the stakeholder theory explains the use of balanced scorecard, which is a stakeholder approach, as the measure for performance. Accordingly, stakeholder theory is thought to provide a solid theoretical base for the main objective as well as the four specific objectives of this study.

The moderating role of Board Composition on the relationship between assessment capability and performance

The ability to align strategic choices and actions to environmental events is largely depended on the firm's ability to fittingly understand the environmental proceedings and mount the appropriate response actions (Tripsal & Gavetti, 2000). According to Shimizu & Hitt (2004) assessment involves the capability to collect and assess negative data from the firm's environment objectively. The more the organization is able to correctly fathom the industry dynamics under which their firm operates the better are the strategic choices they make and the higher the firm's performance (Garry & Wood, 2010). Day (2002) explains that assessment is also known as sense-making and refers to the interpretation of gathered information against past experiences and knowledge.

When attention gives early signals about factors that might hinder the success of the strategy, assessment sets in by provoking management of the firm to ask questions on the execution process or the leaders' reliability and competency (Carpenter & Sanders, 2009). Both the environmental understanding and action-outcome response require cognitive capability for information processing (Hodgkinson & Healey, 2011). With the ever-changing business environment, it is imperative to assess the actual direction of a firm and compare that course to the direction requisite to flourish in the dynamic environment (Della-Piana, Low & Lyman (2005).

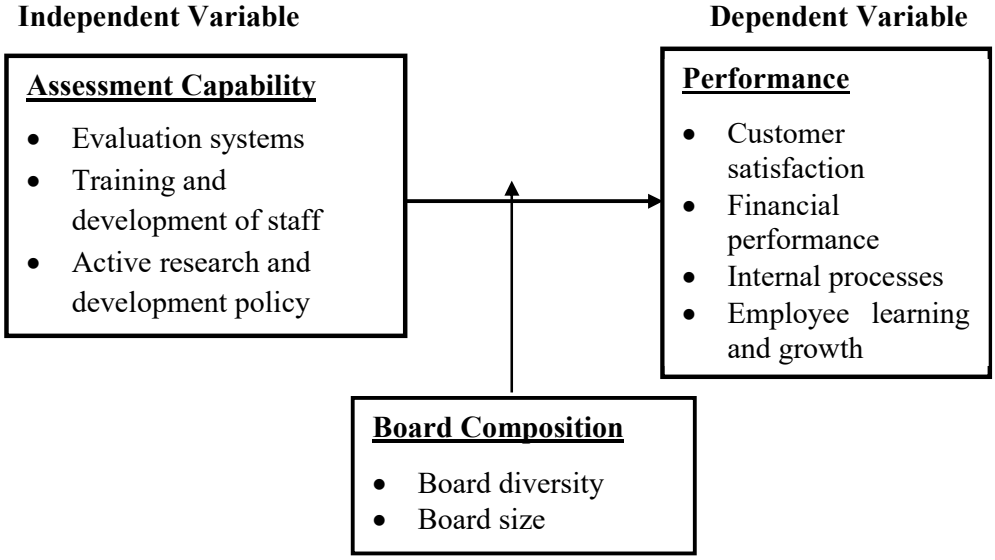
Shimizu & Hitt, 2004) argue that strategic mistakes can result from an initial inaccurate evaluation of the environment and from maintenance of the status quo despite environmental changes. An appropriate response to the prevailing scenario results in sustainable performance for the firm. An effective assessment process inhibits an organization from taking wrong decisions and helps them to forestall hitches if there is variation in the internal and external environment (Elshamly, 2013)

Board composition can show several degrees of heterogeneity (Bhagat & Black, 2002). Munyradadzi, Padia & Callaghan (2016) studied board composition, board size and financial performance of Johannesburg stock exchange companies basing on the resource dependence theory and agency theory predicted that board composition can be positively related to firm performance. In this study, as suggested by Rashid (2011) the measures of board composition employed was the ratio of independent non-executive directors and board size. The study adopted a quantitative approach and use of multiple regression analysis in data analysis. Krivogorsky (2006) suggests the existence of a positive relationship between board composition and firm performance. Meme (2017) supports the position that board characteristics in regard to board size, board diversity and board independence has a significant effect on the financial performance of organizations.

Shimizu & Hitt (2004), in support of the relationship of board diversity and performance, posit that nomination of new outside directors has the effect of increasing the probability of shaking off a poorly performing enterprise since the directors provide new insights and fresh

perspectives to a firm not apparent to the incumbents. Kalsie & Shrivastav (2016) assert that a larger board consists of a bigger number of members who work towards the interest of the stakeholders in monitoring and controlling, and thereby increasing the firm performance.
Several studies also support this as Adhikary, Huynh, & Hoang (2014); Fauzi & Locke, 2012; Jackling & Johl, 2009; found that the evidence of a positive relationship between the firm's board size and its firm performance. However, Hermalin and Weisbach (2001) disagree and suggest that larger boards are way less effective relative to small boards as their size moves them into a more symbolic role, rather than performing their elementary role as part of the management.

Conceptual framework



RESEARCH METHODOLOGY

The research philosophy adopted for this study is positivism. The research design was a descriptive survey study. The population of study comprised of all management employees of sugar firms operating in Western Kenya which form the western sugar belt. In this study, the sampling frame consisted of a list of all the management staff at top level and business level in the nine sugar firms operating in Western Kenya. The total number of management staff was 416 consisting of supervisors, middle level managers and top management executives in the nine firms as shown in table below :-

Sugar Company	No. of Management Staff
West Kenya Sugar Company	40
Nzoia Sugar Company	84
Butali Sugar Mills	35
South Nyanza Sugar Company	74
Sukari Industries Limited	22
Kibos Sugar and Allied Industries Limited	27

Muhoroni Sugar Company	29
Chemelil Sugar Factory	74
Busia Sugar Industry	31
Total	**416**

Yamane's (1967) formula was employed to determine the size of the sample as follows:

$$n = \frac{N}{1 + N(e^2)}$$

where:

n represents sample size,

N represents study population,

e represents error margin ($2\% \leq e \leq 5\%$). Five percent margin of error will be used because the study will be an ex-post facto survey, whereby the independent variables cannot be manipulated hence necessitating relatively higher margin of error.

Table 3. 2: Sample Distribution in Sugar Firms in Kenya

	No. of Management Staff	
Sugar Company		**Sample Size**
West Kenya Sugar Company	40	20
Nzoia Sugar Company	84	41
Butali Sugar Mills	35	17
South Nyanza Sugar Company	74	36
Sukari Industries Limited	22	11
Kibos Sugar and Allied Industries Ltd	27	13
Muhoroni Sugar Company	29	14
Chemelil Sugar Factory	74	36
Busia Sugar Industry	31	16
Total	**416**	**204**

Primary data was collected through the administration of the questionnaires to management staff (strategic level and business level mangers) of the sugar companies in the western sugar belt. The collected data was analysed by descriptive statistics as well as inferential statistics. Therefore, the following regression model was used:

$PF = \beta_0+\beta_1SF+\beta_2Z+\beta_3SFZ+\xi_i$, where:

PF represents Performance of Sugar Firms

SF represents Assessment Capability

Z represents Board Composition

SFZ represents interaction term introduced to measure the moderation effect

The statistical results were interpreted, elucidated and discoursed consistent with the theoretical and conceptual fundamentals of the study and the findings presented in the form of tables, charts and graphs.

FINDINGS, CONCLUSION AND RECOMMENDATIONS

Response Rate

Table 4.1: Analysis of the response rate

Response rate	Frequency	Percent
Questionnaires sent out	204	100%
Questionnaires filled and returned	178	87.3%

The sample of the study consisted of 204 target respondents to whom questionnaires were sent out. From these, 178 questionnaires were correctly filled and returned. As presented in Table 4.1, this yielded a response rate of 87%. This response rate was deemed appropriate for the study which in agreement with Kothari (2011) perceived a response rate greater than 70% to be satisfactory for a given study.

Hierarchical Regression Analysis

To 383 nalyse the moderating role of board composition on the relationship between Assessment capability and performance of sugar firms, a hierarchical regression analysis was done. The findings are as indicated in the table below:-

Model Summary

					Change Statistics				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.254[a]	.064	.059	.556	.064	11.579	1	168	.001
2	.346[b]	.119	.109	.541	.055	10.432	1	167	.001
3	.407[c]	.166	.150	.528	.046	9.163	1	166	.003

a. Predictors: (Constant), Assessment_Capability

b. Predictors: (Constant), Assessment_Capability, Board_Composition

c. Predictors: (Constant), Assessment_Capability, Board_Composition, ASBC

From the table above, Assessment capability accounted for 6.4% of the changes in performance of sugar firms (P=0.01<0.05) at 95% confidence level. With the introduction of the moderator, the R square value increased to 11.9% indicating an R square change of 5.5%. Further with the introduction of the interaction term, the R square change increased to 16.6% indicating a further 4.6% increase in performance.

ANOVAa

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.581	1	3.581	11.579	.001[b]
	Residual	51.963	168	.309		
	Total	55.544	169			
2	Regression	6.637	2	3.318	11.331	.000[c]
	Residual	48.908	167	.293		
	Total	55.544	169			
3	Regression	9.195	3	3.065	10.977	.000[d]
	Residual	46.349	166	.279		
	Total	55.544	169			

a. Dependent Variable: Performance

b. Predictors: (Constant), Assessment_Capability

c. Predictors: (Constant), Assessment_Capability, Board_Composition

d. Predictors: (Constant), Assessment_Capability, Board_Composition, ASBC

From the ANOVA table above, the p values of the three models were less than 0.05 at 95% confidence level. This indicated that the models were fit in testing the relationship between the three variables of the study.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	3.107	.190		16.332	.000
	Assessment Capability	.202	.059	.254	3.403	.001
2	(Constant)	2.789	.210		13.305	.000
	Assessment Capability	.139	.061	.175	2.281	.024
	Board Composition	.157	.049	.248	3.230	.001
3	(Constant)	4.733	.674		7.023	.000
	Assessment Capability	-.495	.218	-.623	-2.274	.024
	Board Composition	-.445	.204	-.702	-2.177	.031
	ASBC	.192	.064	1.438	3.027	.003

a. Dependent Variable: Performance

Model 1 above indicated that with a single unit increase in assessment capability, there was 0.202 increase in performance ($p=0.001<0.05$). In model 2, with a single unit increase in assessment capability and board composition, there will be a 0.139 and 0.157 increase in performance respectively. In model 3, with the introduction of the interaction terms,

Assessment capability and board composition account for negative results on performance i.e. -0.495 and -0.445 respectively. However, the interaction term accounts for significant and positive contributions to performance.

Conclusion

Finally, on the moderation effect of board composition on the relationship between the independent variables and the dependent variables it was concluded that there exists a statistically significant moderation.

Recommendations

Based on the findings of the study the researcher recommends that organizations should put in place proper and adequate mechanisms to constantly monitor their operating environment with the aim of sensing any changes that may need readjustment of the firm in order to cope in the industry. This is crucial as any unsensed dynamics could be detrimental to existence and the performance of the firm or may occasion inaction on great opportunities that would otherwise prop the firm above its competition in the industry.

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