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Complexity or Simplicity? Competitive Repertoire And Firm Performance In Uncertain Contexts

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ABSTRACT

To survive in a changing environment, firms need to craft strategies that endow them with success. Competitive repertoire considers the full array of strategies deployed by an organization and provides a comprehensive view of the firm's strategies. Deriving from the resource based view and the information processing theory, it is expected that by deploying a complex repertoire of competitive actions would secure superior performance for the firm due to the inability of other firms to mimic complex actions. However, it has been argued that in uncertain and dynamic environments, firms would benefit more by maintaining competitive repertoire simplicity thereby limiting themselves to a narrow set of known and familiar actions. These expectations were tested among 53 food and beverage manufacturing firms in Kenya. Primary data, collected using a structured questionnaire and secondary data were obtained and analyzed through ordinary linear regression. The study established that the food and beverage manufacturing firms largely relied on competitive repertoire simplicity which affected performance positively. The study therefore concluded that competitive repertoire simplicity was beneficial to firms in uncertain contexts and recommended that firms in such contexts maintain a narrow set of familiar actions.

Key Words: Competitive actions; Competitive repertoire complexity; Strategy pattern; Firm performance; Food and beverage manufacturing firms

INTRODUCTION

Driven by the increasingly complex environment, organizations are finding it necessary to keep crafting strategies that enable them gain and sustain competitive advantage. Ferrier and Lyon (2004) observed that researchers and practitioners had devoted their attention to how organizational competences could be leveraged to create advantage for the organizations. Further, as environments become complex, firm strategies must also evolve to match environmental complexity. This implies that strategies are increasingly deployed by organizations to secure superior performance and with time these strategies are becoming increasingly complex.

Organizational strategies can be assessed in various ways for instance Porter (1980) defines the generic strategies as either cost leadership or differentiation with a narrow or broad focus. Pearce and Robinson (2012) propose the grand strategies for organizations. Mintzberg (1987) argues that strategy can be seen as a pattern, a plan, a position and a perspective which evolve over time to accommodate reality. Andrews (1980) views strategies as the pattern of decisions that a company makes which reveal its objectives and plans for achieving them. Strategy viewed as a pattern takes into account management's actions over time and allows for evaluation of a wide range of actions that may not fit into certain classes of strategies. Aligning with the view of strategies as a pattern is the evaluation of the competitive repertoire of an organization.

Competitive Repertoire Complexity

Competitive repertoire focuses on the rivalry between firms pegged on competitive moves and responses, strategic and organizational backgrounds and their drivers and outcomes (Chen & Miller, 2012). In a bid to improve their positions and performance, firms usually engage in competitive moves ranging from simple actions like price changes to more complex action like integration. Ferrier, Smith and Grimm (1999) defined competitive moves as externally focused, definite and discernible actions by a firm to improve or defend its place. Smith, Ferrier and Ndofor (2001) asserted that moves and countermoves in a market resulted in competitive dynamics which mirror the normal and innovative movements in the firm as they pursue profits. They noted that markets never reached equilibrium implying that as long as firms seek to succeed in the marketplace, there will always be competitive moves.

Competitive repertoire implies the array of competitive strokes deployed by an organization. It focuses on the entire set of an organization's competitive moves within a certain period which are essential to the competitive arsenal whether minor or major. Chen and Miller (2012) noted that competitive repertoire enables researchers to conceptualize organization strategy in a concrete manner. Lee (2012) conceptualized competitive repertoire as an organization's strategic play book containing a series of unique and sequential actions and counteractions. Miller and Chen (1996) observed that competitive repertoires consisted of set decisions, product or service additions or deletions including major and minor decisions. Lee (2012) noted that to properly analyze the effect of competitive repertoire on performance, it was important to isolate incidental activities from strategically initiated actions. He proposed that only purposely designed actions to achieve competitive advantage should be considered.

Competitive repertoire is a broad construct with several elements to it. Specifically it can be analyzed from the total number of actions undertaken by an organization or from the variety of actions undertaken. Li, Fang, Wang and Lim (2015) suggested that competitive repertoire could be evaluated from three characteristics namely volume, complexity and heterogeneity. Volume refers to all the moves launched by a firm within a specific period. It applies to the count of competitive moves undertaken in a certain period. Complexity is the degree to which the continuous competitive actions by a firm are made up of a wide range of actions of different kinds in a given period. Heterogeneity is the degree to which the competitive moves deviate from those of matched competitors.

Competitive repertoire can also be evaluated on a continuum ranging from simplicity to complexity as seen in various studies (Miller & Chen, 1996; Connelly et al, 2017 and Ferrier & Lyon, 2004). In this case competitive repertoire simplicity denotes the level to which an organization's competitive strokes consist of a narrow set of actions (Ferrier & Lyon, 2004). Miller and Chen (1996) argued that simplicity comprises of two related aspects that is range and concentration. The range implying that few kinds of actions are used to compete while the concentration refers to only a few kinds of action are employed within the range. They noted that simplicity did not imply that the firm was passive or conservative rather that its decisions are mostly of one type.

Competitive repertoire simplicity works in less turbulent environments where the same actions can prove successful over a period of time. Miller and Chen (1996) argued that managers pursuing simplicity are usually confident to exploit previously successful actions rather than diversify to others. Ferrier and Lyon (2004) noted that simplicity is defended where firms have a distinctive competence that leads to success. However, they observed that there was a fine line between simplicity that leads to success and the one that leads to failure.

This is because previously successful strategies when stretched turn to strategic liabilities. Miller (1993) argued that a narrow lens of experience and skewed information processing would predispose the organization to competitive simplicity. Overtime competitive repertoire simplicity therefore leads to failure as the firms fail to maintain appropriate levels of information processing and competitive actions. Miller and Chen (1996) noted that simplicity can be harmful to performance in heterogeneous contexts or in its extremity.

Competitive repertoire complexity refers to a situation where a wide range of competitive moves is engaged and consists of different types of moves. In this case the range of moves is wide and the actions are not concentrated to any type of actions. Connelly et al. (2017) noted that as competition progresses, organizations find it necessary to engage opponents with a complicated array of moves. This allows the firm to counter an evolving environment in a better manner and gain competitive advantage. Ferrier and Lyon (2004) noted that firms differ in their repertoire complexity driven by their managers' lens of experience which affects performance differently in the short and long run.

Competitive repertoire complexity is connected to performance especially in the long run. This is because consistent with the resource based view, complex actions make it difficult for rivals to mimic. Offstein (2004) observed that firms' competitive behaviour is important theoretically and empirically since it is linked to financial performance. He argued that competitive repertoire complexity allowed a firm to spread its bases of competitive advantage and maintain them over time. This is because rivals are unable to predict the firm's actions and respond to them. Ndofor, Sirmon and He (2011) established that complexity allowed the firm to use its resources effectively leading to better performance.

Firm Performance

Firm performance is important to organizations since it usually designates the sole reason for the existence of the firm. It is the outcome of organization activities. March and Sutton (1997) noted that the interest on firm performance as a dependent variable is most explicit in organization strategy since the field seeks to understand, predict and shape organization performance. Venkatraman and Ramanujam (1986) asserted that the value of firm performance in strategic management can be seen in theoretical, empirical and managerial perspectives. From a theoretical perspective, performance is at the heart of strategic management since most theories have performance implications explicitly or implicitly. Empirically, most studies use performance to evaluate strategies and managers actions. From a managerial perspective most prescriptions are on performance improvement. This variable was therefore adopted to evaluate the effect of competitive repertoire.

Behn (2003) observed that performance measurement was not an end to itself but rather should be used to achieve managerial purposes. By comparison between private and public agencies, he posited that performance measurement was good as it helped to achieve eight purposes. First, it helped to evaluate how well the agency was performing. It also helped to control and budget for organization activities. Next, performance measurement could be used to motivate stakeholders to do things right. It could also be applied by managers to promote the values of their agencies and to celebrate organizational accomplishments. Performance measurement could also assist firms learn what was working and what was not. Lastly, it enables performance improvement. He also noted that different purposes required different measures if the measures were to be meaningful.

Hubbard (2009) proposed the sustainable balanced scorecard (SBSC) which is composed of financial, customer, internal processes, social, learning and development and environmental perspectives of performance. The SBSC incorporates measures that top managers can identify with effortlessly and is likely to be readily accepted by organizations to measure performance. Further, by incorporating social and environmental perspectives the SBSC takes care of the emerging requirements on organizations to report on other performance perspectives. This study adopted the SBSC to measure performance since a firm's competitive repertoire is made up of a variety of actions which may affect performance perspectives differently.

LITERATURE REVIEW

The effect of competitive repertoire complexity on firm performance can be explained by the resource based view. The resource based view holds that firms with valuable, rare, inimitable and non-replaceable resources outperform their competitors (Wernerfelt, 1984; Barney, 2001; Kraaijenbrink, Spender & Groen, 2010 and Oh & Kuchinke, 2017). This theory posits that firms which possess in-house resources which are difficult for their competitors to access have a competitive advantage. Accordingly, for a business to have continued competitive advantage it must be able to control and apply these resources. Competitive repertoire complexity constitutes a unique resource that can be applied to deliver competitive benefits. This is because a firm can craft competitive moves that are idiosyncratic to the firm thereby gaining advantage over the rest consistent with the resource based view.

The effect of competitive repertoire complexity on performance is also founded on the information processing theory. This theory holds that people process any information they obtain from the environment rather than merely responding to stimuli. Organizations are information processing organisms which face uncertainty (Tushman & Nadler, 1978) and the overarching task of a firm and its managers is to process information (Hult, Ketchen & Slater, 2004). Due to the uncertainty, the decision makers keep gathering information which they process before making decisions. Shaffer and Kipp (2010) noted that the information processing theory is informative since it sheds light on the mental processes associated with human decision making. It also acknowledges the different information needs associated with different strategies and helps in understanding organization actions and why they perform differently in similar settings. Consistent with this, Offstein (2004) posited that competitive repertoire complexity drains the information processing capability of the rivals and confounds them as they cannot predict the firm's actions, which leads to better firm performance. Therefore competitive repertoire complexity is associated with superior performance.

Competitive repertoire complexity affects performance since it makes it difficult for rivals to anticipate the firm's moves and it constitutes an idiosyncratic resource that can deliver superior performance. Connelly et al. (2017) studying 1,168 firms in 204 industries sought to establish the antecedents and performance outcomes of competitive repertoire complexity. They found that complex competitive repertoire is harmful to performance in the short term but beneficial in the long term. This is supportive of the expectation that competitive repertoire complexity yields superior returns however the benefits of competitive repertoire complexity take time to be realized.

Larraneta, Zahra and Gonzalez (2014) studying 140 new ventures in Spain observed that the new endeavours were likely to profit from applying multiple competitive actions especially in highly dynamic industries. Further, they established that in such highly uncertain contexts strategic simplicity affected firm performance positively. These findings were consistent with the view that competitive repertoire complexity was beneficial to firm performance however this was contingent on the organizational context. Ferrier and Lyon (2004) concluded that competitive repertoire simplicity was negatively associated with firm performance among airline firms. However, in their multi-industry study, they established that repertoire simplicity was positively related to performance for businesses headed by diverse management teams supporting the need to check the context.

Hambrick, Cho and Chen (1996) suggested that senior management profiles could be modified depending on the strategic repertoire of the firm to achieve its objectives. In their study of 32 USA airlines, they established that firms with heterogeneous management teams had a greater propensity to deploy a wide array of complex competitive moves with a positive impact on performance. Carpenter (2002) concurred that the organizational context is shaped to a great deal by the strategies the organization is pursuing which affects the extent to which managerial characteristics affect firm performance. In his study he established that manager's education, functional and tenure diversity affected performance positively depending on the complexity of firm's internationalization strategy.

Miller (1993), studying competitive simplicity and firm performance concluded that simplicity had differing effects on firm performance over time. Specifically, firms applying competitive simplicity would be successful in the short term but with a changing environment such success would wane. Connelly et al (2017) observed that such simplicity would lead to managerial myopia which inhibited the ability of the firm to adapt within a changing environment. This suggests the need to evaluate the context of the firm in considering the effect of the competitive moves on performance.

The food and beverage industry has been facing declining margins due to economic challenges resulting in consumers seeking to save money thus shifting purchase to foods for home preparation while increased concerns about obesity leading to demand for healthy foods and stringent food safety regulations (Stuckler & Nestle, 2012). However, the industry has above average potential since food is a basic part of life. This sector in Kenya has a huge potential given that most of the food produced in the region is sold raw with little value addition but there is growing demand for processed foods and fast foods (Mutunga, Minja & Gachanja, 2014) which is likely to spur food and beverage processing within the country. They further opined that the sector was affected by unfavourable policies but had shown signs of recovery driven by rapid population expansion and rural-urban migration. This had resulted in intense competition and deployment of strategies to sustain competition. Against this backdrop, this study sought to evaluate the competitive repertoire applied by firms in this industry and the resulting effect on performance by setting the hypothesis that:
H_1: Competitive repertoire complexity has no significant effect on performance.

METHODOLOGY

This study employed a cross sectional descriptive survey design among 53 large food and beverage manufacturing firms in Kenya. Primary data relating to competitive repertoire complexity and non financial performance measures was collected using a structured questionnaire. Secondary data relating to financial performance of the companies was collected from the Kenya Revenue Authority for the period between 2010 and 2015. Competitive repertoire complexity was measured in terms of concentration and range. Competitive repertoire concentration was measured using the Herfindahl's index calculated as $\sum (a_i/T)^2$ whereby a_i/T is the proportion of the firm's actions in the *i*th category to its total number of actions in a given year while competitive repertoire range comprised of the number of competitive moves within the period (Ferrier & Lyon, 2004). Firm performance was evaluated along the six performance perspectives of the SBSC with financial performance being measured in terms of Return on Assets (ROA) and customer, social, internal processes, learning and development and social measures being composited into one measure of non financial performance. Ordinary linear regression was then applied to test the hypothesis of study.

RESULTS AND DISCUSSIONS

The competitive actions were classified into five categories and Table 1 presented the total number of competitive actions.

Table 1: Competitive Repertoire of Food and Beverage Manufacturing Firms

Type of Actions	Frequency	Percentage
Marketing	5,614	52.49%
Production	1,091	10.20%
Technology	1,454	13.59%
Management	538	5.03%
Corporate	1,999	18.69%
Total	10,696	100%

Table 1 revealed that marketing actions dominated the competitive actions undertaken by the food and beverage manufacturing firms accounting for 52.49% of the competitive actions. This could be associated with the pressure to sell that is inherent in the food and beverage sector given that the commodities are fast moving consumer goods. In addition, the competitive repertoire range was between 32 and 2,865 competitive actions indicating major differences in the competitive approach of the sampled firms. The calculated Herfindalh's index ranged from 0.21 to 0.69 with an average of 0.32 indicating that the firms relied largely on a narrow range of actions as shown by the marketing actions accounting for more than half of the competitive actions. H_1 was tested for financial and non financial performance and Table 2 presented the findings.

Table 2: Competitive Repertoire Complexity and Firm Performance

Effect of Competitive Repertoire Concentration on Performance

Performance	R	R square	F	Sig.	B	Conclusion
Financial	0.279	0.078	4.291	0.043	0.841	Significant
Non Financial	0.02	0	0.02	0.889	0.077	Not Significant

Effect of Competitive Repertoire Range on Performance

Performance	R	R square	F	Sig.		Conclusion
Financial	0.272	0.074	4.068	0.049	0.132	Significant
Non Financial	0.29	0.084	4.667	0.035	-0.182	Significant

Table 2 revealed that competitive repertoire complexity had a significant effect on financial performance ($p < 0.05$) but a statistically not significant effect on non financial performance ($p > 0.05$). In addition the effect on both financial and non financial performance was positive as shown by the B coefficients implying that the adoption of a narrow range of actions by the firms was beneficial to their performance. On the other hand, competitive repertoire range had a statistically significant effect on both financial and non financial performance as indicated by

$p < 0.05$. Competitive repertoire range had mixed effects on performance with a positive effect on financial performance but a negative effect one on non financial performance as indicated by the B coefficients.

The findings were consistent with the findings by Connelly et al (2017), Larraneta et al (2014), Ferrier and Lyon (2004) and Miller (1993) that competitive simplicity was beneficial to firm performance. This was also consistent with the resource based view expectations that the firm's competitive repertoire constitutes idiosyncratic resources that can be deployed for competitive advantage. This was further evidenced by the wide differences in the competitive repertoire range among the firms (ranging between 32 and 2,865 competitive actions).

This study however noted that competitive repertoire concentration and range accounted for a relatively small amount of variations in both financial and non financial performance (ranging between 7.4% and 8.4%). This could explain the rationale behind the competitive simplicity adopted by firms in this industry. Given the small amount of variation in performance associated with the competitive repertoire in the industry, a complex repertoire would be largely wasteful. In addition, the study observed that the findings did not align with the expectations from the information processing theory that competitive repertoire complexity would confound competitors resulting in superior firm performance. This study attributed this to the uncertainty within the industry with changing customer trends. As noted by Larraneta et al (2014) and Miller (1993), competitive repertoire simplicity led to positive firm performance in highly uncertain industries.

CONCLUSIONS AND IMPLICATIONS

This study concluded that food and beverage firms in Kenya were characterized by competitive repertoire simplicity implying that they largely adopted a narrow range of similar competitive actions. Further this study concluded that this simplicity was beneficial to the performance of the firms to a large extent. The study noted that consistent with previous authors, competitive repertoire simplicity benefitted firms in highly uncertain environments like the food and beverage manufacturing industry in Kenya. The study further concluded that given the weak correlation between competitive repertoire and firm performance, the firms in this sector were more likely to benefit from competitive repertoire simplicity. Finally the study concluded that although competitive repertoire complexity was associated with superior performance from the resource based view and the information processing theory, this association is dependent on the prevailing environmental conditions.

The study recommended that managers in the food and beverage manufacturing sector adopt competitive repertoire simplicity in the light of the dynamic and highly uncertain environment. Further it recommended that scholars would benefit from considering the circumstances under which the information processing theory held. Consistent with the assertions by Lee (2012), the information processing theory does not explain reactive situations where managers may not have sufficient time to process information from the environment. This was evidenced by the finding that this theory did not hold in the food and beverage manufacturing context which is largely uncertain. Finally, this study recommended that scholars could extend this discussion by studying the long term consequences of competitive repertoire especially in highly dynamic environments to see if competitive repertoire simplicity continued to benefit the firm in the long term.

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