
Dynamic Capabilities and Organizational Agility of Manufacturing Firms in Port Harcourt, Nigeria

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Abstract: *This study examined the relationship between dynamic capabilities and organizational agility in manufacturing firms in Rivers State. The study adopted a cross-sectional survey of the quasi-experimental design. The population of study consists of seven (7) manufacturing firms that were systematically selected from the 31 firms registered under the Manufacturers Association of Nigeria Rivers State. Questionnaire were given to managers of these firms and hypotheses analyzed. Findings revealed that there is a significant relationship between dimensions of dynamic capabilities and measures of organizational agility. This study therefore recommended that organizational managers should endeavour to frequently scan the environment and devise means of embracing opportunities to gain competitive advantage.*

Keywords: *Dynamic Capability, Organizational Agility, Sensing Capability, Seizing Capability, Configuring Capability, Responsiveness and Flexibility*

Introduction

Organizations that function in an unpredicted environment face the inevitability of constant change (Breu, Hemingways & Strathem, 2001). In this situation, organizations that must maintain competitiveness should be agile and sensitive enough to react to market changes urgently (Lee, 2004, Weill et al; 2002). Firms that fail to be agile might find themselves losing market share and competitive advantage. The firms inability to react accordingly in a specific manner is because of the challenges in the business environment which cannot be controlled and predicted (Das, 1995). Organizational agility is an important and relevant concept for more organizations in today's competitive and fast-changing environment.

Organizational agility is the way firms quickly adjust in response to the variations in the market. Organizations that are agile give room for change by anticipating, initiating ideas, maximizing opportunities and still remain resilient. According to Tallon(2008), it takes organization with greater agility to survive in an unstable environment than organizations operating in less unstable environment. To achieve agility, organizations must be sensitive to the internal and environmental changes and utilize resources in a timely manner so as to react to the changes accordingly. Measures of organizational agility include responsiveness, flexibility, competency and speed (Sharifi & Zhang, 1999).

The capabilities of a manufacturing firm are a key determinant of performance and drive competitiveness overtime (Hayes et al; 1988). Kayode (1989) described all industries and particularly the manufacturing sector as key of any economy which it's importance cannot be

overlooked. The manufacturing firms are facing incredible and significant challenges resulting from the dynamic character of manufacturing itself, its market and environmental situations (Ahmad, Othman & Lazim, 2014). Dynamic capability is necessary in every organization as it allows them to manage changes in the environment and dispatch the right knowledge to people so that the goals of the organizations can be achieved (Quinn, 1999).

Dynamic capability is a core element for an organization to survive in the ever present dynamic environment (Rehman & Saeed, 2015). According to Teece (2007), sensing, seizing and configuring capabilities are the three (3) classification of dynamic capabilities.

Lots of research work have examined dynamic capabilities with various constructs but no intensive work has been done on dynamic capabilities and organizational agility in Nigeria. For this reason, the work seeks to cover up this gap in literature by examining the relationship between dynamic capabilities and organizational agility on manufacturing firms in Rivers State.

Statement of the Problem

The Nigerian manufacturing firm is faced with so many challenges such as low sales, high production, low capital utilization, poor power supply, lack of foreign exchange to source needed inputs and multiple taxation etc. (Adeoye & Elegunde, 2012). According to Manufacturing Association of Nigeria (MAN, 2002) other problems of the firm include substandard imported goods, high cost of funds, high import dependency, inappropriate policies, macro-economic inabilities, lack of transparent governance and weak capital base of manufacturing companies.

Manufacturing Association of Nigeria (MAN) has officially declared that of its 2000 members, 30 percent mostly small and medium enterprises have closed down, 60 percent are struggling to survive while 10 percent which are multinationals are operating at sustainable level. Between 2000 and 2016 more than 900 manufacturing companies shut down or temporarily suspended production. In 2008 and 2009, this sector contributed only 4.2 percent to the nation's GDP and 4.19 percent in 2010.

Objectives of the Study

- To examine the relationship between sensing capabilities and responsiveness.
- To examine the relation between sensing capabilities and flexibility.
- To examine the relationship between seizing capabilities and responsiveness.
- To examine the relationship between seizing capabilities and flexibility.
- To examine the relationship between configuring capabilities and responsiveness.
- To examine the relationship between configuring capabilities and flexibility.

Research Hypotheses

The following hypotheses have been formulated to serve as a guide to this study;

Ho₁: There is no significant relationship between sensing capabilities and responsiveness.

Ho₂: There is no significant relationship between sensing capabilities and flexibility.

Ho₃: There is no significant relationship between seizing capabilities and responsiveness.

Ho₄: There is no significant relationship between seizing capabilities and flexibility.

Ho₅: There is no significant relationship between configuring capabilities and responsiveness.

Ho₆: There is no significant relationship between configuring capabilities and flexibility.

Literature Review

Dynamic capabilities have its origin in the Resource – Based view which tends to study the relationship between the competitive advantage and the resources of the organization. The word was first used by Teece in 1990. It is believed that for a capability to be dynamic, it should be scarce, adaptive and cannot easily be copied by competitors (Barney 1991, Foss & Roberston, 2000). Capability is the role strategic manager plays in handling changes that comes from within the organizational adaptation. Dynamic capability shows how a firm is able to achieve new forms of competitive advantage given the market positions (Leonard – Barton, 1992). It is belief to be the transformation of firm resources and capabilities.

According to Zollo and Winter (2002), dynamic capability is a collective activity whereby organization gradually raises and changes its daily routines with the intention of improving effectiveness. Pavlou and El Sawy (2011), refer dynamic capabilities as those capabilities that help units extend, modify and reconfigure the existing operational capabilities into new ones that better match the changing environment. Helfat and Peteraf (2003) stressed that dynamic capability goes beyond changing firms valuable resources rather it should be rooted in the firm and be repeatable.

Sensing capability – Organizations have to consistently scan their environment for opportunities to be identified. It deals with how an organization gather usable data, transform it into information, interpret and analyze the urgency, causes and impact, and as such, anticipate or defect opportunities and threats in the business environment (Oosterhout, 2010). According to Eisenhardt & Martins (2000), sensing capability helps to ensure that organizations respond quickly to opportunities and threats. It enables firm acquire the required knowledge for the business environment (Gattiker et al, 2005).

Seizing capability – It focuses on the ability of a firm to set up on identified opportunities and threats (Teece, 2007). It can also be seen as a firm's strategy for decision making and ability to combine resources in order to miximize opportunities (Katkalo et al, 2010).

Reconfiguring capability – It is the organization's ability to match and manage service strategy and organizational design to achieve strategic fit. It is concerned with gaining and maintaining competitive advantage by improving, guilding organization's assets (Fischer et al, 2010). The competitive advantage largely depends on how well an organization strategically reconfigure and changes it's objectives very quickly (Hitt et al, (1998). The constant application of reconfiguring capability produces efficient responses to major changes in the environment (Zahra et al, 2006).

Organizational Agility

Agility refers to how a firm rapidly utilizes the available resources in responding to opportunities and threats. Sull (2009), defines organizational agility as “the ability to quickly sense and grab opportunities more than other competitors. Organizational agility helps to maintain competitive edge in turbulent environment (Barney & Arian,2001). It focuses on responsiveness and flexibility as it's main characteristics (Sharifi & Zhang, 2001). Yusuf et al, (2003) proposed that organizational agility is the successful application of responses such as speed, flexibility, innovation and quality by the means of the integration of configurable

resources and best practices of knowledge – rich environment to provide customer – driven products and services in a fast changing environment.

Responsiveness – It is the way of an organization to respond to its external environment in an appropriately (Clippinger, 1999). It is considered as the ability of an organization to detect the extra – organizational changes and to take measures to fit into the situation. According to Gresov et al, (1993), responsiveness is the aggressiveness of an organization’s marketplace strategy. Bray et al, (2007) refer to it as the organization’s ability to respond appropriately to mitigate negative threats or capitalize on positive opportunities generated by the organization’s environment. It also transforms the information gotten into action effectively (Haeckel, 1999).

Flexibility – It denotes the organizational capacity to respond to a turbulent environment through innovation development of product, service and processes based on a culture of learning and renewal (Lundvall, 1992). The concept of flexibility refers to the ability to adapt and change in response to what is happening to an organization. Flexibility can also be seen as how prompt a organization reacts to changes and using flexible information system to introduce innovation (Bran, 2015). Internal flexibility is the capacity of organizations to cope with the environment while external flexibility refers to the organizations capacity to influence the environment and thus reduce their vulnerability (Anosff & Brandenburg, 1971).

Relationship between Dynamic Capabilities and Organizational Agility

The agile based competence management research of Van Assen (2002) suggests that organizational agility is a dynamic capability to respond reactively or proactively to various demands from changing environment. Dynamic capabilities correspond to the definition of organizational agility as they are the abilities of business to exploit extrinsic signals in order to perform efficiently in volatile environment. Even though organizational agility does not stress the importance of continuity, it does have it in concept as agility is both short and long term aim of organizations.

Methodology

This research adopted a cross-sectional survey of the quasi-experimental design. The population of study consists of ten (10) registered and functional manufacturing firms in Port Harcourt according to the records of the Manufacturers Association of Nigeria (MAN). The firms were systematically selected and focusing on managers and supervisors, a total of 102 respondents were drawn. Questionnaires were administered to all the respondent of which eighty nine (89) were retrieved back for the study. A five – point Likert Scale ranging from Strongly Agree (SA) to Strongly Disagree (DA) was used to derive questions from each of the variables while Spearman Rank Correlation Coefficient was used to examine the relationship between the independent and dependent variable. The data was analyzed by the use of statistical package for social sciences (SPSS version 21.0).

List of Registered Manufacturing Firms in Port Harcourt, Rivers State

S/N	COMPANIES NAME	NO. OF MANAGERS
1	Dull fill Prima Food Limited	15
2	First Aluminum Nig. Limited	10
3	River Vegetable Oil Company	9

4	Nigerian Bottling Company	12
5	General Agro Industrial Limited	10
6	Air Liquid Nigeria Plc	8
7	Almarini	9
8	Crocodile Matchet Nig.	7
9	Eastern Bulkome Company	10
10	Nigerian Engineering Work Limited	12
		102

4. Results and Discussions

Responses gotten from the questionnaire were analyzed and results obtained are shown in the tables below:

Statistical Analysis for Hypothesis One

			Sensing Capability	Responsiveness
Spearman's rho	Sensing Capability Coefficient	Correlation	1.000	.740***
		Sig. (2-tailed)	.	.000
		N	85	85
	Responsiveness Coefficient	Correlation	.740**	1.000
		Sig. (2-tailed)	.000	.
		N	85	85

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

Hypothesis Two

			Sensing Capability	Flexibility
Spearman's rho	Sensing Capability Coefficient	Correlation	1.000	.810**
		Sig. (2-tailed)	.	.000
		N	85	85
	Flexibility Coefficient	Correlation	.810**	1.000
		Sig. (2-tailed)	.000	.
		N	85	85

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

Hypothesis Three

			Seizing Capability	Responsiveness
Spearman's	Seizing Capability	Correlation	1.000	.834***

rho	Coefficient		.000
	Sig. (2-tailed) N	.85	.85
	Responsiveness Coefficient	Correlation	.834**
	Sig. (2-tailed) N	.000 85	1.000 .85

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

Hypothesis Four

			Seizing Capability	Flexibility
Spearman's rho	Seizing Capability Coefficient	Correlation	1.000	.858**
	Sig. (2-tailed) N	.85	.000 85	.85
	Flexibility	Correlation Coefficient	.858**	1.000
		Sig. (2-tailed) N	.000 85	.85

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

Hypothesis Five

			Reconfiguration Capability	Responsiveness
Spearman's rho	Reconfiguration Capability Correlation Coefficient		1.000	.880**
	Sig. (2-tailed) N	.85	.000 85	.85
	Responsiveness Coefficient	Correlation	.880**	1.000
		Sig. (2-tailed) N	.000 85	.85

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

Hypothesis Six

			Reconfiguration Capability	Flexibility
Spearman's rho	Reconfiguration Capability Coefficient	Correlation	1.000	.877**
	Sig. (2-tailed) N	.85	.000 85	.85

	Flexibility Coefficient	Correlation	.877**	1.000
		Sig. (2-tailed)	.000	.
		N	85	85

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

Reliability Test

Variables	Number of cases	Number of items	Alpha
Sensing capability	15	3	.961
Seizing capability	15	3	.956
Reconfiguration capability	15	3	.973
Responsiveness	15	3	.952
Flexibility	15	3	.956

Table 1 above reveals a correlation coefficient ($r = 0.740$) between sensing and responsiveness to be strong and positive. The coefficient of determination ($r^2 = 0.55$) indicated that 55% of responsiveness ($r = 0.810$) between sensing and flexibility is strong and positive with a coefficient of determination ($r^2 = 0.66$) indicating that 66% of flexibility can be explained by sensing capability. Table 3 shows a correlation coefficient ($r = 0.834$) between seizing and responsiveness is positive. The coefficient of determination ($r^2 = 0.70$) indicating 70% of responsiveness that can be explained by sensing capability. For table 4, the correlation coefficient ($r = 0.858$) between seizing and flexibility is positive. The coefficient determination ($r^2 = 0.74$) indicating that 74% of flexibility can be explained by seizing capability. Table 5 shows a correlation coefficient ($r = 0.880$) between reconfiguration and responsiveness which is positive. The coefficient determination ($r^2 = 0.77$) indicating that 77% of responsiveness can be explained by reconfiguration capability. Table 6 shows a correlation coefficient ($r = 0.877$) between reconfiguration and flexibility which is positive. Coefficient determination ($r^2 = 0.77$) indicated that 77% of flexibility can be explained by reconfiguration capability.

Their significant values of ($P < 0.05$) reveal a significant relationship, based on that, all the null hypotheses are rejected. Therefore a significant relationship exist between the dimensions of dynamic capability and measures of organizational agility in the manufacturing firm in Rivers State.

In line with Eisenhardt and Martin (2000), organizations with strong sensing capability will be quick to respond to opportunities and threats. Having sensed the opportunities in the environment, the ‘respond’ component of agility offers more specific and actionable guideline for managers to decide and act in turbulence. Overby et al, (2006) affirm that sensing and responding capabilities enable organizations to effectively capture business opportunities by optimizing organizational resources. Sensing capability generates knowledge of the business environment, while responding capability transforms that knowledge into action effectively (Gattiker et al, 2005; Haeckel, 1999). According to Teece (2007), successful organizations that constantly seize opportunities, have a deeper comprehension of user needs and are able to respond to its environment in an appropriate manner. Zollo and Winter (1999) confirm that firms have to orient to customers at any given moment, strive for target that promote values and satisfy

customer demands and rely on environment seizing and response capabilities to dynamically adapt to complicated changes in the environment.

Frequent deployment of reconfiguring capability may also lead to more efficient responses to major changes in the market place; firms with little experience of deploying their reconfiguring capabilities will find altering their substantial capabilities more difficult, more costly and less effective (Zahra et al, 2006). Hitt et al (1998) affirms that the achievement of sustainable competitive advantage largely depends upon an organizations ability to reconfigure strategically and change its objectives very quickly.

Conclusion and Recommendations

Based on the findings, we conclude that proper application of dynamic capability in manufacturing firms can be used to achieve responsiveness and flexibility, thereby making organizations to become agile.

Based on the conclusion of this study, the followings are recommended:

- Organizations should ensure that they frequently scan the environment to enable them become responsive to the environment.
- Organizations should endeavour to devise means of embracing opportunities easily to gain competitive advantage.
- Organizational processes and procedures should be one that can be easily adjusted to cope with the business environment.
- Managers of manufacturing firms should always endeavour to know the choices and preferences of customers in order be ahead of competitors.

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