

IMPACT OF DYNAMIC CAPABILITIES ON SMALL AND MEDIUM ENTERPRISES PERFORMANCE IN A VOLATILE ENVIRONMENT

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ABSTRACT

In present times the concept of dynamic capabilities has gained center of debate as it has been considered one of the ways to deal with the changing environmental turbulence which eventually lead to decline of organizational performance and competitive advantage of small and medium enterprises.

In Sri Lanka especially in Batticaloa, the studies related to dynamic capabilities and organizational performance are rare and there is need to fill this empirical gap by investigating the influence of the dynamic capabilities of small and medium enterprises (SMEs) on organizational performance.

The main objective of the study is to examine the relationship between dynamic capabilities and organizational performance on SMEs in Manmunai North Divisional Secretariat in Batticaloa. To achieve this objective, the target population was considered as SMEs in Manmunai North Divisional Secretariat in Batticaloa District. Questionnaires were issued to a sample of 160 SME owners. Descriptive, Pearson's correlation and simple regression analysis were used to analyze the data.

The findings of this study revealed that the dynamic capabilities have a positive and significant relationship with organizational performance of SMEs. By addressing the findings of this study SME owners could try to improve the dynamic capabilities in their business which can lead the businesses in achieving competitive advantages.

Keywords: Dynamic Capabilities, Organizational Performance, Organizational Inertia, Small and Medium Enterprises

1. INTRODUCTION

In today's markets, there are so many environmental turbulences which the marketers are facing that arises from technological advances, changes in consumer demand, and new regulations (Helfat & Winter, 2011). These developments can impact on organizational performance and also cause a decline in the competitive advantages of the firms or to even become redundant. According to Zott (2003), some firms have the ability to deal better with environmental turbulence than others and that it is of interest to identify the factors that cause performance differentials when responding to environmental turbulence. In general, performance differentials have either been attributed to the industry or to the organization itself (Schmalensee, 1985). Dynamic capabilities are expected to be valuable for organizations when dealing with environmental turbulence (Teece, Pisano & Shuen, 1997). Researches have shown that dynamic capabilities have both direct and indirect effects on organizational performance: directly via dynamic capability costs and indirectly via the organizational resource base (Wilden, Gudergan, Nielsen & Lings, 2013). Productive process is affected by dynamic capabilities indirectly by integrating, reconfiguring, gaining, and releasing resources to respond to environmental turbulence or to create internal and external change (Eisenhardt & Martin, 2000).

Dynamic capabilities make organizations capable of innovativeness by planning out suitable measures and finding out their impacts on the accomplishment of organizational goals (Teece, Peteraf & Leih 2016). Studies have reflected that innovativeness possess the capability to change the strategies of small and medium enterprises in their invention, development, introduction and commercialization of innovative products. The main challenge for many organizations is the dynamic environmental context in which organization exists. Therefore, the organizational dynamism and uncertainty remain the major concern for organizational theorists for over the past three decades (Gerloff, Muir & Bodensteiner 1991).

The theory of dynamic capabilities states that companies expect innovation and renew resources and core competencies for use (Ramachandran, 2011). These are higher-level capabilities that are expanded, changed, changed and created resources for the fundamental role in the decision options in-order to increase performance (Eisenhardt and Martin, 2000; Winter, 2003). The literature shows a connection between market turbulence and competitiveness, intensity and environmental dynamics (Chmielewski and Paladino, 2007; Tallon, 2008). Firms should therefore search frequently and quickly opportunities or new business markets (sensing) (Zahra & George, 2002) and reconfigure their products, services and internal business process models in terms of changing customer behavior (Zahra & George, 2002). As no prior research has conclusively dealt with the consequences that dynamic capabilities have on organizational performance this paper's contribution lies in explaining more explicitly the intricacies of the dynamic capabilities – performance relationship.

2. LITERATURE REVIEW

Dynamic Capabilities and Organizational Performance

There is an accord with respect to the dynamic capabilities and their relationship with organizational performance. An increasing number of researches affirm that the connection between dynamic abilities and organizational performance is indirect. Dynamic capabilities empower an organization to achieve competitive advantage through creation, arrangement, and assurance of tangible and intangible resources which bolster predominant organizational performance (Teece, 2007). In order to reap the benefits of inter-organizational innovation and organizational performance, all parties involved must be in collaborative relationships. Collaboration and dynamic capabilities between partners enable superior innovation performance and greater competitive advantage for any business (Cheng, Chen & Huang, 2014). The explorative study by Zott (2003) analyzes how dynamic skills are related to different factors of organizational performance and suggests three performance-related attributes of dynamic capabilities-timing, costs and learning. The study shows that the point in time at which an organization changes or resource positions are reoriented is significant. The difference in organizational performance also depends on the costs associated with providing resources through imitation and experimentation. The ability to learn or to learn the speed of how to change is associated with superior performance.

The study by Pavlou and El Sawy (2011) reveals congruent facts with other scholars who are developing dynamic capabilities are positively related to operational skills and independent in terms of organizational performance. Pavlou and El Sawy (2011) measured the performance of new products in terms of product effectiveness (product quality and innovation) and process efficiency (time-to-market at low cost).

Drnevich and Kriauciunas (2010) have examined positive and negative contributions from dynamic capabilities for relative organizational performance. The impact of dynamic

capabilities was measured at two levels - process and organization level. The indicators in the process included productivity, business process performance and product quality and quality services affected by the use of IT and the associated organizational changes. The indicator at the organizational level was defined as profitability compared to the industry average. The analysis supports the suggestion that heterogeneity of dynamic skills makes a positive contribution to relative organization performance. It has been demonstrated that the heterogeneity of dynamic capabilities has a positive effect on the organization performance at the process level, but not at the organizational level. These results showed that the dynamic capabilities were influenced organize products, customers, and processes to deliver a positive contribution at the process level and negatively impact the organization's profitability.

Results from Zott (2003) and Drnevich and Kriauciunas (2011) support the prevailing dynamic capability perspective that dynamic capabilities are the levers for gaining competitive advantage and achieving superior organizational performance. Dynamic capabilities must be managed and deployed conscious to lead to superior organizational performance. Researches by Proeller, Kroll, Krause and Vogel (2014) have shown that strong dynamic skills have a mediating effect organizational performance - Strategic management has a positive impact on organizational performance if the organization has previously developed dynamic skills. The study by Pavlou and El Sawy (2011) reveals congruent facts with other scholars who are developing dynamic capabilities are positively related to operational skills and independent in terms of organizational performance.

It is also essential to consider of one as part of dynamic capabilities construct - the significance of every constituent pointer of dynamic capabilities (sensing, seizing, and reconfiguring) might differ over time. The relationship of these indicators to organizational performance may also be different. Harris, Fletcher and Mahnke (2012) found that the sensing and seizing skills were most important during market entry, commercialization and the growth phase of the new venture and in the process of internationalization. However, the dynamic capability component indicators, although interdependent and non-discrete, may overlap and be combined in various stages of organizational development to improve organization performance. The use of dynamic capabilities to leverage their potential should be understood as a series of actions at various levels of governance.

According to the study of Nedzinskas (2013), highlight the positive relationship between dynamic capabilities and organizational performance. As the concept of dynamic capabilities has become a key driver of sustainable competitive advantage, this study argues that dynamic capabilities have a direct or indirect positive relationship to business performance. In addition, Nyachanchu's (2017) work proves that the three dimensions of dynamic capabilities, such as sensing, seizing and reconfiguring have a positive correlation with organizational performance. Scholars such as Banerjee (2018) and Wilden, Gudergan, Nielsen and Lings (2013) have also found that dynamic capabilities have a positive impact on firm's performance.

Considering the causal relationship between dynamic skills and organizational performance, the following hypotheses are formulated:

H₁: Dynamic Capabilities have significant impact on Organizational Performance

H_{1A}: Sensing (as an indicator of Dynamic Capabilities) have significant impact on Organizational Performance

H_{1B}: Seizing (as an indicator of Dynamic Capabilities) have positive impact on Organizational Performance

H_{1C}: Reconfiguring (as an indicator of Dynamic Capabilities) have positive impact on Organizational Performance

3. CONCEPTUAL FRAMEWORK

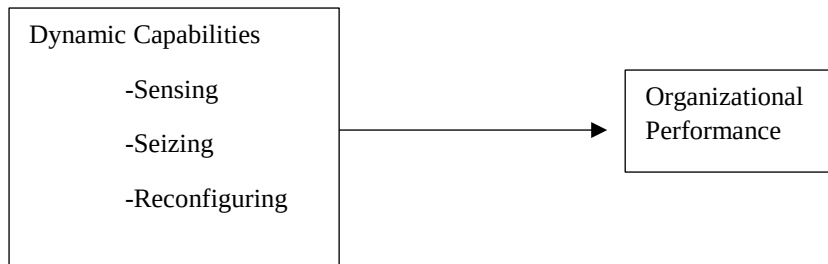


Figure 1: Conceptual Framework

(Source: Nedzinskas, Pundzienė, Buožiūtė & Pilkienė, 2013).

This study conceptualizes the following frame work in relation to the relationship between the dynamic capabilities and organizational performance. The effect of dynamic capabilities on relative organizational performance is illustrated in the figure above. Teece (2007) proposed dynamic capabilities disaggregation rationales for expository purposes: 1) the capacity to sense and shape opportunities, 2) to seize opportunities, and 3) to maintain competitiveness through enhancing, combining, protecting, and reconfiguring business enterprise intangible and tangible assets. According to the figure 3.1, the research conceptual model assumes the relationship between dynamic capabilities (independent variable) and organization performance (dependent variables).

Theories to Underpin Conceptual Model of the Study

Resource Based View Theory

The resource-based view (RBV) addresses the accumulation of valuable, rare, inimitable, and non-substitutable resources (VRIN) as the basis for enterprise competitiveness and also suggests that value and scarce resources are related to competitive advantage (Barney, 1986) and this competitive advantage is related to performance (Newbert, 2008).

Using the approach of Teece, Pisano and Shuen (1997), this investigation defines firm dynamic capabilities as the capabilities of a firm to integrate, learn and reconfigure internal and external resources. VRIN resources as Barney (1986) suggests, are main components of firm competitiveness and recent studies of the mediating effect of dynamic capabilities further underline their importance. Wu (2007) shows that dynamic capabilities can act as mediating variables between resources and performance. Dynamic capabilities thus are considered a transformer for converting resources into enhanced performance. Because of the characteristics of VRIN resources, the dynamic capabilities can effectively extract the competitive combinations from them to improve firm performance (Lin & Wu, 2014).

4. RESEARCH METHODOLOGY

This research included quantitative study. The aim of the quantitative study is to identify the impact of dynamic capabilities on organizational performance. The quantitative part of this research focuses on the use of formalized questions in surveys, the quantitative methods focus on the objective measurement and the statistical, mathematical or numerical analysis of the data collected through structured questionnaires.

Sample and Data Collection

The target respondents of the study are SMEs selected from Manmunai North Divisional Secretariat in Batticaloa District. As a sample for the quantitative study, 160 SMEs are selected on the basis of the convenience sampling method.

Data Analysis

The primary data were collected through closed structure questionnaire. For the purpose of the quantitative analysis, self-fulfillment questionnaires with 31 questions were handed out to 160 SME owners at the Manmunai North Divisional secretariat in the Batticaloa district. Here the collected data from the questionnaires were analyzed and evaluated by using the Statistical Package for Social Science (SPSS 22.0 version).

In this research to find what relationship exist among dynamic capabilities and organizational performance, the regression analysis was applied. This could be explained through the following equation.

$$\text{Simple Regression } \{Y=a + bx\} \text{ (1)}$$

where,

Y=Dependent variable

b=Slope of the equation

a=Y intercept of the equation

x=Independent variable

5. RESULTS AND FINDINGS

From the demographic profile of the respondents, the highest number of SMEs were aged between 1 to 5 years, forming 59% of the respondents. This meant that most of the SMEs were relatively young. It was also observed that 95.6% of the SME's employed only 1-5 number of employees in their firms.

Reliability test was carried out to ensure the study achieved accurate representation of the total population under study (Joppe, 2000; Golafshani, 2003). The Table shows Cronbach's alpha reliability coefficients for the variables. The Cronbach alpha coefficients were: - Sensing capabilities (0.743), Seizing capabilities (0.8) and Reconfiguration capabilities (0.755). The Cronbach's alpha coefficient for organizational performance (dependent) variable was 0.681. Therefore, apart from Organizational Performance, the other variables had coefficients about or above 0.700. This was in harmony with Henson (2001) and Hair, Black, Babin, Anderson and Tatham (2006). The coefficient for Organizational Performance variable was also above the recommended 0.60 cutoff (Sekaran, 2003; Hair et al, 2006; Garson, 2012). s

Table 1:Cronbach's Alpha Reliability Test

Construct	Dimension	Count of Measures	Cronbach's alpha Coeff.
Organizational Performance	Organizational Performance	7	0.681
Dynamic Capabilities	Sensing Capabilities	8	0.743
	Seizing Capabilities	9	0.8
	Reconfiguration Capabilities	2	0.755

(Source: Study data).

Descriptive analysis of the study variables showed organizational performance had a mean score of 4.33 and standard deviation of 0.347. Sensing capabilities had a mean score of 4.51 and standard deviation of 0.391. Seizing capabilities had a mean score of 4.55 and standard deviation of 0.290. Reconfiguration capabilities had a mean score of 4.87 and standard deviation of 0.307. These details are captured on Table 2.

Table 2: Descriptive Statistics

Variable	Mean	Std.Dev
Firm Performance	4.33	0.347
Sensing Capabilities	4.51	0.391
Seizing Capabilities	4.55	0.290
Reconfiguration Capabilities	4.87	0.307

(Source: Study data).

A correlation test of variables revealed that there was positive correlation between organizational performance and the three dimensions of dynamic capabilities - sensing capabilities (0.644, $P<0.01$), seizing capabilities (0.738, $P<0.01$) and reconfiguration capabilities (0.413, $P<0.01$). The correlation between sensing capabilities and seizing capabilities was 0.710, $P<0.01$. It was 0.819, $P<0.01$ between sensing capabilities and reconfiguration capabilities. These values fell within acceptable threshold for independent variables (Berry et al., 2006). These results are on Table 3.

Table 3: Correlations of Variables

	1OP	2 SE	3 SI	4 RC
Organizational Performance	1			
Sensing Capabilities	0.644**	1		
Seizing Capabilities	0.738**	0.710**	1	
Reconfiguration Capabilities	0.492**	0.819**	0.710**	1

Pearson Correlation (2-tailed). Significance * $P<0.05$; ** $P<0.01$.

(Source: Study data).

Regression analysis revealed that all the three variables - sensing capabilities ($B=0.422$, $P<0.01$), seizing capabilities ($B=0.791$, $P<0.01$) and reconfiguration capabilities ($B=0.392$,

P<0.001); had significant influence on organizational performance. The regression results were used to test the following three hypotheses: - H0i: There was no significant effect of sensing capabilities on organizational performance, H0ii: There was no significant influence of seizing capabilities on organizational performance and H0iii: Reconfiguration capabilities had no significant effect on organizational performance. The coefficient for sensing capabilities (B=0.422) was significant (P<0.01) and therefore the first null hypothesis (H0i) was rejected and it was concluded that sensing capabilities had significant effect on organizational performance. The coefficient for seizing capabilities was B=0.791, P<0.01 and the null hypothesis (H0ii) was also rejected and a conclusion reached that seizing capabilities had significant effect on organizational performance. Reconfiguration capabilities' coefficient of B=0.392, P<0.001 led to rejection of H0iii and conclusion that this variable had significant effect on organizational performance. The detailed regression results are indicated in Table 4.

Table 4:Regression results on Firm Performance

	Unstd B Coefficients	Std. Error	Std Beta Coefficients	t	Sig.Val
Constant	0.739	0.295		2.505	0.013
Sensing Capabilities	0.422	0.081	0.474	5.185	0.000
Seizing Capabilities	0.791	0.089	0.662	8.874	0.000
Reconfiguration Capabilities	0.392	0.098	0.366	4.002	0.000
R	0.783				
R ²	0.613				
Adj. R ²	0.606				

Notes: Significance *P<0.05, **P<0.01, ***P<0.001. Dependent Variable: Organizational Performance. Unstd: Unstandardized coefficients. Std: Standardized coefficients. SE: Sensing Capabilities. SI: Seizing Capabilities. RC: Reconfiguration Capabilities.

(Source: Study data).

6. CONCLUSIONS

The existing literature on dynamic capabilities consists mainly of conceptual and theoretical discussions. Considering that the predictors of organizational performance have remained largely conceptual, this study was an attempt to test the concept in an empirical environment. The study was based on linking organizational performance to sensing, seizing, and reconfiguration capabilities.

The hypothesis test results showed that the sensing was a predictor of organizational performance. This result coincides with results of Osisioma, Nzewi and Mgbemena (2016), Li and Liu (2014), Woldesenbet, Ram and Jones (2012), Karagouni, Protogerou and Caloghirou (2012) and Wu (2010). The study found that seizing predicts the organizational performance which is consistent with the study of Pandza and Holt (2007).

It was also observed that reconfiguration capabilities had a significant impact on organizational performance, which was confirmed by a previous study conducted on Indian SMEs (Batra, Sharma, Dixit and Vohra, 2015). This also supported the findings of Cao (2011),

which was directed at international retailers in China to design, exploit, and reconfigure opportunities and threats.

In-addition this study results coincide with the studies done by Wilden, Gudergan, Nielsen and Lings (2013), who identifies that dynamic capabilities positively influence firm performance and also improve inter-firm performance. Also, the work of Wilden, Gudergan, and Lings (2007) has been shown that dynamic capabilities have both direct and indirect effects on organizational performance: directly via dynamic capability costs and indirectly via the organizational resource base. In addition to this the work of Nyachanchu (2017) also proves that the three dimensions of dynamic capabilities such as sensing, seizing and reconfiguring has a positive relationship with the firm performance with the correlation coefficients of sensing capabilities 0.394**, seizing capabilities 0.360** and reconfiguration capabilities 0.413**. Banerjee (2018) in his work has mentioned that the dynamic capabilities are important to businesses to meet the challenging external environment businesses create for themselves, is a basis for organizational performance and has a substantial relation to it.

The study results provide insight into the degree of change in organizational performance when using sensing, seizing and reconfiguration capabilities. In addition, this study has useful managerial implications. It's worth to note that dynamic capabilities have significant impact SMEs organizational performance in a volatile environment which will help the SME owners to develop and enhance strategies to boost dynamic capabilities which will induce the performance.

From the above research results it can be found that the SMEs though they possess high level of dynamic capabilities which can induce the organizational performance. So, the recommendations of this study states that dynamic capabilities of the organization have to be induced. The dynamic capabilities can be increased by improving the organizational learning. The organizational learning can increase the intangible resources like human capital structural capital and this will improve the dynamic capabilities and enhances the performance as well. The businesses can also attempt to build on and expand the dynamic capability of learning through experimenting by incremental steps based on the development of strong trusting relationships. Businesses can also be supportive to create a secure environment and encourage all individuals within the organization to take personal initiative in terms of continually developing new and innovative ways to deliver services.

Limitations and Direction for Future Studies

The research is limited only to the context of SMEs. This will only give the results generalized on that particular context. Another limitation is that the cross-sectional design of this study. Here the data were collected only at the one single point of time therefore no conclusion can be taken about causal relations.

The study of longitudinal dynamic capabilities would allow us to understand which part of the dynamic capabilities indicator and why it is more or less important for the performance of a sustainable organization at various organizational development or maturity stages.

This study requires a wider choice of organizations as we have controlled and addressed SMEs. Larger organizations, multinational corporations, public sector institutions or start-up companies may convey a relatively different level of dynamic capabilities, organizational performance.

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