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The impact of dynamic capabilities on firm perceived marketing performance of small and medium sized enterprises

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Abstract

Today companies operating in emerging markets face with certain problems especially in turbulence, complex and changeable environment. There are compelling Political, Environment, Social, Technology, Economical and Legal factors forcing companies to adapt to complex and changeable environments. Despite all these challenges, companies should adapt changeable environment and develop strategies to deal with rapidly changing conditions in order to sustain growth. This can be achieved with the help of using their dynamic capabilities helping them remain competitive in the long term. The purpose of this study is to explore the impact of dynamic capabilities on companies' perceived market performance. The data was collected through a quantitative field research in SME companies operating the Aegean region, west of Turkey. Interviews were conducted with 198 managers of the companies. Especially those managers working in R&D, marketing, production departments were targeted. Key issues such as dynamic capabilities of companies and the market performance of firms were examined based on two questionnaires. SPSS 21 and Amos 16.0 were used for statistical analyses. Multiple regression analysis was used to investigate the impact of dynamic capabilities on companies' perceived market performance. The results of the study indicate that companies' perceived marketing performance depends on dynamic capabilities. The empirical findings suggest that dynamic capabilities have a positive effect on operational capabilities which in turn have a significant effect on the performance of the firms. Companies can sustain growth by using their dynamic capabilities while making certain strategic changes to improve their performance.

Keywords: Dynamic capabilities; core competences; perceived marketing performance.

Introduction

In this article, we first discuss the core competences and dynamic capabilities and then review the literature on how dynamic capabilities relate to the performance of firms. The following section is

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about the marketing performance of firms. The final section discusses dynamic capabilities and their impact on perceived marketing performance of enterprises.

To begin with, it is important to define core competences and dynamic capabilities of the firms. Companies are like living creatures as they are born, mature and die while also having some abilities such as adapting to a new situation, having their own capacities and individual abilities, and reacting to changes. Companies have core competences. In their life course, companies have to survive both by challenging and adapting to economic, political, social and environmental changes and on the way they develop their core competences in a competitive environment.

Core competence can be defined in many ways but, it is generally defined as the characteristic knowledge of a specialized skill that enable the organization to grow their performance and achieve the highest possible level of customer satisfaction compared to competitors, through the integration of technology, processes and resources in one or more of the activities and management of the links between these activities (Harrison and John, 2013; Macmillan and Tompo; 2000; Scholes and Johnson, 2002; Hamel and Heene, 1994; Hitt, 2001). Tampoe (1994) defines core competence as a technical and management system which adds value to company by using technologies, processes, sources and competitive advantages. It is also defined as the experimental results which confirm the superiority of competitive performance (Besler and Sezerel, 2012).

In order to survive through and overcome the competition, are core competences enough for companies? It is certain that in order to survive, companies have core competences related to production, service, marketing, and so on. In this uncertain, unpredictable, dynamic and changeable environment, companies should make their core competences more dynamic. All competences should be dynamic like a muscle which should be fed and exercised. Building these abilities requires investment and focus which takes many years but failure limits the future (Greaver, 1999). Companies may not survive in this dynamic environment by only using their core competences. Therefore, companies should feed, exercise and keep these core competences dynamic.

Dynamic, in this context, can be defined as companies' ability to change their capacity by keeping their core competences against changeable technology and environment, while capability is defined as companies' using their both internal and external abilities to manage in changeable technology and environment (Teece et.al.,

1997). In particular, the dynamic capability refers to "the firm's ability to integrate, build and reconfigure internal and external competencies to address rapidly changing environments" (Teece, Pisano and Shuen, 1997).

What are the differences between Core Competencies and Dynamic Capabilities?

Core competencies and dynamic capabilities of a company have both common and different features which are seen on the Table 1 below.

Table 1: Core Competencies and Dynamic Capabilities Features

Core Competences	**Dynamic Capabilities**	**Core Competencies and Dynamic Capabilities**
Static	Dynamic	Can not be marketed
Routine,protect enterprises' abilities	Abilities to adapt the change and time	Flexible
Learnt collectively	Learnt in a new situation	Long-Short term
The main power a enterprise has	The correct usage of the main power of an enterprise	The information necessary for business goals
They use resources and assets in a specific strategy	They are used by rearranging the resources and assets according to the environment and technology	Take a basic role in the decision making process
Can be duplicated, imitated, reproduced by competitors	Cannot be duplicated, imitated, reproduced by competitors	Customer benefits
Strategy to protect existing abilities	Strategy to improve existing capabilities	Provide competitive advantages
Routines related to operational functions	Ability to change company routines	Goal is to sustain an enterprise
Mostly directed by Top Level Managers	It takes place in line with the ideas of R & D, Marketing, Production department together with Top Level Managers	Intend to increase the Business Performance
Resistance to changes	Adaptation to changes	Sustainability through changes
Learnt slowly and take time	Learnt quickly	Learnt
Focus on basic production	Focus on agile production	Production maximization
Coordination	Learning	Integration

Literature Review

There are many studies on the impacts of dynamic capabilities on firm performance. While dynamic capabilities research has uncovered the characteristics of resources and capabilities and the market conditions that permit sustainable competitive advantages (Teece, Pisano and Shuen, 1997.), we have met with only limited researches in which dimensions of dynamic capabilities affect firms' marketing performance in literature. In this paper, we attempt to address this gap in dynamic capability literature by conceptually and analytically linking three dynamic dimensions (sensing, seizing, and configuration) with firm performance.

The basic premise adapted in this paper is that dynamic capabilities are indirectly linked with firm marketing performance. While Teece (1997, 2007) states that the main reason for company to reach success or to fail is to have dynamic capabilities or not, Eisenhardt and Martin (2000) state these capabilities provide competitive advantage by themselves, in other words, for being not imitated and transferred by competitors dynamic capabilities provide competitive advantage, but they can not have competitive advantage because competitors can independently develop these in different ways and have similar dynamic abilities.

In literature there are many researches on dynamic capabilities and numerous ones on company performance. For example, Malliari, L., and Sirkeci, I. (2017) studied on firms' performance of direct mail in building customer loyalty, Rozhkov, M., Cheung, B. C., & Tsui, E. (2017) studied on the effect of workplace context on competencies and performance. Moreover, Odening, M., Wagner, C., Narayana, R., & Huettel, S. (2013) searched the dynamic efficiency under uncertainty. Sharabati, A. A. A., Shamari, N. S., Nour, A. N. I., Durra, A. B. I., & Moghrabi, K. M. (2016) studied on the impact of intellectual capital on business performance while Attia, A. M. (2016) studied on the effect of quality management practices on the company's performance. Bianchi, C., Cosenz, F., & Marinković, M. (2015) try to show shows how to design a Dynamic Performance Management approach to assess SMEs competitiveness. Girod, S. J., & Whittington, R. (2017) studied on financial performance consequences of organizational restructurings and organizational reconfigurations, and Sako, M., & Chondrakis, G. (2017) implications for firm boundaries and organizational design in the context of dynamic capabilities. However, there is a gap in literature to explain the link between dynamic capabilities and firms' perceived marketing performance.

Firms are aware of necessity of monitoring and understanding their performance competing in continuously changing environments (Taticchi et al., 2010). Measurement is an important element to improve business performance (Sharma et al., 2005). A performance measurement and management system (PMS) is a dynamic system which enables support of decision-making processes by gathering and analyzing information (Neely et al., 2002).

Helfat et.al., (2007) identify the quality, cost, market demand, and competition as four intial influences of dynamic capabilities which affect firm performances (Figure 1) and Zott (2003) also states that there is a relation between dynamic capabilities and firm performance and he summarizes it in the Figure 2.

Figure 1. Dynamic capabilities: processes and performance yardsticks (*Source: Helfat et.al. (2007)*

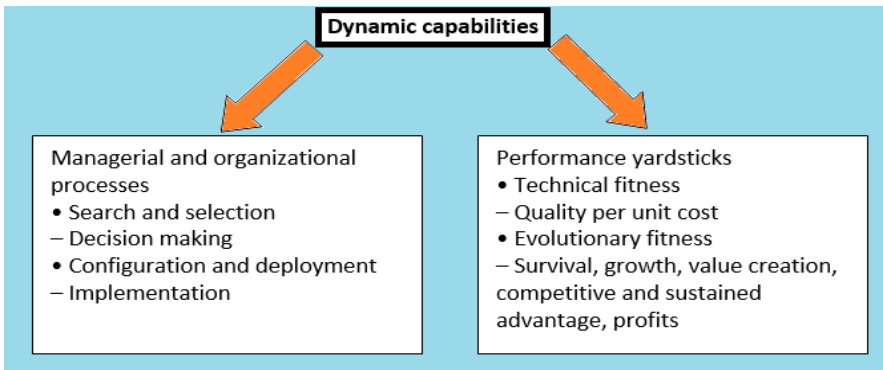
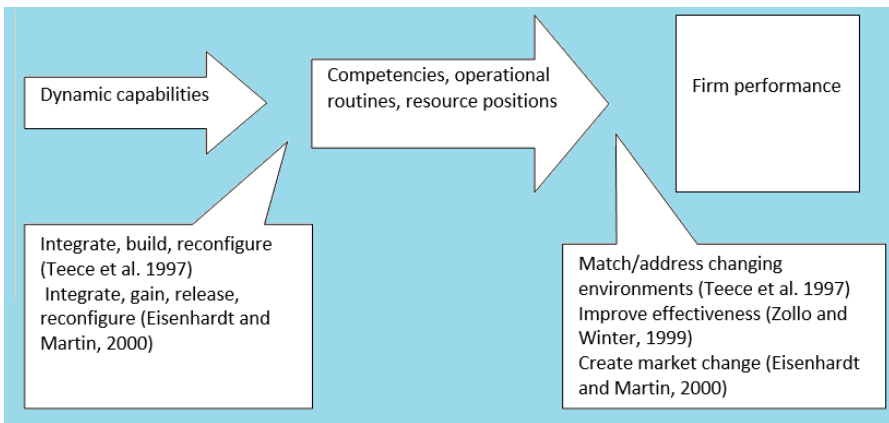


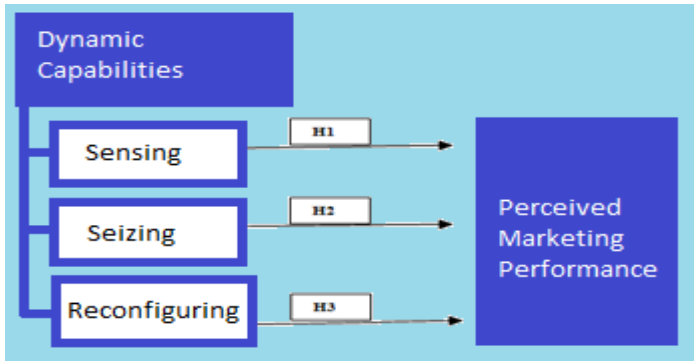
Figure 2. Emerging consensus regarding dynamic capabilities and their link to firm performance (Source: Zott, C. 2003)



Data and Methodology

Dynamic capabilities create new capabilities for companies (Kogut and Zander, 1992), provide with activities (Porter, 1994), acquisition integration processes (Zollo and Singh 1998) and shape a firm's resource positions (Eisenhardt and Martin, 2000). The two figures above show that there is a relation between dynamic capabilities and firm performance. However, the impact of dimensions of dynamic capabilities on firms' perceived marketing performance was partly observed in literature review. This chain of causality demonstrates a link between dynamic capability and firms' marketing performance (Figure 3 shows our research model).

Figure 3. The Model that Shows the Dimensions of Dynamic Capabilities' Impact on Firms' Perceived Marketing Performance



Sample Selection and Data Collection

This research is a descriptive study which also offers practical insights. The sample of this quantitative research includes the SMEs companies operating in the Aegean region, west of Turkey. The data included in the sample were gathered from interviews with 198 managers, particularly with managers working in R&D, marketing, production departments of the companies.

Dynamic Capabilities Scale

The data were gathered by two questionnaires. The first questionnaire that measures Dynamic Capabilities was created by Teece (2007) and later was developed by MacInerney-May (2012). It consists of 14 questions and measures a firm's dynamic capabilities in three dimensions. MacInerney-May (2012) confirmed that dynamic capabilities have three factors (sensing, seizing, and configuration). In the present study, the reliability coefficient of the scale was figured as 0.94. The scale was prepared with likert scale form 1 to 5 (1= disagree,

5=totally agree). The results of the confirmatory factor analysis for the scale were seen on Table 3.
The second questionnaire measuring a firm perceived marketing performance developed by Xiao, L. (2007) was used to gather data. It consists of 4 questions. In the present study, the reliability coefficient of the scale was figured as 0.88. The scale was prepared with a 5-point likert scale (1=disagree, 5=Totally agree). The results of the confirmatory factor analysis for the scale were seen on Table 3, too.

The Measurement of Variables

Independent Variables

The Dimensions of Dynamic capabilities

We can define dynamic capabilities as a higher-order capability, raising firms' performance by effectively responding to customers' demands and needs. Especially sensing dimension, as being one of the dynamic capabilities, facilitates integrating and assembling resources (Sambamurthy et al., 2003). Therefore, the next hypothesis is formulated as:

H1*: Sensing has a positive influence on perceived marketing performance.*

As Sherehiy et.al, (2007) state a dynamic organization should keep staying competitive and improving its performance. How can gathering data be useful to seize opportunities and threats, to learn from new knowledge, and respond to unpredictable events in the both internal and external environment? How does seizing, one of dimension of dynamic capabilities, affect firms' marketing performance? Therefore, the next hypothesis is formulated as:

H2: Seizing has a positive influence on the performance of a firm.

Dynamic capabilities have been a prevailing topic for academic research for years but how can a firm be successful in the unpredictable, dynamic, and changing environment where the firms operate today? (Sherehiy, Karwowski, & Layer, 2007). By reconfiguring their dynamic capabilities the firms can be successful in marketing performance. Therefore, the next hypothesis is expected as:

H3: Reconfiguring has a positive influence on the performance of a firm.

Dependent Variables

Firms' perceived marketing performance

Data Analysis

The data were analyzed with descriptive and frequency analyses in the process of testing research questions mentioned above. Kolmogorov-Smirnov analysis was used to test data for the normal distribution. The reliability of both scales and sub-dimensions was calculated with Cronbach alpha reliability coefficients. The Pearson Correlation analysis was used to see the relationship between the independent variables (Sensing, Seizing, and Reconfiguring) and dependent variable (Firm perceived marketing performance). A Regression Analysis was applied to determine the impact of the independent variables on the dependent one. For confirmatory factor analyses, AMOS 16.0 program was used to see the validity of the scales.

Validity and Reliability Analysis

Before the analysis of data is carried out, it must be confirmed that the constructs are valid and reliable. To identify the validity of a construct, a factor analysis is carried out. The Cronbach's alpha is an indicator for the reliability of a construct when the Cronbach's alpha coefficient is at least .70 in order to be acceptable for reliability (Hair et al., 1995), the values calculated for each variable are shown below.

Table 2: Variables Cronbach's Alpha Coefficient

Variables	**Cronbach's AlphaCoefficient**
Dynamic Capabilities	0.937
Perceived Market Performance	0.883

All variables are more than 0.70, so it can be confirmed that all variables are reliable.

Table 3: Results of CFA

	Dynamic Capabilities	Perceived Market Performance
χ^2 / DF	2.254	1.853
GFI	0.896	0.990
AGFI	0.853	0.951
NFI	0.897	0.991
CFI	0.939	0.996
IFI	0.940	0.996
RMSEA	0.08	0.066
RMR	0.035	0.012

Table 3 shows the values of χ2 / DF, GFI, AGFI, NFI, CFI, IFI, RMSEA and RMR for model fit.

Table 4: The descriptive statistics of the participants

Demographic variables	Category	Number (N)	Percentage
Gender	Male	143	%72
	Female	55	%28
Age	26-35	74	%37
	36-45	67	%34
	46 years and over	29	%15
Education	Primary School	53	%14
	High School	47	%24
	Associate Degree	39	%20
	Undergraduate	80	%40
	Master and Doctorate	18	%9
Job Position	CEO	51	%26
	Marketing manager	29	%15
	Production manager	35	%18
	R&D manager	6	%13
	Others (specialist, department chief, team leader)	77	%39
Sector	Industry	87	%44
	Service	39	%20
	Agriculture	25	%13
	Others	47	%24
Monthly income	0-750 TL	188	%51
	751-1500 TL	141	%38
	1501 TL and over	42	%11
Number of employees in the firm	49 or less	69	%35
	50-149	65	%33
	150-249	23	%12
	250-349	7	%4
	350 and over	34	%17
Marketing type	National	95	%48
	International	103	%52

A research model was developed to decide the relationship between the variables of data analysis. Dynamic capabilities dimensions were considered as independent variables, and perceived marketing performance was evaluated as dependent variable within the model. When the compliance indices of the confirmatory factor analysis in Table 3 are examined, it is seen that the values of the firms' perceived performance scale show good adaptation and the values of dynamic capabilities and perceived marketing performance

scales are within acceptable adaptation values. As a result, the values obtained show that the scales are validated and acceptable. The descriptive statistics of the participants are seen in Table 4.

Results

The average score of dynamic capabilities of the sampling in the research is shown in Table 5.

Table 5: The average score of dynamic capabilities

Variable	Minimum	Maximum	Average	SD
Sensing	2,29	5,00	3,9401	,65570
Seizing	1,33	5,00	3,9781	,73781
Configuration	2,00	5,00	3,9141	,80934

Pearson Correlations were calculated in order to find the relationships between the independent variables (Sensing, Seizing, Reconfiguring) and dependent variable (Firm perceived marketing performance) in the research (Table 6). As seen in Table 6, all dimensions have significant relations with each other.

Table 6: Correlation Findings

Variable	1	2	3	4
1. Sensing	**1**			
2. Seizing	0.787**	**1**		
3. Configuration	0.723**	0.683**	**1**	
4. Perceived marketing performance	0.579**	0.502**	0.509**	**1**

N=198, (*) p <.05 (**) p<.01

Regression Analysis Findings

For the data analysis, the study reported here adapts the three fold classification of company-level dynamic capabilities proposed by Teece (2007). Dynamic capabilities have three dimensions that measure an organizational dynamic ability proposed by Teece (2007), too. They are sensing, seizing, and configuration. We gather data from the questionnaires measuring firms' dynamic capabilities with the questions about firms' sensing, seizing, configuring abilities and firm perceived marketing performance.

A regression analysis was used to show the direct relations between the variables, and the explanatory power of the independent variables (Sensing, Seizing, Reconfiguring) and dependent one (Firm

perceived marketing performance). After confirming the construct validity of the scales by applying confirmatory factor analysis of the variables test, the research finds out the effect of dimensions of dynamic capabilities on perceived marketing performance.

Dimensions of dynamic capabilities (sensing, seizing, configuration) variables included in the analysis in the first phase predict the perceived marketing performance. The dimensions of dynamic capabilities (sensing, seizing and reconfiguring) explain 35% of the total variance (F=35.429, p<.001, p<.005 (Table 7). We find that dynamic capabilities have a significant positive effect on firms' perceived performance.

According to this finding;

Hypothesis 1 (sensing predicts perceived marketing performance) is supported,

Hypothesis 2 (seizing predicts perceived marketing performance) is also supported,

Hypothesis 3 (configuration predicts perceived marketing performance) is supported, too.

Table 7: Estimation Results for the Model

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,096	,277		3,956	,000
	sensing	,470	,121	,398	3,879	,000
	seizing	,072	,102	,069	,710	,047
	reconfiguring	,167	,083	,174	2,013	,045
R^2 = 0.354 F = 35.429 p = 0.000						
a. Predictor: (Constant), sensing,seizing, configurating						
b. Dependent Variable: perceived marketing performance						

Conclusion

In our study, we try to explain the relationship between dynamic capabilities and their effect on firms' perceived market performance. Data was gathered from interviews with 198 managers from SMEs companies operating in the Aegean region, west of Turkey. Multiple regression analysis was applied to analyze the effect of dimensions of dynamic capabilities (sensing, seizing and configuration). The results of the study indicate that enterprises' perceived marketing performance depends on dynamic capabilities.

General industrial structure is uncertain and uncertain possibilities are not modeled because it may not be possible to specify future potential situations in advance (Eisenhardt and Martin, 2000). In such uncertain and dynamic market places, it can be difficult for the companies to keep up with its routine skills and maintain their sustainability. So especially for the leaders and managers, it is important to revise the existing knowledge in these environments and to constantly innovate and sense these uncertainties that may develop. After sensing and learning these new situations, the leaders and managers may adapt them to company easily by using their knowledge. If they succeed it, namely if they can use their dynamic capabilities, the company can cope with the environmental changes and have competitive advantages.

In the new world of work, the response to change depends on dealing with the uncertainty and risk situations adequately (Dove, 2001). These dynamics can offer new opportunities to businesses and cause new threats. Thus, enterprises need to closely monitor these economic dynamics, whether they are opportunities or threats, and integrate them into their operations, and revaluating them. As we pointed out above, today's highly dynamic environments require companies to act quickly and adequately in responding to changes in dynamic and changeable environments. In order to do so, companies should be more agile. Companies should not only aim to use their core competences in a particular area but focus on how to make them more dynamic.

In this research, we analyze the dimensions of dynamic capabilities (sensing, seizing, and configuration) as independent variables which affect the perceived marketing performance.

Hypothesis 1: Sensing has a positive effect on perceived marketing performance. It is supported as seen on Table 7.

Hypothesis 1: Seizing has a positive effect on perceived marketing performance. It is supported as seen on Table 7.

Hypothesis 1: Configuration has a positive effect on perceived marketing performance. It is supported as seen on Table 7.

Suggestions for Future Studies

The current research analyzes the dynamic capabilities and the effect of them and their impacts on firms' perceived marketing performance. This study was carried out with the mangers in the SMEs. Future studies can examine dynamic capabilities using different variables and features. In addition, further studies which deal with

both the dynamic capabilities and performance may ensure more satisfactory results.

When the related literature is reviewed, some other variables appear which can be antecedents or consequences of dynamic capabilities (the role of managers in business strategy and economic performance, the effective strategic management of the political environment, knowledge management). Research related different variables and reveals the complicated relationships between them will also contribute to the literature.

Besides, using different characteristics and samplings of the researches can contribute to the literature with the generalization of the findings. Futhermore, the examination of the variables of demographic features (age, gender, educational status etc.) and working life (working period in organization, status, income etc.) that have a mediating effect can bring depth and broadness to the subject.

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