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RESEARCH ARTICLE

Linking Dynamic Capabilities and Market Performance of SMEs: The Moderating Role of Organizational Agility

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Abstract
The purpose of this study is to highlight the moderating role of organizational agility (OA) between dynamic capabilities (DC) and market performance (MP) in SMEs in Turkey and Malaysia. The data was collected from 198 managers in both countries. The data was analyzed by Partial Least Squares Structural Equation Modelling (PLS-SEM). The research has found that there is a significant relationship between organizational agility and market performance, dynamic capabilities and market performance. The finding also reveals that organizational agility has a moderating role between dynamic capabilities and market performance. This research contributes to boosting scientific research, particularly in terms of testing the model content, as well as the variables and the factors affecting them. In addition, this research pointed to the need for organizations to practice organizational agility and dynamic capabilities in order to improve market performance. Dynamic capabilities and organizational agility vary according to environmental dynamism for a firm's market performance and high levels of dynamic capabilities may lead to upper market performance, as market performance is often more directly tied to SMEs organizational agility. Moreover, managers should account for dynamic capabilities while assessing the effects of it on organizational agility and firm performance.

Keywords

Organizational Agility, Dynamic Capabilities, Market Performance, SMEs, Turkey, Malaysia

Introduction

The global competition has forced many industry sectors to progress to a hyper-competitive environment from slow-moving (Esper et al., 2007). Manufacturers are able to introduce new goods and improvements in operating systems in an attempt to surpass each other (Mangan et al., 2008). Today's market is known as more volatile, increasingly competitive and time-sensitive customers and clients (Gunasekaran, 1998; Gunasekaran et al., 2008), and firms has faced to agility because of an increase in market complexity and uncertainty (Brown & Bessant 2003; Yusuf et al. 2004). Due to these uncertainties, significant changes in market trends, rapid change in customer demand, technological innovation, the manufacturing industries have faced an intensive challenge (Gunasekaran et al., 2008; Richard et al., 2009). Here

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agility plays a key role. Because agility has occurred in order to enable organizations, which are relevant to their rapidly changing needs, to meet the challenges of demanding, needs and expectations of customers (Fliedner & Vokurka, 1997).

Whereas standard mass production takes care of a few long-lasting products, an agile enterprise works on manufacturing a large range of frequently updated products (Bernardes & Hanna, 2009), and has become less time-consuming (Kurniawan & Zailani, 2010). For manufacturing industries, managers aim to supply their enterprises with the shortest possible lead times to meet their needs expectations and requirements. Because it is known that to respond slowly the demands of changing market can damage the firms and cause to lose their competitive advantage. The firms must explore the structure and management of their manufacturing activities in order to keep their competitive advantages (Christopher et al., 2006). This process is related to organizational agility.

The idea of organizational agility has been conceptualized in literature as a mechanism through which organizations can achieve competitive advantages by meeting the needs of their customers rapidly and adapting to the changing environment. Organizational agility means the collection of business initiatives which allow businesses to achieve competitive advantage, manufacturing processes that achieve speed and cost-effectiveness (Porter, 1996), and refers to the efficiency and effectiveness of the day-to-day activities of a company to meet changing business needs in a rapidly changing environment (Cao and Dowlatshahi, 2005; Zehir et al. 2008). This process is related to the capabilities of organizational agility and dynamic capabilities, too. Organizational agility includes internal and external capabilities, which are mainly used for creating organizational ability and retaining a competitive advantage for the longer term (Gripsrud et al., 2006) and the source of competitive ability for organizations, which build and use packages of quality resources that are not easily imitated by other organizations (Gregory et al., 2019; Lam et al., 2019; Mazzarol & Reboud, 2020).

Due to the dynamic business environment, agile capabilities are important to ensure that internal and external components can be rapidly integrated, built and reconfigured to address environments (Teece, 2009). With this dynamic view, organizational agility stresses the ability to feel and respond to market changes and opportunities (Sambamurthy et al., 2003; Chakravarty et al., 2013) and focuses on the ability to learn and upgrade existing operating abilities with new knowledge, integrate new expertise into the reconfigured operating abilities, and introduce the operational capabilities reconfigured (Paul & Omar, 2011).

One the most important tasks for enterprises and managers is to manage uncertainties in this dynamic and constantly changing environment. It is critical for their task to search, to respond to and to exploit change as an opportunity (Koh & Simpson, 2005). Enterprises and their managers need new analytical and effective vision, new capacity and conviction in order to seize, learn and reconfigure emerging opportunities, and guide in a challenging

environment. Teece et al (1997) calls them as dynamic capabilities. And they define dynamic capabilities as a "*firm' s ability to integrate, build and reconfigure internal and external competences to address rapidly changing environments (p.516)"*. They also stressed that a strategic approach will help to create a framework for policy that could give managers an understanding of how to develop competitiveness and sustainability to establish in the long term. Dynamic capabilities in rapidly changing markets are simple and clear, rapid and new learning systems, unconfirmed knowledge and outcomes can be volatile. Learning strategies lead to the development of dynamic capabilities (Eisenhardt & Martin, 2000; Wang and Ahmed, 2007; Weerawardena, & Liesch, 2019; Salunke et al., 2019; Hernández-Linares et al., 2020). Teece (2007) described dynamic capabilities consisting of different organizational skills, systems, methods, frameworks, decision regulations and orders that provide the opportunity to make good long-term profit.

Successful managers in a highly competitive organization know and take advantage of opportunities. Managers aim to preserve, develop and reconfigure resources in order to get the highest profit in a competitive environment. This process is related to firms' marketing performance. It can be achieved by meeting customers' needs and demands in a volatile environment. While many researchers have emphasized and agreed upon the positive influence of organizational agility (Nagel & Dove, 1991; Sharifi & Zhang, 1999) and dynamic capabilities (Teece et al.,1997; Helfat et al., 2009; Doz & Kosonen, 2010; Lewis et al., 2014; Teece et al.,2016; Vorhies & Morgan, 2003; Roberts & Grover, 2012; Akkaya & Üstgörül, 2020) on organizational performance, there is still no research about the relationship among those these variables. Moreover, studies related to information sharing as a moderating variable between dynamic capabilities and marketing performance are very few. Therefore, the present study fills this gap existing in those variables in this aspect. In other words, studies on organizational agility and market performance linked with dynamic capabilities are insufficient, thus, this study focuses on the role of dynamic capabilities and processing in agile organization practices, and its influence on the marketing performance of small and medium size manufacturing companies. In addition to emphasizing the role of dynamic capabilities, this study also evaluates the relationships among dynamic capabilities and organizational agility on marketing performance.

Literature Review

Dynamic Capabilities

One of the first pioneers in the dynamic capabilities field was Teece et al. (1997). Dynamic capability as a priority is on improving management competencies and integrating other competencies, such as operational and technological. The sector is, thus, focused on a variety of fields, such as research and development management, process development and techno-

logy transfer. The authors say that a dynamic approach will help to create a strategic theory that can give business people a sense of how competitiveness and efficiency can be built in the long-term run. Dynamic capabilities are the company's ability to adapt, build and reconfigure internal and external competences to respond to changing environments (Teece et al., 1997). Dynamic capabilities can be defined as to adapt the resources of an organization to new forms of competitive advantage.

Dynamic capabilities include different methods, such as product development, strategic decision taking and partnership. Dynamic capabilities also have some common characteristics, are identifiable, not ambiguous. The development of dynamic capabilities is driven by learning mechanisms (Eisenhardt & Martin 2000). Dynamic capabilities of company systems are intended to create efficiency by designing solutions for some processes in production development or pricing (Cavusgil et al. 2007; Cavusgil & Knight, 2015). In terms of the sustainability of an organization, dynamic capabilities are critical to renewing and upgrading the key capability (Barney 2001; Cavusgil et al. 2007). In other words, dynamic capabilities underline an on-going challenge by a company to maintain, build and restructure resources and are the key abilities to respond to environmental changes.

To have the ability to change and adjust rapidly has grown more important for companies (Schreyögg & Kliesch-Eberl, 2007; Şen & Bolat, 2015). Because companies can earn a competitive return when having dynamic capabilities, utilizing dynamic capabilities enables the chance to bring high profits in the long term (Teece & Augier, 2009). Good managers that can sense, seize and configure opportunities in a dynamically competitive company, can achieve this. Such skills are very difficult to strengthen and use for the company. Shortly, it can be stated that dynamic capabilities emphasize that a company is continuously aiming to preserve, develop and reconfigure resources, capabilities to adjust to environmental changes through sensing, seizing and configuring opportunities.

Organizational Agility

Organizational agility concept originates from agility. The agility concept firstly was introduced in the Iacocca Institute of Lehigh University in 1991 (Ren et al., 2003). Agility refers to a company's ability to survive and succeed in a competitive environment with constant and unpredictable market change–to respond quickly to fast-paced, fractured world markets (Goldman, 1991; Adeleye & Yusuf, 2006).). Agility also refers to the ability to adapt quickly and efficiently by merging and recombining separate resources without compromising day-to-day activities, an operational capacity and a significant strategic priority in manufacturing operations (Sheppard & Young, 2006; Wieland & Wallenburg, 2012; Kisperska-Moron & Swierczek, 2009).

Organizational agility as a term has first been researched from manufacturing and work-

force viewpoints among others, before extending the concept to cover whole company operations (Sherehiyet al., 2007). Organizational agility refers to a number of business strategies that allow businesses to gain competitive advantage, manufacturing processes that achieve quality, precision and economic costs (Porter, 1996), and refers to the efficiency and effectiveness of daily activities of a company in order to meet the changing business climate requirements (Cao & Dowlatshahi, 2005). Organizational agility enables firms to respond to the volatile, unpredictable business environment in a flexible, innovative way quickly and efficiently (Zhang & Sharifi, 2007; Wieland & Wallenburg, 2012). Organizational agility has some characteristics listed by McCann and Selsky (2009).

- ✓ The ability to build a vision and atmosphere for strong action across the entire company.
- ✓ The ability to understand and decide where the organisation ends to create principles and strategies for practice.
- ✓ The ability especially considering to receive and share information and to use it even in the most critical areas of the company.
- ✓ The ability to get new resources and integrate them with human resources into the organization rapidly.

The competition that accompanied globalization transformed many companies into a hyper competitive environment from slow-moving. Therefore, the manufacturers aim to outperform each other easily and introduce new models and improvements to operational processes (Esper et al., 2007; Mangan & Lalwani., 2016). The importance of agility comes from its ability to change processes quickly and efficiently by combining and reintegrating organizational resources without disrupting day-to-day activities or process changes. (Meyer & Stensaker 2006; Wieland & Wallenburg, 2012). For manufacturers organizational agility is important to survive in a changeable environment.

Market Performance

Undeniably, the success of an enterprise is mainly due to its organizational performance (Drucker, 1997) and marketing performance. The marketing performance of a company in the competition is critical among the several indices of agility and competitiveness (Mackenzie et.al. 2001). Marketing performance is defined as the outcomes of marketing operations in the form of changes in market share profit and customer responsiveness of customer needs and expectations and total sales performance of a company (Ambler et.al., 2004; Farris et.al., 2010), as financial performance of a company (Morgan, 2011) and the firm's profitability, productivity (O'Sullivan & Abela, 2007). Marketing performance can be influenced by different factors such as; leadership, learning and market orientation (Lee & Tsai, 2011; Wang,

Chih-Chien & Wang, P.-H & Yang, Yolande, 2014). Vorhies et.al (2010) and Wang et.al. (2010) claimed that marketing performance is the central driver of organizational performance in all business functions.

Organizational Agility, Dynamic Capabilities and Market Performance

The dynamic capabilities are the updated and advanced process of developing the agility of the organization. The agile organizations are more responsive, competitive and flexible. Thus, it allows the company to develop their management and strategies for better marketing performance. The dynamic capabilities are essential as it allows the organization to develop their organizational agility (Teece et al., 2016). In order to survive in the modern market, the companies have adopted their capabilities and to be more agile. The dynamic capabilities could improve firm marketing performances (Morgan et al., 2009). The dynamic capabilities are particularly important, as they can assist SMEs in overcoming resource constraints and increasing their performance (Eikelenboom & Jong, 2019). Moreover, organizational agility shapes firm performance (Chakravarty & Sambamurthy, 2013; Cegarra-Navarro et al., 2016). Taking the above factors into account, it is likely that dynamic capabilities may increase the ability of SMEs to invest in constant adjustments of their market performance (Dangelico et al., 2017).

Many studies have been separately done on organizational, agility, dynamic capabilities and firm performance in the literature. For example, Murphy (2013) researched the impact of firm culture on firm performance, Teeratansirikool et.al (2013) studied the relationship between competitive strategies and firm performance, Dawar (2014) examined the link between capital structure and firm performance. Moreover, Mason (2010) discussed organizational agility as a dynamic capability for maintaining competitive advantage, Gardner (2004) focused on dynamic capabilities and the need to be flexible on subunit level activities in an organization.

As the above results clearly shows, different studies have concluded differently about the critical factor behind firm performance. But there are limited studies about the relationship between organizational agility and dynamic capabilities with firms' market performance in the literature. In this context, this research aims to connect the relationship among those three variables by trying to answer the question of whether organizational agility has a moderating role in the relationship between dynamic capabilities and firms' perceived marketing performance? Therefore, we designed the research model and formulated the following hypotheses.

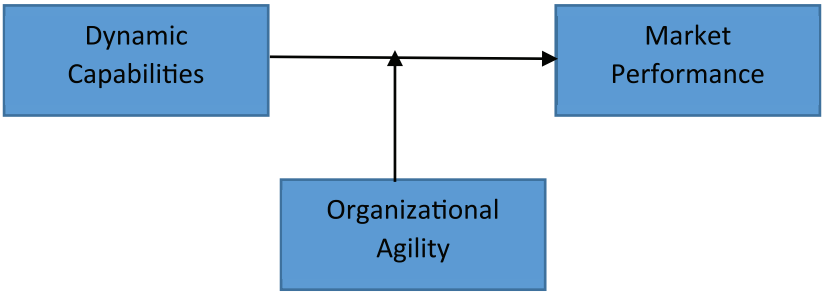


Figure 1. Research Model

Hypotheses

H_1: Dynamic capabilities have statistical impact on market performance in medium size manufacturing companies in Turkey and Malaysia at ($p<0.05$) level.

H_2: Organizational agility has statistical impact on market performance in medium size manufacturing companies in Turkey and Malaysia at ($p<0.05$) level.

H_3: Dynamic capabilities have statistical impact on market performance with moderating role organizational agility in medium size manufacturing companies in Turkey and Malaysia at ($p<0.05$) level.

Methodology

Research Sample Selection and Data Collection

As the research intends to gather data from a large number of participants, a quantitative research method is used. The sample of this research is composed of SMEs operating in Turkey and Malaysia. Simple random sampling was used to get data from managers in different levels from April to September, 2019. This research used three scales to collect data. The first one is Dynamic Capabilities, created by Teece (2007) and then was developed and translated to Turkish by Bezci (2015). It consists of 14 items that measure an organization's dynamic capabilities. The second one is Organizational Agility developed by Sharifi and Zhang (1999) and adapted to Turkish by Akkaya and Tabak (2018). It consists of 17 items that measure an organization's agility. The last scale measuring a firm's perceived marketing performance developed by Xiao, L. (2007) was used to gather data. It consists of 4 questions. All items are measured on a five-point Likert-type scale (1=strongly disagree to 5 = strongly agree).

In this study, frequency analysis revealed that most of the respondents are from Turkey i.e. 54% of the total respondents. Most respondents in the present study are male i.e. 67%. 37%

of respondents are aged between 36-40 years followed by another group aged 31-35 years old i.e. 24% of respondents.F urthermore, 44% of respondents in this study have 5-10 years work experience followed by another group with professional experience of less than five years.

Validity and Reliability

In this section, Cronbach's alpha coefficient is used to test the internal consistency for each item of the research. Table 1 shows acceptable levels of reliability to all three scales, where the reliability coefficient ranged between (0.701-0.879), and all constructs were above (0.7) (Hair et al., 2010), this indicator lets us know that the design and scale of the questionnaires was able to measure the study variables and dimensions, and the items in the questionnaire were able to represent each variable of the study.

Table 1
Cronbach's Alpha Coefficient for Study variables

Construct	Cronbach's Alpha
Dynamic Capabilities	0.879
Organizational Agility	0.865
Market Performance	0.701

As recommended by Sekaran and Bougie (2013), there are three categories i.e. low, less than or equal to 2.99, medium (from 3 to 3.99) and high where mean score is greater than four. Mean values of all the variables in the present study lie in the range of 3 and 3.99 so all variables come in the category of medium. In this study, organizational agility has the highest mean score i.e. 3.707. Dynamic capability has the lowest mean score i.e. 3.216. Table.1 exhibits the mean and standard deviations scores of all variables of the study.

Table 2
Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Dynamic capability	198	3.00	15.00	3.478	2.832
Organizational agility	198	4.00	20.00	3.707	3.739
Market performance	198	6.00	30.00	3.619	5.540
(Valid N (listwise	198				

Data Distribution

PLS-SEM analysis is not strict to the data normality, but it is imperative to check the severity of the data (Hair et al., 2010). Non-normal data inflate the standard deviation and parameter significance of the model. Kolmogorov-Smirnov and Shapiro-Wilks test explains whether to accept the null hypothesis of normally distributed data or not. These tests do not conclude the position of data from the non-normal distribution. Therefore, Hair et al. (2017) has recommended applying skewness and kurtosis tests to check the normal distribution in the research. Skewness refers to the values around mean of data either positively skewed

(longer tail on right side) or negatively skewed (longer tail on left side). Kurtosis measures the flatness and height of the distribution. Data is normally distributed providing values of skewness and kurtosis lies in the range of +2 and -2 (George & Mallery, 2010). Based on the data analysis, the skewness and kurtosis values of all variables in the study lies in the range of +2 and -2. Therefore, there is normally distributed data.

In this study, correlation revealed that there is a strong positive correlation between dynamic capability and organizational agility. All three variables in this study are highly positive correlations as shown in below table 3.

Table 3
Data Distribution and Correlation Analysis

	N	Skewness		Kurtosis		Correlations		
	Statistic	Statistic	Std. Error	Statistic	Std. Error	1	2	3
Dynamic capability	198	385.-	173.	048.-	344.	1		
Organizational agility	198	774.-	173.	424.	344.	418.	1	
Market performance	198	519.-	173.	052.-	344.	298.	301.	1

Measurement Analysis and Hypotheses Testing (Direct relationship)

PLS-SEM analysis of the relationship between independent variables and the dependent variables were applied to test and verify the research hypotheses.

Before conducting structural model analysis, the present research has assessed the measurement validity. Measurement validity evaluates the internal consistency and construct validity. Construct validity is ensured through convergent validity and discriminant validity. In the present study, there is enough convergent validity as values of the all factor loadings were found to be higher than 0.70 and values of average variance extracted (AVE) of all constructs were also higher than 0.5. So, there is acceptable convergent validity. For discriminant validity, this study has employed Fornell-Larcker criterion. Based on the Fornell-Larcker criterion, values of square root of AVE values of all constructs were found to be higher than the simple inter-construct correlations. So, there is enough discriminant validity as well. So, the proposed framework has sufficient measurement validity in this study**.**

Results

PLS-SEM analysis of the relationship between independent variables and the dependent variables were applied to test and verify the research hypotheses. The hypotheses tested the impact of both dynamic capabilities and organizational agility on market performance and the moderating role of organizational agility between dynamic capabilities and market performance.

The mean of dynamic capabilities was 3.216, and the standard deviation was 0.065. This finding had a statistical significance (p value) .017 showing an acceptance of the H_1. This finding showed a strong correlation value between dynamic capabilities and market performance.

The mean of organizational agility was 3.707, and the standard deviation was. 0.041. This finding had a statistical significance (p value) .000 showing an acceptance of the H_2. This finding showed a strong correlation value between organizational agility and market performance, too.

Moderation testing model had a *T* test of 3.278 and the standard deviation was. 0.039. The T-test value and significance (p value) 0.012 showed that this model is statistically significant which shows H_3 is accepted.

The results of the proposed hypotheses are presented in below Table.3. At large, all proposed hypotheses are supported in this study. It is confirmed that dynamic capability ($\beta = 0.322$, $\rho < 0.05$), organizational agility ($\beta = 0.504$, $\rho < 0.05$) have a positive and significant effect on the consumer's attitude.

Table 4
Hypotheses Testing

Hypotheses	B	.S. D	T-values	P	LLCI	ULCI
Dynamic capability > Market performance	0.322	0.065	3.250	0.017	0.127	0.304
Organizational agility > Market performance	0.504	0.041	4.836	0.000	0.308	0.834

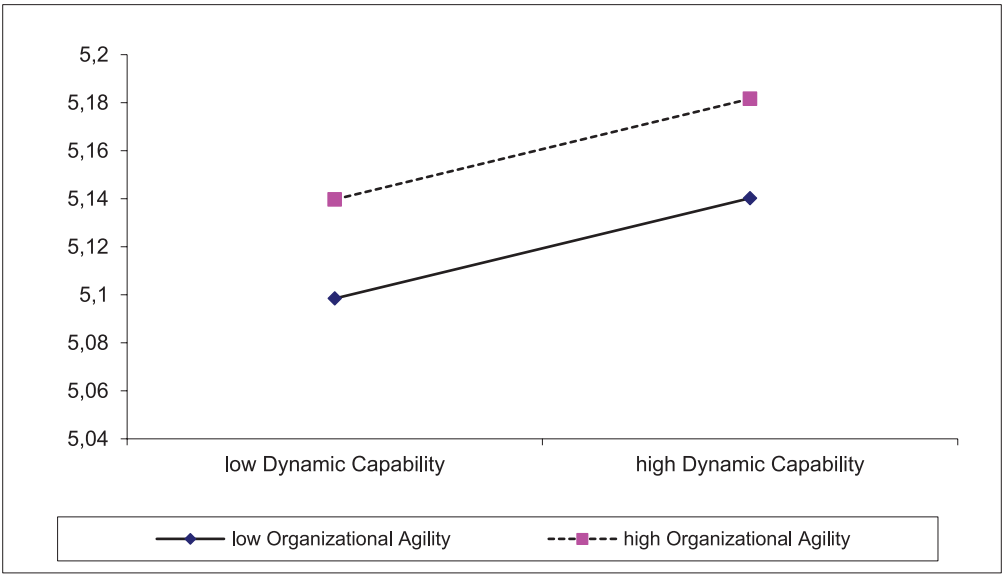
Moderation Analysis of Organizational agility

This study has investigated the role of organizational agility as a moderator between dynamic capability and market performance. Data analysis has concluded that organizational agility significantly strengthens the relationship between the dynamic capability and market performance ($\beta = 0.0127$, $P < 0.05$). So, the moderating role of organizational agility is confirmed. Results have been exhibited in below Table 5.

Table 5
Moderation Testing

Hypotheses	B	.S.D	T-values	P	LLCI	ULCI
Dynamic capability*Organizational agility > Market performance	0.0127	0039.	3.278	0.012	0.005	0.020

Based on the data analysis, this study has also presented the graphical results of moderator-organizational agility. The graphical analysis shows that in the presence of higher organizational agility, dynamic capability amplifies its impact on the market firms of SMEs.



Graph-1. Moderating role of Organizational Agility

Discussions and Conclusions

The moderating role of organizational agility between dynamic capabilities and market performance of SMEs companies in Turkey and Malaysia was the focus of study in this research. The results advance the debate about SMEs market performance in significant ways. In other words, organizational agility handled by managers ls a good moderator between dynamic capabilities and the firm's market performance. Moreover, our results showed that dynamic capabilities and organizational agility vary according to environmental dynamism for a firm's market performance. There were some starting points with the theoretical articles about dynamic capabilities and organizational agility (Eisenhard and Martin, 2000; Sharifi and Zhang, 2001; Zollo and Winter, 2002; Teece, 2007) but soon it became clear that the research would emphasize works by some scholars more (Zhang and Sharifi, 2007; Wang and Ahmed, 2007; Teece, 2009; Helfat et al., 2009 and McCann et al., 2009). Moreover, there are some recent studies related to our research. Hernández-Linares et al. (2020) concluded that dynamic capabilities individually affect firm performance and the moderating role of the market in SMEs. Wilden et al. (2019) found that dynamic capabilities relate to service provision and firm performance. Zhou et al. (2019) uncovered the mechanisms through which dynamic capabilities influence firm performance. Eikelenboom and De Jong (2019) concluded that dynamic capabilities are closely related with sustainability performance in SMEs. Pulakos and Kantrowitz (2020) and Hoonsopon and Puriwat (2019) concluded that organizational agility is one of the most important keys for firms to manage their own performance

in a changeable environment. Felipe et al. (2020) concluded that capabilities enhance firm performance in medium-tech intensity industries. Günsel et al. (2018) remarked that SMEs management capability and firm performance are closely related. Nafei (2016) has found that there is a significant relationship between organizational agility and performance. These studies support our hypotheses in this study.

This study has some contributions to the theory and SMEs managerial implications. This study provides valuable information to SMEs that wish to address their market performance. First, SMEs should notice that they can enhance their market performance (Morgan et al., 2009; Eikelenboom & Jong, 2019) by fostering dynamic capabilities. Second, this study showed that SMEs may need to extend their view on organizational agility to enhance their market performance (Chakravarty & Sambamurthy, 2013; Cegarra-Navarro et al., 2016). High levels of dynamic capabilities may lead to upper market performance, as market performance is often more directly tied to SMEs organizational agility. Third, this study contributes to the dynamic capabilities of organizational agility and the market performance literature by providing a detailed and refined theoretical framework.

Finally, SMEs aim to increase their market performance may thus largely benefit from evaluating their dynamic capabilities in light of organizational agility. It can also be stated that this research contributes to the international strategic management literature by researching in two important counties and exploiting the ideas of the dynamic capabilities, organizational agility and market performance research field. This work has attempted to take note of as many researchers as possible from these fields within the limits of comparative research. Managers should account for dynamic capabilities while assessing the effects of it on organizational agility and firm performance.

This study has some limitations. For example, the study has one hundred and ninety-eight participants in two countries. Future researchers may use larger size groups in more countries. It may also be noted that, even though this research was open to global organizational agility and dynamic capabilities with market performance professionals, managers from only two countries participated, a more diversified study population may additionally give more clear results. Expanding the scope of study to other sectors apart from SMEs for analysing the influence of dynamic capabilities on organizational performance by including other aspects and practices of it can be an area for future research.

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