

# The role of Dynamic Capability in Mediating the Effect of Environmental Dynamism and Managerial Capabilities, toward Firm Performance of Small Medium Enterprises

Adrian Permana, Arsono Laksamana & Lena Ellitan

## Abstract:

Small Medium Enterprises (SMEs) hold business potentials that gain a serious attention from the government. Some factors that affect the efficiency of SMEs include: internal and external factors. The success of SMEs depends on its abilities in managing its internal and external factors through environment factor analysis and the creation and execution of work strategy. Using PLS-SEM analysis, sample used for the study was 80 Small Medium Enterprises (SMEs) owners or managers in Surabaya, Indonesia. The findings of this study state that Managerial Capabilities has the most significant impact. Meanwhile, Environmental Dynamism does not have any impact towards Firm Performance, because SMEs are independent in managing the company, in terms of its capitalization, product or service development, and flexibility resulting from its low operating cost of workers, and place of business.



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## 1.1 Research Background

The business world changes so rapidly today. Economic turbulence that happens has never been imagined before, and increasingly difficult to predict. Other global situations faced, among others, that include economic slowdown, trade wars among powerful countries, and falling commodity prices. The prolonged economic crisis and the situation above caused recessionary conditions in various countries including Indonesia, which was also directly affected. Business performance has become a phenomenon in the business world that is constantly changing. A lot of companies become stagnant, unable to grow, or even close their businesses as they are unable to adapt with the rapidly changing business environment. On the other hand there are companies that develop along with the changes that occur in a business environment like this (Kurnia dan Harjanti, 2013). The environment includes various dimensions that can affect the industry and the company. The environment is an important contingency factor because it influences the firm's performance and achievements. Awang et al., (2008) found the external environment caused by the global turbulence affects a country's economy as a whole and it also has an impact on the Firm Performance. Internal processes within an organization, including systems and strategies created, must be adapted to anticipate changes in the external environment. Green, Sanusi and Connell (2018) found that the key characteristics of progress and development of Small and Medium Enterprises in Indonesia are highly dependent on government policies or regulations Indonesia and related institutions, which to this day continue to cause dissatisfaction between owners and managers of Small and Medium Enterprises. Small and Medium Enterprises complained about the huge pressure to survive in business. Small and Medium Enterprises must continue to learn tips to be able to survive and how to remain able to "play the games" in the midst of government regulations that often change.

Performance and development of Small and Medium Enterprises is very dependent on the development of Human Resources in various aspects, especially in the field of Human Resources competencies such as knowledge, skills and abilities as well as attitude in entrepreneurship. Ardiana et al., (2010) in their research found that the level of knowledge of human resources for Small and Medium Enterprises in Surabaya does not affect Firm Performance, but the higher the skill level of human resources for Small and Medium Enterprises affects Firm Performance and the skills or abilities of human resources for Small Business Medium has the most dominant influence on the Small and Medium Enterprises. Mulyadi (2014) found that individual factors owners and managers of Small and Medium Enterprises consisting of five indicators, namely education, unemployment, work experience, entrepreneurial experience, and working time have insignificant relationship with the performance of Small and Medium Enterprises. Dynamic Capabilities is the company's ability to integrate, build and reconfigure its internal and external competencies in the face of rapid environmental changes (Teece and Pisano, 1994; Teece, et al., 1997). Zhou and Li (2010) and Kurniawan, et.al. found that the development of Dynamic Capabilities depends on the orientation of the strategy adopted by the company and proves the role of Dynamic Capabilities in providing competitive advantage that ultimately improves Firm Performance.

This study analyzes the Environmental Dynamism variable as an external factor in the form of dynamic environmental changes with the managerial capability of the company that is needed (Managerial Capabilities) as an internal factor in its influence on Firm Performance. In addition, this study examines the implementation of Dynamic Capabilities as a mediating variable for Small and Medium Enterprises in influence on Firm Performance (Firm

Performance). Many factors affect the performance of Small and Medium Enterprises, including the influence of internal and external factors. Success depends on the ability to manage these two factors through the analysis of environmental factors and the establishment and implementation of business strategies. Internal factors are formed from marketing variables, access to capital, entrepreneurial ability, human resources, financial knowledge and business plans. External factors are formed from social network variables, legality, government support, coaching, technology, and access to information (Sudiarta et al., 2014)

## 1.2 Research Objectives

Based on the situation and condition of the Small and Medium Enterprises described, as well as the formulation of the problems described above, the objectives of this research are as follow:

1. Test and analyze the effect of Environmental Dynamism and Managerial capabilities on Small and Medium Enterprises Dynamic Capabilities
2. Test and analyze the effect of Environmental Dynamism and Managerial Capabilities on Firm Performance with Dynamic Capabilities as a mediating variable.
3. Test and analyze the effect of Environmental Dynamism and Managerial Capabilities on the Small and Medium Enterprise Firm Performance

## Theory and Development of Hypothesis

### Environmental Dynamism and Dynamic Capabilities

Previous studies have stated that Environmental Dynamism has a positive effect on a company's Dynamic Capabilities, the higher the intensity of Environmental Dynamism, the stronger the Dynamic Capabilities of that company (Oktemgil and Greenley, 1997; Teece, 2007; Li and Liu, 2014). Rapid changes in technology, the level of product competition and an increasingly fast and competitive market, where the factors of change are not easily predictable, the level of change and innovation are all uncertain plus government regulations or regulations that can not be fixed and consistent (Dess and Beard, 1984; D'Aveni, 1994; Hitt et al., 1998), in dealing with and anticipating all of these, Dynamic Capabilities are needed. The ability needed to adapt to these changes, in addition to the ability of innovation that continues to be developed in anticipating and dealing with changes in the environment, but also the ability to absorb (Absorptive Capability) to absorb all information, manage and implement in the form of knowledge needed by the company and determine the strategy in managerial decisions needed (Cohen and Levinthal, 1990; Verona and Ravasi, 2003). D'Este, 2002; Mota and de Castro, 2004 in their research also stated that Dynamic Capabilities has become a key driver for the evolution of the company by addressing market dynamics in the form of rapid changes (Environmental Dynamism). Zahra et al., 2006 stated that Dynamic Capabilities develop in response to various situations, not just Environmental Dynamism, so managing this capability is very important to get good Firm Performance.

### Managerial Capabilities and Dynamic Capabilities

Previous studies have stated that Managerial Capabilities have a positive effect on a company's Dynamic Capabilities (Adner and Helfat, 2003; Helfat et al., 2007; Tripsas and Gavetti, 2000; Harreld et al., 2007; Aragon-Correa and Sharma, 2003; Zahra et al., 2006). The role of managers in developing the company's ability to deal with and adapt to new environments is very important and determines the progress and performance of these organizations. These become the determining factors in the implementation and development of various forms of Dynamic Capabilities (Adner and Helfat, 2003; Helfat et al., 2007; Harreld

et al., 2007). Cepeda and Vera (2007) stated that managers largely determine the learning process in organizations with the aim of forming new skills that are highly needed in Dynamic Capabilities in order to compete in a rapidly changing environment. Managers' decisions will determine the level of knowledge needed by the company and the strategies needed to stay afloat and win the market. The perception of the owner or manager is very important and strategic in recognizing opportunities to productively change routine habits or change the configuration of resources needed, their willingness to make changes and their ability to implement these changes. (Penrose, 1959). This ability is determined by the motivation, expertise, and experience of the manager in developing his managerial ability to continue to grow.

### **Dynamic Capabilities as mediation and Firm Performance**

Wu (2006) in his research proves that Dynamic Capabilities is a mediating variable between resources and performance in an unstable environment and was developed in subsequent studies which found that Dynamic Capabilities have a higher effectiveness than Resource Base View in dealing with environmental volatility, Dynamic Capabilities also provide competitive advantage and ultimately significantly affect Firm Performance (Wu, 2010). Eisenhardt and Martin (2000); Hitt et al., (2001) in their research stated that Dynamic Capabilities create market value by adjusting resources in a strong environmental change and improving Firm Performance by prioritizing the accuracy, speed and efficiency of the organization in market changes that occur. Tiantian et al., (2014) in their research to test the Dynamic Capabilities of Firm Performance in various levels of change in the company's external environment, found that Dynamic Capabilities provide the most significant influence on Firm Performance in an intermediate level of dynamism, but it gives weaker influence when the level of change is at a strong or weak level. Chien and Tsai (2012) in their research also prove that Dynamic Capabilities of a company increase Firm Performance, in addition to mediating the company's downsizing strategy to significantly improve Firm Performance.

### **Environmental Dynamism and Firm Performance**

Previous studies have stated that Environmental Dynamism has a significant influence on Firm Performance (Li and Liu, 2014; Idris, et al., 2013; Akgun et al., 2007; Bourgeois, 1985). Klassen and McLaughlin (1996) stated changes and environmental influences both related to the company's external situation and patterns of dynamic environmental changes that are also related to government policies or regulations have an influence on improving the financial performance of companies. Harreld et al., (2007) also express a reality where many companies are struggling and even close down and cannot continue operations when the environment changes, they fail to adapt to the changing environment. Wardhana and Ardianti (2014) stated the superiority factor of Small and Medium Enterprises in surviving through the crisis because of several flexibility factors, among others, in a simple organizational structure, the cost of human resources can be reduced to a minimum and also flexible in its arrangement, placement and management, because many resources are close family of the Small and Medium Enterprises owners themselves. They also have a low risk in economic turmoil, because they use their own capital or joint ventures with several other partners, and not many take bank loans. Apart from that, the freedom to innovate and develop its products is also a key to the success of Small and Medium Enterprises in dealing with the existing crisis.

### **Managerial Capabilities and Firm Performance**

Previous studies have stated that Managerial Capabilities have a positive effect on a firm's Firm Performance (Adner and Helfat, 2003; Gupta et al., 2014; Reswanda, 2012; Hansen et al., 2004; Lockett, 2005; Wang and Ahmed, 2007) . Gelaskanycz dan Hambrick (1997) stated that

the ability of managers to formulate and implement strategic initiatives in capitalizing environmental opportunities to deal with external threats is vital for the company's success. Empirical evidence by Eisendhardt and Schoonhoven (1990) stated that the executive team is a determining factor not only for organizational strategy but also for improving Firm Performance. Empirical research also reveals that organizational performance is very good in relation to the competencies and profiles of senior executives who are aligned or in accordance with the strategies they implement (Michel and Hambrick, 1992). Ardiana et al., (2010) in their research on the influence of the competency of Human Resources for Small and Medium Enterprises in Surabaya found that the higher the skills of Human Resources for Small and Medium Enterprises, the higher the performance of Human Resources and at the same time significantly influence the Performance of Small and Medium Enterprises. In addition to that, they more specifically find that the ability of Human Resources for Small and Medium Enterprises has the most dominant influence on Small and Medium Enterprises because it is evident that the ability of Human Resources has the most significant effect on Firm Performance. Castanias and Helfat (2001) in their research stated that superior managerial human capital that is formed from expertise based on work experience, learning-by-doing and best practices from books, knowledge and other sources of information, that sharpen the knowledge needed in carrying out managerial tasks, directly shows its impact through the improvement in Firm Performance. The ability of top management combined with the assets and other capabilities of the company together will significantly increase the company profit.

## RESEARCH METHODS

### Research Design

This research is an explanatory research that will prove the causal relationship between independent variables namely Environmental Dynamism (ED); Managerial Capabilities (MC), intervening variable that is Dynamic Capabilities (DC) to the dependent variable, namely Firm Performance (FP).

### Population and Sample

The population in this study is SMEs engaged in consumer goods in the field of manufacturing or services in the Family Business Community of Ciputra University in Surabaya. Small and Medium Enterprises are defined by the Central Statistics Agency based on the quantity of employees, namely for small businesses having a workforce of 5 to 19 people, while medium businesses have a workforce of 20 to 99 people. The unit of analysis in this study is a medium-sized company owned by the Family Business community of Ciputra University Surabaya students. The respondents of this study are students who are the owners or managers who are fully responsible for the operations and strategies of these companies. The sampling technique used in this study was purposive sampling. Purposive sampling in this case is limited to certain types of people who can provide the desired information or meet certain criteria determined by researchers. In this study the criteria are set based on these characteristics:

1. Small and Medium Enterprises engaged in consumer goods, manufacturing or services
2. The companies have a workforce of 20 to 99 people

### Method of collecting data

Data collection methods in this study use the census method by distributing questionnaires to certain population groups. The questionnaire is a list of pre-formulated written questions that the respondent will answer, usually in clearly defined alternatives. Questionnaires are an efficient data collection mechanism if researchers know exactly what is needed and how to

measure research variables. In total there were 107 questionnaires distributed to respondents in the community. Out of the distributed questionnaires, only 96 respondents returned the questionnaire completely. After the questionnaire was re-evaluated, it appeared that the respondents who fulfilled the requirements in accordance with the research characteristics sum up to 80 respondents, while the rest of the respondents did not fulfill the criteria, either from the type of business, age of the company, and the number of employees, thus the total sample that is eligible and used for this research was the sample from 80 respondents.

### **Variables and Operational Definitions of Variables**

The variables in this study include: (1). Exogenous or independent variables consisting of Environmental Dynamism (ED); Managerial Capabilities (MC) (2). Mediation variables (intervening variables) consisting of Dynamic Capabilities (DC) variables. (3). Endogenous variables or dependent variables consisting of Firm Performance (FP)

#### **Environmental Dynamism (X<sub>1</sub>)**

Environmental Dynamism in this study is the rapid and unpredictable rate of external changes in the company's industrial environment, such as rapid changes in technology, market, and strong competition (Dess and Beard, 1984).

#### **Managerial Capabilities (X<sub>2</sub>)**

*Managerial Capabilities* in this study is the ability of company management to manage company resources and competencies to the maximum in an effort to build the company's ability to deal with changes in external conditions (Adner and Helfat, 2003).

#### **Dynamic Capabilities (Y<sub>1</sub>)**

Dynamic Capabilities has the understanding as the capability of a company to integrate, build, and harmonize the internal and external factors to be able to adapt to a rapidly changing environment (Teece et al., 1997, Kurniawan, et.al. 2017).

#### **Firm Performance (Y<sub>2</sub>)**

Firm Performance is defined as the achievement, the success of personnel, teams, or organizational units in realizing strategic goals that have been set previously with the expected behavior (Mulyadi, 2007, Sondakh, et.al 2017).

### **Data analysis**

#### **Data Quality Test: Validity and Reliability**

There are two conditions that should be applied to the instrument of measurement with the using of questionnaires The two requirements that should be met are: validity and reliability. A questionnaire is said to be valid if the questions contained in a questionnaire are able to reveal something that will be measured by the questionnaire. The questionnaire is said to be reliable if the respondent's answers to the questions in the questionnaire are consistent and stable over time (Umar, 2000; 30).

#### **Technical Analysis of Data**

In this study, the research model that was compiled has never been tested as a unified model but rather tested separately between variables. Therefore PLS-SEM is the right analysis technique to use. The PLS analysis process consists of measurement models and structural models. The process of testing the measurement model aims to measure the indicators used in a construct.

## Data Analysis and Discussion

### Characteristics of Respondents

In this study, the respondents chosen were the owners of Small and Medium Enterprises in the Family Business community at Ciputra University, Surabaya. Data of the respondents were obtained using a questionnaire to analyze a sample of medium-sized family companies in the Family Business community at Ciputra University, Surabaya. Of all the questionnaires that were submitted and sorted out to meet the requirements for Small and Medium Enterprises in accordance with the characteristics of this study, 80 respondents were obtained. The condition of respondents in this study is based on gender, line of business and number of employees in each Small and Medium Enterprises and then recapitulated in the tabulation and explanation as follows: There were more male respondents than female respondents. In Table 1 it can be seen that 63% of respondents are male while 37% are female.

**Table 1: Description of Respondent's Gender**

Gender		
Category	Amount	Percentage
Men	50	63 %
Women	30	37 %
<b>Total</b>	<b>80</b>	<b>100%</b>

### Respondents by Type of Business

Respondents in this study also came from two types of Small and Medium Enterprises in manufacturing and services engaged in consumer goods. Following is a table on the types of businesses studied. From Table 4.2, it can be concluded that 63% of respondents came from Small and Medium Enterprises engaged in the service sector. The rest of the Small and Medium Enterprises are engaged in manufacturing comprises to as much as 37% of the total respondents.

**Table 2: Respondents by Type of Business**

Business fields	Amount	Percentage
Services	50	63 %
Manufacture	30	37 %
<b>Total</b>	<b>80</b>	<b>100 %</b>

Based on Table 3, it can be seen that 52% of the companies studied have employees between 20 to 39 people, followed by companies with 80-99 people employees at 24% of the companies studied.

**Table 3: Respondents by Number of Employees**

Number of employees		
Category	Amount	Percentage
20 - 39	42	52 %
40 - 59	14	17 %
60 - 79	5	13 %
80 - 99	19	24 %
<b>Total</b>	<b>80</b>	<b>100 %</b>

**Validity and Reliability**

The validity test on the research questionnaire was carried out to ensure the quality of the data to be used in the analysis. Validity test aims to find out the ability of the indicator in measuring a construct. In this study the validity testing was performed using the 'correlation product moment' method. The criteria of the decision making was to compare between the correlation value and the r table value. A question item is said to be valid if the correlation value is greater than r table value. Next, after the question items were concluded valid, reliability testing was performed using the Cronbach Alpha method. The questionnaire was concluded to be reliable if the Cronbach's Alpha value was greater than 0.60. The following are the results of the validity and reliability test of the research construct.

**Table 4: Validity and Reliability Test of Environmental Dynamism Variables**

Item	Corrected Item Total Correlation	r tabel n=80	Conclusion	Cronbach's Alpha
ED1.1	0,691	0,220	0,691 > 0,220 (Valid)	0,891 > 0,60 (Reliable)
ED1.2	0,649	0,220	0,649 > 0,220 (Valid)	
ED1.3	0,703	0,220	0,703 > 0,220 (Valid)	
ED1.4	0,754	0,220	0,754 > 0,220 (Valid)	
ED1.5	0,612	0,220	0,612 > 0,220 (Valid)	
ED1.6	0,663	0,220	0,663 > 0,220 (Valid)	
ED2.1	0,805	0,220	0,805 > 0,220 (Valid)	0,877 > 0,60 (Reliable)
ED2.2	0,740	0,220	0,740 > 0,220 (Valid)	
ED2.3	0,773	0,220	0,773 > 0,220 (Valid)	
ED2.4	0,715	0,220	0,715 > 0,220 (Valid)	
ED2.5	0,551	0,220	0,551 > 0,220 (Valid)	
ED3.1	0,795	0,220	0,795 > 0,220 (Valid)	0,914 > 0,60

Item	<i>Corrected Item Total Correlation</i>	r tabel n=80	Conclusion	<i>Cronbach's Alpha</i>
ED3.2	0,814	0,220	0,814 > 0,220 (Valid)	(Reliable)
ED3.3	0,766	0,220	0,766 > 0,220 (Valid)	
ED3.4	0,844	0,220	0,844 > 0,220 (Valid)	
ED4.1	0,716	0,220	0,716 > 0,220 (Valid)	0,866 > 0,60 (Reliable)
ED4.2	0,786	0,220	0,786 > 0,220 (Valid)	
ED4.3	0,764	0,220	0,764 > 0,220 (Valid)	
ED4.4	0,614	0,220	0,614 > 0,220 (Valid)	
ED4.5	0,609	0,220	0,609 > 0,220 (Valid)	

Table 4 shows that the validity test with the *Corrected Item-Total Correlation* value of the *Environmental Dynamism* variable has a correlation value greater than r table 0.220. As for the reliability test with the *Cronbach's Alpha* value the value is already greater than the value of 0.60. Based on these results, it can be concluded that the question items used to measure the dimensions of the *Environmental Dynamism* variable have good item validity and reliability.

**Tabel 5: Validity and Reliability Test of Managerial Capabilities Variables**

Item	<i>Corrected Item Total Correlation</i>	r tabel n=80	Conclusion	<i>Cronbach's Alpha</i>
MC1.1	0,790	0,220	0,790 > 0,220 (Valid)	0,865 > 0,60 (Reliable)
MC1.2	0,714	0,220	0,714 > 0,220 (Valid)	
MC1.3	0,864	0,220	0,864 > 0,220 (Valid)	
MC1.4	0,577	0,220	0,577 > 0,220 (Valid)	
MC1.5	0,556	0,220	0,556 > 0,220 (Valid)	
MC2.1	0,509	0,220	0,509 > 0,220 (Valid)	0,860 > 0,60 (Reliable)
MC2.2	0,710	0,220	0,710 > 0,220 (Valid)	
MC2.3	0,772	0,220	0,772 > 0,220 (Valid)	
MC2.4	0,445	0,220	0,445 > 0,220 (Valid)	
MC2.5	0,829	0,220	0,829 > 0,220 (Valid)	
MC2.6	0,675	0,220	0,675 > 0,220 (Valid)	
MC3.1	0,718	0,220	0,718 > 0,220 (Valid)	0,828 > 0,60

Item	Corrected Item Total Correlation	r table n=80	Conclusion	Cronbach's Alpha
MC3.2	0,806	0,220	0,806 > 0,220 (Valid)	(Reliable)
MC3.3	0,836	0,220	0,836 > 0,220 (Valid)	
MC3.4	0,434	0,220	0,434 > 0,220 (Valid)	
MC3.5	0,427	0,220	0,427 > 0,220 (Valid)	

Table 5 shows that testing the validity of the Corrected Item-Total Correlation value of the Managerial Capabilities variable has a correlation value greater than r table of 0.220. As for the reliability test with the Cronbach's Alpha value, the values are all greater than the 0.60 value. Based on these results, it can be concluded that the question items used to measure the dimensions of the *Managerial Capabilities* variable have good item validity and reliability.

**Table 6: Validity and Reliability Test of Dynamic Capabilities Variables**

Item	Corrected Item Total Correlation	r table n=80	Conclusion	Cronbach's Alpha
DC1.1	0,649	0,220	0,649 > 0,220 (Valid)	0,785 > 0,60 (Reliable)
DC1.2	0,506	0,220	0,506 > 0,220 (Valid)	
DC1.3	0,623	0,220	0,703 > 0,220 (Valid)	
DC1.4	0,608	0,220	0,608 > 0,220 (Valid)	
DC2.1	0,454	0,220	0,454 > 0,220 (Valid)	0,763 > 0,60 (Reliable)
DC2.2	0,366	0,220	0,366 > 0,220 (Valid)	
DC2.3	0,779	0,220	0,779 > 0,220 (Valid)	
DC2.4	0,715	0,220	0,715 > 0,220 (Valid)	
DC3.1	0,667	0,220	0,667 > 0,220 (Valid)	0,808 > 0,60 (Reliable)
DC3.2	0,601	0,220	0,601 > 0,220 (Valid)	
DC3.3	0,677	0,220	0,677 > 0,220 (Valid)	
DC3.4	0,568	0,220	0,568 > 0,220 (Valid)	

Table 6 shows the validity test with the Corrected Item-Total Correlation value of the Dynamic Capabilities variable having a correlation value greater than r table of 0.220. As for the reliability test with the Cronbach's Alpha value, the values are all greater than the 0.60 value. Based on these results, it can be concluded that the question items used to measure the dimensions of the Dynamic Capabilities variable already have good validity and reliability.

**Table 7 Test the Validity and Reliability of Firm Performance Variables**

Item	Corrected Item Total Correlation	r table n=80	Conclusion	Cronbach's Alpha
FP1.1	0,721	0,220	0,721 > 0,220 (Valid)	0,855 > 0,60 (Reliable)
FP1.2	0,726	0,220	0,726 > 0,220 (Valid)	
FP1.3	0,764	0,220	0,764 > 0,220 (Valid)	
FP1.4	0,626	0,220	0,626 > 0,220 (Valid)	
FP2.1	0,562	0,220	0,562 > 0,220 (Valid)	0,818 > 0,60 (Reliable)
FP2.2	0,594	0,220	0,594 > 0,220 (Valid)	
FP2.3	0,681	0,220	0,681 > 0,220 (Valid)	
FP2.4	0,749	0,220	0,749 > 0,220 (Valid)	
FP3.1	0,712	0,220	0,712 > 0,220 (Valid)	0,859 > 0,60 (Reliable)
FP3.2	0,676	0,220	0,676 > 0,220 (Valid)	
FP3.3	0,689	0,220	0,689 > 0,220 (Valid)	
FP3.4	0,724	0,220	0,724 > 0,220 (Valid)	
FP3.5	0,647	0,220	0,647 > 0,220 (Valid)	
FP4.1	0,584	0,220	0,584 > 0,220 (Valid)	0,822 > 0,60 (Reliable)
FP4.2	0,693	0,220	0,693 > 0,220 (Valid)	
FP4.3	0,606	0,220	0,606 > 0,220 (Valid)	
FP4.4	0,732	0,220	0,732 > 0,220 (Valid)	
FP5.1	0,630	0,220	0,630 > 0,220 (Valid)	0,785 > 0,60 (Reliable)
FP5.2	0,592	0,220	0,592 > 0,220 (Valid)	
FP5.3	0,655	0,220	0,655 > 0,220 (Valid)	
FP5.4	0,502	0,220	0,502 > 0,220 (Valid)	

Table 7 shows that the validity test with the Corrected Item-Total Correlation value of the Firm Performance variable has a correlation value greater than r table of 0.220. As for the reliability test with the Cronbach's Alpha value, the values are all greater than the 0.60 value. Based on these results, it can be concluded that the question items used to measure the dimensions of the Firm Performance variable already have good validity and reliability.

### Hypothesis test

In processing data contained in this study, the reseracher used the Partial Least Square (PLS) method with the help of Smart PLS 3.2.8 software. The Smart PLS 3.2.8 structural model is used to determine the effect of Environmental Dynamism and Managerial Capabilities variables on Firm Performance variables with Dynamic Capabilities as mediating variables with the following model images:

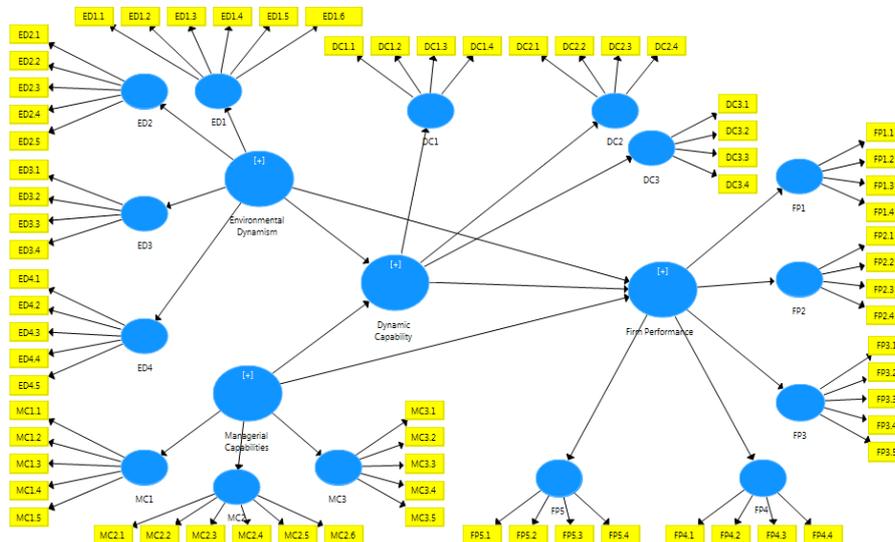


Figure 1 Smart PLS Structural Model

Conducting analysis with Partial Least Square (PLS) consists of two evaluations which include evaluation of the outer model and inner model. The following are some descriptions of the evaluation steps.

**Evaluation of the Outer Model**

The results of the estimation of the Algorithm with Smart PLS 3.2.8 with a sample of 80 Small and Medium Enterprises are as follows:

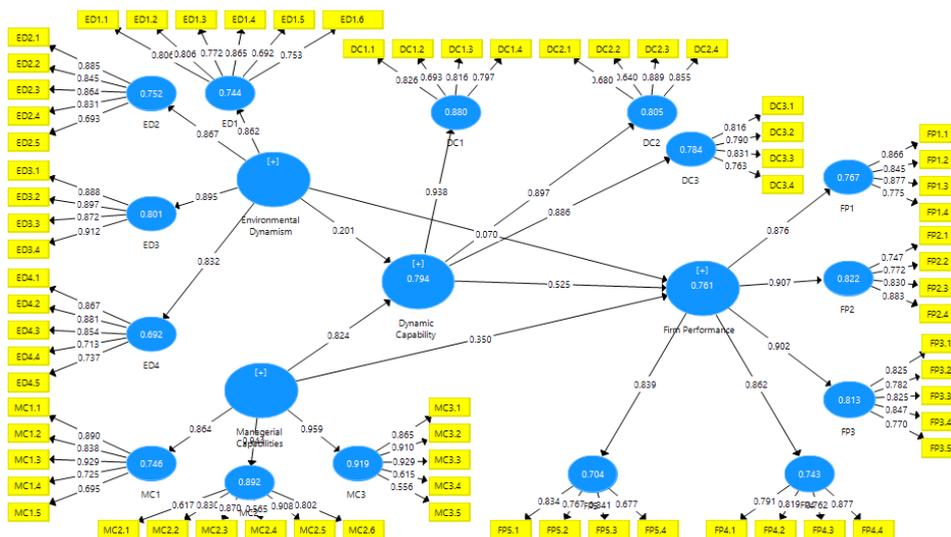


Figure 2 Estimated Results of Smart PLS Algorithms

Evaluating the outer model involves measuring the measurement models on the research variables. The evaluation includes convergent validity, discriminant validity and composite reliability testing.

### Convergent Validity and Average Variance Extracted

Convergent validity measurement using the outer loading value with a limit on the outer loading value should be greater than 0.5. This is in accordance with researches from Hair et al. (2017) and Rasoolimanesh & Ali (2018) who argued that an outer loading value greater than 0.50 is an acceptable condition with the assumptions that are reinforced by other measures of Convergent Validity which are also accepted. The following are Outer Loading and Average Variance Extracted values for each study variable.

**Tabel 8 Nilai Outer Loading & AVE Environmental Dynamism**

Variable	Dimension	Indicator	Outer Loading Value	AVE Dimension	AVE Variable
Environmental Dynamism	The Product/Service features desired by customers	ED1.1	0,806	0,615	0,502
		ED1.2	0,806		
		ED1.3	0,772		
		ED1.4	0,865		
		ED1.5	0,692		
		ED1.6	0,753		
	The Product/Service features supplied by competitors	ED2.1	0,885	0,683	
		ED2.2	0,845		
		ED2.3	0,864		
		ED2.4	0,831		
		ED2.5	0,693		
	Product Technologies in the Industry	ED3.1	0,888	0,796	
		ED3.2	0,897		
		ED3.3	0,872		
		ED3.4	0,912		
	Government policy in the Industry	ED4.1	0,867	0,662	
ED4.2		0,881			
ED4.3		0,854			
ED4.4		0,713			

Variable	Dimension	Indicator	Outer Loading Value	AVE Dimension	AVE Variable
		ED4.5	0,737		

Based on Table 8 it is known that the outer loading value of each indicator question for Environmental Dynamism variables all have values greater than 0.5, so it can be said that the question indicators can already be used to take measurements on the Environmental Dynamism variable. Other evaluations on the Average Variance Extracted value on each dimension and all variables also have values greater than 0.50, so that the results of the Outer Loading and Average Variance Extracted evaluation concluded that the measurement of the Environmental Dynamism variable had fulfilled Convergent Validity.

**Table 9 Value of Outer Loading & AVE Managerial Capabilities**

Variable	Dimension	Indicator	Outer Loading Value	AVE Dimension	AVE Variable
<i>Managerial Capabilities</i>	<i>Managerial Human Capital</i>	MC1.1	0,890	0,673	0,537
		MC1.2	0,838		
		MC1.3	0,929		
		MC1.4	0,725		
		MC1.5	0,695		
	<i>Managerial Social Capital</i>	MC2.1	0,617	0,602	
		MC2.2	0,830		
		MC2.3	0,870		
		MC2.4	0,565		
		MC2.5	0,908		
		MC2.5	0,802		
	<i>Managerial Cognition</i>	MC3.1	0,865	0,626	
		MC3.2	0,910		
		MC3.3	0,929		
		MC3.4	0,615		
MC3.5		0,556			

Based on Table 9 it is known that the outer loading value of each question indicator for the Managerial Capabilities variable all have values greater than 0.5, so it can be said that the question indicators can already be used to measure the Managerial Capabilities variable. Other evaluations on the Average Variance Extracted value on each dimension and all variables also have a value greater than 0.50, so that the results of the Outer Loading and Average Variance Extracted evaluation concluded that the measurement of Managerial Capabilities variable has fulfilled Convergent Validity.

**Table 10 Value of Outer Loading & AVE Dynamic Capabilities**

Variable	Dimension	Indicator	Nilai <i>Outer Loading</i>	AVE Dimension	AVE Variable
<i>Dynamic Capabilities</i>	<i>Adaptive Capability</i>	DC1.1	0,826	0,616	0,505
		DC1.2	0,693		
		DC1.3	0,816		
		DC1.4	0,797		
	<i>Absorptive Capability</i>	DC2.1	0,680	0,598	
		DC2.2	0,640		
		DC2.3	0,889		
		DC2.4	0,855		
	<i>Innovative Capability</i>	DC3.1	0,816	0,640	
		DC3.2	0,790		
		DC3.3	0,831		
		DC3.4	0,763		

Based on Table 4.14 it is known that the outer loading value of each question indicator for the Dynamic Capabilities variable all have values greater than 0.5, so it can be said that the question indicators can already be used to take measurements on the Dynamic Capabilities variable. Other evaluations on the Average Variance Extracted value on each dimension and all variables also have values greater than 0.50, so that the results of the Outer Loading and Average Variance Extracted evaluation concluded that the measurement of the Dynamic Capabilities variable has fulfilled Convergent Validity.

**Table 11 Value of Outer Loading & AVE Firm Performance**

Variable	Dimension	Indicator	<i>Outer Loading Value</i>	AVE Dimension	AVE Variable
<i>Firm</i>	<i>Financial</i>	ED1.1	0,866	0,709	0,506

Variable	Dimension	Indicator	Outer Loading Value	AVE Dimension	AVE Variable
<i>Performance</i>	<i>Performance</i>	ED1.2	0,845		
		ED1.3	0,877		
		ED1.4	0,775		
	<i>Market and Costumers</i>	ED2.1	0,747	0,656	
		ED2.2	0,772		
		ED2.3	0,830		
		ED2.4	0,883		
	<i>Process Measure</i>	ED3.1	0,825	0,657	
		ED3.2	0,782		
		ED3.3	0,825		
		ED3.4	0,847		
		ED3.5	0,770		
	<i>People Development</i>	ED4.1	0,791	0,661	
		ED4.2	0,819		
		ED4.3	0,762		
		ED4.4	0,877		
	<i>Preparing for The Future</i>	ED5.1	0,834	0,612	
		ED5.2	0,767		
		ED5.3	0,841		
		ED5.4	0,677		

Based on Table 4.15 it is known that the outer loading value of each question indicator for Firm Performance variables all have values greater than 0.5, so it can be said that the question indicators can already be used to take measurements on Firm Performance variables. Other evaluations on the Average Variance Extracted value on each dimension and all variables also have values greater than 0.50, so that from the results of the Outer Loading and Average Variance Extracted evaluation it is concluded that the measurement of Firm Performance variables has fulfilled Convergent Validity.

### Discriminant Validity

After evaluating Convergent Validity, the next step is evaluating Discriminant Validity which uses Fornell-Larcker evaluation and cross loading value as the measures.

**Table 12 Fornell-Larcker**

Variable	<i>ED</i>	<i>MC</i>	<i>DC</i>	<i>FP</i>
<i>Environmental Dynamism</i>	<b>0,709</b>			
<i>Managerial Capabilities</i>	0,225	<b>0,833</b>		
<i>Dynamic Capabilities</i>	0,387	0,669	<b>0,710</b>	
<i>Firm Performance</i>	0,352	0,622	0,656	<b>0,711</b>

Based on Table 12 Fornell-Larcker evaluation, the Fornell-Larcker results note that the AVE root value of each study variable (bold) on the diagonal row has a greater value than the correlation between the research variables (not bold). Thus, from the results of the Fornell-Larcker evaluation, it was concluded that the Discriminant Validity evaluation from the PLS analysis was passed and fulfilled. Meanwhile, other evaluations using cross loading show that the largest outer loading value of the results of cross loading on each variable obtained the highest value on the variable that was measured. This shows that the Discriminant Validity evaluation using cross loading criteria also proves a good Discriminant Validity.

### Composite Reliability dan Cronbach's Alpha

The last evaluation on the Outer Model is Composite Reliability which tests the reliability value of each indicator in a variable. A variable is said to have met Composite Reliability if the Composite Reliability value is more than 0.7 and the Cronbach Alpha value is greater than 0.60. The following is the Composite Reliability value for each variable.

Based on Table 4.18, it can be seen that each variable in the research model has a Composite Reliability value greater than 0.7. Meanwhile, for the Cronbach Alpha value, all the variables also obtained values that are greater than 0.60. Referring to the results of this evaluation, it can be concluded that each research variable has met the Composite Reliability.

**Table 13 Composite Reliability Value**

Variable	<i>Composite Reliability</i>	<i>Cronbach Alpha</i>
<i>Environmental Dynamism</i>	0,952	0,945
<i>Managerial Capabilities</i>	0,947	0,939
<i>Dynamic Capabilities</i>	0,924	0,910
<i>Firm Performance</i>	0,955	0,950

### Structural Model Test

In the process of testing hypotheses based on structural models of research, the relationship between constructs should be tested, that is also known as the inner model. Structural model or inner model is an attempt to measure the relationship between latent variables or constructs in a research. A relationship must show significant results with the p-value that must be lower than 0.05. In testing the inner model, it is also necessary to see the value of R<sup>2</sup> (Hair et al., 2014). Path coefficient test will describe the influence of exogenous variables on endogenous variables. A large path coefficient value indicates that exogenous variables have a large influence on endogenous variables. The influence must be tested for significance through the bootstrapping procedure. Meanwhile, for the interpretation of R<sup>2</sup> values, guidelines from Hair et al. (2014) can be used: which is the value of 0.75 showing a strong endogenous influence, while value of 0.5 indicates that the influence on the model is moderate. Whereas the R<sup>2</sup> value of 0.25 indicates a weak influence (Hair et al., 2014). These are the description of the results of the R-square and hypothesis testing obtained from the results of the Smart PLS 3.2.8 bootstrapping process:

### R-Square

The assessment of goodness of fit is to look at the R-square value generated through the estimation of Smart PLS on each path. Based on data processing using the PLS method, the R-square obtained are as follow:

**Table 14 R-square value**

Variable	R Square
<i>Dynamic Capabilities</i>	0,794
<i>Firm Performance</i>	0,761

In the relationship path between Environmental Dynamism and Managerial Capabilities to Dynamic Capabilities, an R-square value of 0.794 means that the percentage of diversity of perceptions of Dynamic Capabilities in Small and Medium Enterprises that can be explained by the variable Environmental Dynamism and Managerial Capabilities is at 79.4%. Meanwhile, the remaining 20.6% is explained by other variables outside the research model. Whereas in the relationship path between Environmental Dynamism, Managerial Capabilities to Firm Performance with Dynamic Capabilities as mediating variables obtained R-square of 0.761 which means that the percentage of diversity of Firm Performance perceptions in Small and Medium Enterprises can be explained by the variable Environmental Dynamism, Managerial Capabilities and Dynamic Capabilities is at 76.1%, while for the rest of 23.9% can be explained by other variables outside the research model. For Q<sup>2</sup> values calculated by the formula  $Q^2 = 1 - (P_{e1}^2 \times P_{e2}^2)$  where Q<sup>2</sup> is the coefficient of total determination, P<sup>2</sup><sub>ei</sub> is the error parameter for each equation calculated by the formula  $P_{ei} = \sqrt{1 - R_i^2} = (1 - R_i^2)^{0.5}$ . Based on the results of the analysis, R<sub>1</sub><sup>2</sup> = 0,794 and the value of R<sub>2</sub><sup>2</sup> = 0,761 so that the values of P<sub>e1</sub> and P<sub>e2</sub> obtained are as follow:

$$P_{e1}^2 = (1 - 0,794)^{0.5} = 0,206$$

$$P_{e2}^2 = (1 - 0,761)^{0.5} = 0,239$$

The obtained value of the total determination coefficient is as follows:

$$Q^2 = 1 - (P_{e1}^2 \times P_{e2}^2)$$

$$Q^2 = 1 - (0,206 \times 0,239)$$

$$Q^2 = 1 - 0,049 = 0,951$$

Based on the calculation results, the obtained predictive relevance value is 0.951 which means that the diversity of all research data on Small and Medium Enterprises can be explained by the structural model formed that is able to be explained by the variables in the model is at 95.1% while the remaining 4.0% is explained by other variables not used in model.

### Hypothesis testing

In the PLS method the results of the estimated direct effect are determined through the P-value where the value must be less than 0.05. Values smaller than 0.05 mean that there is a significant effect between the two variables. Positive or negative effects will be seen in the path coefficient.

**Table 4.20 Direct Effect**

<i>Direct Effect</i>	<i>Coefficient of Effect</i>	<i>T-statistic</i>	<i>p</i>	<i>Information</i>
<i>Environmental Dynamism → Dynamic Capabilities</i>	0,201	2,946	0,003	Significant
<i>Managerial Capabilities → Dynamic Capabilities</i>	0,824	21,157	0,000	Significant
<i>Environmental Dynamism → Firm Performance</i>	0,070	1,241	0,215	Not significant
<i>Managerial Capabilities → Firm Performance</i>	0,350	2,185	0,029	Significant

The estimated results of the influence path between Environmental Dynamism on Dynamic Capabilities are 0.201 with a T-statistics value of 2.946 and a p-value of 0.003. It is known that the T-statistics value of 2.946 > 1.96 and p-value of 0.003 < 0.05, it can be concluded that Environmental Dynamism has a significant effect on Dynamic Capabilities. The estimated results of the path of influence between Managerial Capabilities to Dynamic Capabilities are 0.824 with a T-statistics value 21.157 and p-value 0.000. It is known that the T-statistics value 21.157 > 1.96 and p-value 0.000 < 0.05, it can be concluded that Managerial Capabilities has a significant effect on Dynamic Capabilities. The estimated results of the influence path between Environmental Dynamism on Firm Performance are 0.070 with a T-statistics value of 1.241 and a p-value of 0.251. It is known that the T-statistics value 1.241 < 1.96 and p-value 0.251 > 0.05, it can be concluded that Environmental Dynamism has no significant effect on Firm Performance. Referring to the results of testing of this hypothesis, H3 is not proven true. The estimated results of the path of influence between Managerial Capabilities on Firm Performance are 0.350 with a T-statistics value of 2.185 and a p-value of 0.029. It is known that the T-statistics value 2.185 > 1.96 and p-value 0.029 < 0.05, it can be concluded that Managerial Capabilities has a significant effect on Firm Performance.

### Test of Mediation Influence

In the next test, indirect effects were analyzed using the Variance Accounted For (VAF) with the following results:

**Table 4.21 Indirect Effect**

<i>Direct Effect</i>	<i>Indirect Effect</i>	<i>Total Effect</i>	VAF	Keterangan
<i>Environmental Dynamism → Dynamic Capabilities → Firm Performance</i>	0,106	0,175	0,605 (60,5%)	<i>Partial Mediation</i>
<i>Managerial Capabilities → Dynamic Capabilities → Firm Performance</i>	0,433	0,782	0,554 (55,4%)	<i>Partial Mediation</i>

The results of the evaluation of the influence of mediation testing with VAF values obtained values of 60.5% and 55.4%, both of which are in the range of 20% to 80%. Based on this test, it can be concluded that there is an influence between Environmental Dynamism and Managerial Capabilities on Firm Performance by mediating the Dynamic Capabilities variable. Mediation that occurred in the 2 relationships was concluded to be partial mediation.

## DISCUSSION

### Effect of Environmental Dynamism on Dynamic Capabilities

Hypothesis testing results show that Environmental Dynamism has a significant effect on Dynamic Capabilities of Small and Medium Enterprises. The relationship is positive which indicates that the higher the intensity of Environmental Dynamism, the level of Dynamic Capabilities of Small and Medium Enterprises will also be higher. In accordance with the results of research of Li and Liu (2014), who found that Dynamic Capabilities are the potential abilities of companies that can systematically solve problems, are formed by a tendency to always find and anticipate both the internal and external opportunities and threats of the company. Through Environmental Dynamism which is an external factor for Small and Medium Enterprises, with high levels of product and service competition and high technological change. Small and Medium Enterprises are formed to be able to adapt effectively in reading, anticipating every problem, and managing it to ensure the right results in the formulation of strategies and implementation of company policies. Small and Medium Enterprises need the ability to maintain their existence as a company that has high flexibility, being able to adapt and create various innovations as an effort to survive the crisis both locally and globally.

Sanusi and Connell (2018) found that the key characteristics of progress and development of Small and Medium Enterprises in Indonesia depend very much on the policies or regulations of the Indonesian government and related institutions. The results showed that the policies issued by the central and regional governments had an influence in the operation of the Small and Medium Enterprises, so the owners or managers must be proactive in seeking information through existing associations and forming strategic alliances with fellow Small

and Medium Enterprises to support and form discussion groups to unite the voice and have the bargaining power needed.

### **Effect of Managerial Capabilities on Dynamic Capabilities**

In this study, it was found that Managerial Capabilities had a significant influence. From these results, the second hypothesis can be accepted. The role and managerial ability of Small and Medium Enterprises is getting better the Dynamic Capabilities will also increase. This result is in accordance with several previous studies by Harreld et al., (2007) which mentioned one of the core aspects of the managerial role is being able to develop a company's Dynamic Capabilities. Castanias and Helfat (2001) in their research found that the role of a good manager is obtained from periodic experience and learning processes, so that good skills are obtained in the process of developing the company going forward. Small Medium Enterprises owners and managers have prioritized investment in education, training or learning in their human resources. Managerial ability is a key factor in developing expertise and continuously improving capabilities in an environment of change. Small Medium Enterprises owners and managers are key factors in dealing with difficult situations in a changing environment. Owners and managers of Small and Medium Enterprises must continuously improve their competence, sharpen intuition by continuing to learn and interact and communicate with other Small and Medium Business owners. Through increasing competence, Small and Medium Enterprises will have capabilities related to the beliefs or mindset of management such as knowledge or assumptions about things that will happen, knowledge of the options to be chosen and knowledge of the consequences of each choice made will be the key to successful decision making the right decision and affect the performance of Small and Medium Enterprises.

### **Effect of Environmental Dynamism on Firm Performance**

In this study, Environmental Dynamism did not have a significant effect on Firm Performance, from these results the third hypothesis was not acceptable. These results are not in accordance with previous studies by Klassen and McLaughlin (1996) who found that Environmental Dynamism had a significant effect on Firm Performance. This result is in accordance with the research of Sudiarta et al., (2014) who found that external factors did not directly affect the performance of Small and Medium Enterprises. Environmental Dynamism does not have a significant influence on performance, because Small and Medium Enterprises have independence in managing their business, both in capital and in the development of products or services, have flexibility because of low costs, both from the workforce and place of business (Wahyuningsih, 2009). In addition Prasetyo & Harjanti (2013) added that Small and Medium Enterprises are generally a "one man enterprise" business unit, workers are also usually from their own families, sources of venture capital funds generally come from savings, or from informal financial institutions

### **Effect of Managerial Capabilities on Firm Performance**

Managerial Capabilities have a significant influence on Firm Performance. Based on these results, the fourth hypothesis can be accepted. This result is in accordance with previous research by Hansen et al., (2004) which stated that company managers take the initiative and lead towards aligning all company policies and regulating and combining all organizational assets to bring profit in their industries and have competitive advantages compared to other companies. The results of this study indicate that the Managerial Cognition indicator has the lowest average value, while this indicator greatly influences the firm's Firm Performance. the ability to see and read what will happen, knowledge and information that is constantly updated, both regarding market conditions including products and competitive competition, the development of products and the latest technology, opportunities and threats that will

occur and government regulations that must be observed and anticipated. Most Small and Medium Business owners do not have broad views and knowledge, so they are not oriented to the long term. Efforts to improve performance tend to be conventional due to lack of knowledge in the field of management. As one example, product pricing is often oriented only to general conditions in the industrial environment and ironically, labor is rarely taken into account. Thus they are often mistaken in measuring business productivity which will ultimately lead to business performance (Yusni et al., 2009). The results showed the mediating role of Dynamic Capabilities on Firm Performance of Environmental Dynamism variables and Managerial Capabilities variables showed the following results, Environmental Dynamism and Managerial Capabilities with Dynamic Capabilities as mediating variables had a significant effect on Firm Performance. Thus the fifth hypothesis can be accepted. These results are consistent with previous research by Wu (2005) where Dynamic Capabilities has a significant influence as a mediating variable in transforming the resources and competencies of the company to improve Firm Performance. Environmental Dynamism has no direct and significant influence on Firm Performance. Indicators of products or services that are needed or desired by customers, products or services supplied by competitors, technological advances in the industry and the influence of government regulations are external conditions that do not directly affect Firm Performance. However, Environmental Dynamism has a direct and significant influence on a company's Dynamic Capabilities. As explained earlier, changes in the dynamic environment will enhance and shape the Dynamic Capabilities of a company, with the mediating role of Dynamic Capabilities, then Environmental Dynamism will significantly affect the Firm Performance. Sudiarta et al., (2014) found that the success of Small and Medium Enterprises in overcoming the economic crisis is in developing the ability to manage internal and external factors through the analysis of environmental factors and the formation and implementation of business strategies. Ardiana et al., 2010 stated that the performance of Small and Medium Enterprises is related to business development, but the development of Small and Medium Enterprises must be accompanied by the development of HR (Human Resources) in various aspects. The quality of human resources is needed especially in the areas of competence such as knowledge, skills, and abilities and attitude in entrepreneurship. Managerial Capabilities of the owner or manager become a factor driving the company through Dynamic Capabilities as a mediating factor that will affect the Firm Performance.

## CONCLUSIONS AND STUDY IMPLICATIONS

This study found that external factors in the form of Environmental Dynamism did not have a significant effect on Firm Performance of Small and Medium Enterprises. Eventhough empirically the relationship between the two variables had not been found, but the anticipation and management of external factors must be the main consideration and concern for Small and Medium Enterprises, vigilance and insight into competitive competition, as well as changes and development of rapid technological progress. Anticipation and management of government policies must always be updated either through communities or associations that are formed or by actively communicating with relevant government officials. Managerial Capabilities of owners and managers of Small and Medium Enterprises must also be improved in anticipating dynamic environmental changes to maintain the Firm Performance. Dynamic Capabilities as mediation in dealing with situations of dynamic change are urgently needed and need to be developed in order to grow their businesses. Dynamic Capabilities is a new thing in the management of Small and Medium Enterprises, it is hoped that through this finding, Small and Medium Enterprises can develop and equip themselves and continue to

improve the Dynamic Capabilities in dealing with competitive situations that will increase in intensity in the future. Looking at the overall research results, the Managerial Capabilities variable has the most influence on Dynamic Capabilities, where the indicators that make up the Managerial Capabilities variable consist of Managerial Human Capital, Managerial Social Capital, and Managerial Cognition. Rests from the above findings Managerial Capabilities is a key factor and has the role of implementing Dynamic Capabilities as a mediating variable to improve Firm Performance. This ability must be improved and enhanced by Small and Medium Enterprises in order to be able to maintain its existence in Indonesia. Whereas the Managerial Capabilities variable has a significant influence on Firm Performance, indicating that the owner must develop and improve the Managerial Cognition capability that has less value. This capability is needed because it is strategic and it also determines the Firm Performance in the long run. Ability related to management beliefs or mindset such as knowledge or assumptions about things that will happen, knowledge about alternatives or options to be chosen and knowledge of the consequences of each choice taken that is used as a basis for managerial decision making.

## REFERENCES

- Adner, R., & Helfat, C. E. (2003). Corporate Effects and Dynamic Managerial Capabilities. *Strategic Management Journal*, 24, 1011-1025
- Akgun, A. E., & Keskin, H. & Byrne, J. (2007). The moderating role of Enviromental Dynamism between Firm Emotional Capability and Performance. *Journal of Organizational Change Management*, 21(2), 230-252
- Aragon-Correa, & Alberto, J. & Sharma, S. (2003). A Contingent Resource Based-View of Proactive Corporate Environmental Strategy. *Academy Of Management Review*, 28, 71-88
- Ardiana, I.D.K.R, Brahmayanti, I.A, Subaedi (2010). Kompetensi SDM UKM dan Pengaruhnya Terhadap Kinerja UKM Di Surabaya, *Jurnal Manajemen Dan Kewirausahaan*, 12 (1), 43-55
- Awang, K. W, & Ishak, Nor K., Radzi, S. M., & Taha, A. Z. (2008). Environmental Variables and Performance: Evidence from the Hotel Industry in Malaysia. *International Journal of Economics and Management*, 2 (1), 59-79
- Bourgeois, L. J. III, (1985). Strategic Goals, Perceived Uncertainty, and Economic Performance in Volatile Environments. *The Academy of Management Journal*, 28 (3), 548-573
- Cepeda, G.. & Vera, D. (2007). Dynamic Capabilities and Operational Capabilities : a knowledge management perspective, *Journal of Business Research*, 60, 426-437
- Chien, S.. & Tsai, C. H. (2012). Dynamic Capability, knowledge, learning, and Firm Performance, *Journal of Organizational Change Management*, 25, 434-444
- Cohen, M. D. and Levinthal, D. A. (1990). Absorptive capacity: a new perspective on learning and innovation. *Administrative Science Quarterly*, 35, 128-152.
- D'Este, P. (2002). The distinctive patterns of capabilities accumulation and inter-firm heterogeneity: the case of the Spanish pharmaceutical industry. *Industrial and Corporate Change*, 11(4), 847-874.
- Dess, G.G. & Beard, D.W. (1984). Dimensions of organizational task environments, *Administrative Science Quarterly*, 29, 52-73
- Eisenhardt, K. M. & Claudia B. S. (1990). "Organizational growth: Linking founding team, strategy, environment, and growth among U.S. semi conductor ventures, 1978-1988." *Administrative Science Quarterly*, 35, 504-509
- Gupta, V. K. & Dutta, D. K. & Chen, X. (2014). Entrepreneurial Orientation Capability and Firm Performance under conditions of Organizational Learning, *Journal of Managerial Issues*, 21, 157-173
- Hansen, M. H., Perry, L. T., & Reese, C. S. (2004). A Bayesian operationalization of the resource-based view. *Strategic Management Journal*, 25(13), 1279-1295.

- Harreld, B. J. & O'Reilly III. & Charles A. & Tushman, M. L. (2007). Dynamic Capabilities at IBM: Driving Strategy into Action. *California management Review*. 49 (4), 21-43
- Helfat, C. E. (2007). Dynamic Capabilities. *Understanding Strategic Change In Organization*, Blackwell Publishing, London
- Hitt, M.A., Keats, B.W. & DeMarie, S.M. (1998). "Navigating in the new competitive landscape: building strategic flexibility and competitive advantage in the 21st century", *Academy of Management Executive*, 12 (4), 22-42.
- Idris, W. & Mohd, S. & Momani, R. A. (2013). Impact of Environmental Dynamism on Marketing Strategy Comprehensiveness and Organizational Performance, *International Journal of Business and management*, 8 (9), 42-44
- Klassen, R.D. & McLaughlin. C.P. (1996). The Impact of environmental management on firm performance. *Management Science*, 42, 1198-1214
- Kurnia, R.S. & Harjanti, D. (2013). Analisa faktor individual Pengusaha Mikro dan Kecil sektor formal dan hubungannya dengan kinerja bisnis aspek pemasaran dan sumber daya manusia di Jawa Timur. *Agora*, 1 (3).
- Kurniawan, R., Christiananta, B. E., L. & Wijanarko, B.O. 2017. *Modeling Business Performance Based on Network Strategy Suppliers, Cooperation Synergy, Dynamic Capabilities through Business Development Strategy Using Partial Least Square*, *Journal of Applied Environment Biological Science*, 7(10), 113-118.
- Kurniawan, R., Christiananta, B., Ellitan, L. (2018). Evaluation of Corporate Strategy and Dynamic Capability to Business Performance, *International Journal of Scientific Research and Management*, 6 (3 ), 199-206.
- Li, D. & Liu, J. (2014). Dynamic Capabilities, Environmental Dynamism, and Competitive Advantage: Evidence from China. *Journal of Business Research*, 67, 2793-2799
- Lockett, A. (2005). Edith Penrose's legacy to the resource-based view, *Managerial and Decision Economics*, 26, 83-98
- Mota, J. and de Castro, L. M. (2004). A capabilities perspective on the evolution of firm boundaries: a comparative case example from the Portuguese moulds industry. *Journal of Management Studies*, 41(2), 295-316
- Mulyadi, C. (2014). Hubungan Antara Faktor Individual (Economic Perspective) Terhadap Kinerja Bisnis Pada UMKM Di Surabaya Pada Sektor Makanan Dan Minuman, *AGORA* 2 (2)
- Oktemgil, M. and Greenley, G. (1997). "Consequences of high and low adaptive capability in UK companies", *European Journal of Marketing*, 31 (7/8), 445-66.
- Reswanda. (2012), Pengaruh orientasi kewirausahaan terhadap pembelajaran organisasi, keunggulan daya saing berkelanjutan dan kinerja usaha pada UMKM kerajinan kulit berorientasi ekspor di Sidoarjo. *JEAM* Volume XI. No. 2/2012
- Sanusi, A. & Connell, J. (2018), Non-market strategies and Indonesian SMEs: casualties of decentralization?, *Asia-Pacific Journal of Business Administration*
- Sondakh, O., Christiananta, B. & Ellitan, L. (2017). Measuring Organizational Performance: A Case Study of Food Industry SMEs in Surabaya-Indonesia, *International Journal of Scientific Research and Management*, (12), 7681-7689.
- Sudiarta, I. P. L. & Kirya, I K., & Cipta, I. W. (2014). Analisis Faktor-Faktor Yang Mempengaruhi Kinerja Usaha Mikro Kecil Dan Menengah (UMKM) Di Kabupaten Bangli, *e-Journal Bisma Universitas Pendidikan Ganesha Jurusan Manajemen*, 2
- Tiantian, G., & Yezhuang, T. & Qianqian, Y. (2014). Impact of Manufacturing Dynamic Capabilities on Enterprise Performance-the nonlinear moderating effect of Environmental Dynamism, *Journal of Applied Sciences*, 14, 2067-2072
- Teece, D. & Pisano, G. (1994). The Dynamic Capabilities of Firms: an Introduction, *Industrial and Corporate Change*, 3 (3), 537-556
- Tece, D. & Pisano, G., & Shuen A. (1997). Dynamic Capabilities and Strategic Management, *Strategic Management Journal*, 18 (7), 509-533
- Tripas, M. and Gavetti, G. (2000). Capabilities, cognition, and inertia: evidence from digital

- imaging. *Strategic Management Journal*, 21,1147–1161.
- Verona, G. & Ravasi, D. (2003). Unbundling dynamic capabilities: an exploratory study of continuous product innovation. *Industrial and Corporate Change*, 12, 577 – 606
- Wang, C. L. & Ahmed, P. K. (2007), Dynamic Capabilities: a review and research agenda. *The International Journal of Management Reviews*, 9, 31-51
- Wardhana, A., K. & Ardianti, R.R, (2014). Entrepreneural Motivation pengusaha sektor formal terhadap kinerja bisnis usaha mikro dan kecil Jawa Timur. *Agora*, (2)1
- Wu, L.Y., (2006). Resources, Dynamic Capabilities and Performance in Dynamic Environment: Perceptions in Taiwanese IT Enterprise, *Information and Management*, 43 (4), 447 – 454
- Wu, L. Y. (2010). Applicability of the resource-based and dynamic-capability views under environmental volatility. *Journal of Business Research*, 63, 27–31.
- Zahra, S.A. & Sapienza, H. J & Davidsson, P. (2006). Entrepreneurship and Dynamic Capabilities : A Review, Model and Research Agenda, *Entrepreneurship Theory and Practice*, 169-187
- Zhou, K., Z., dan, L. C., B., (2010). How Strategic Orientations Influence The Building of Dynamic Capability in Emerging Economies, *Journal of Business Research*, 63, 224 – 231

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