

# Product Innovation Strategy and Dynamic Environment Against the Improvement of Company Performance at MSME in Kulon Progo

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Product Innovation Strategy and Dynamic Environment Against the Improvement of Company Performance at MSME in Kulon Progo

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**Abstract:** This study aims to improve company performance at MSME by implementing product innovation strategies supported by dynamic environments. This research used a quantitative approach and the structural equation model (SEM) method. Data collection employed questionnaire methods, and data analysis was tested using AMOS. This study's population was MSMEs registered at the Cooperatives and MSME Office in Kulon Progo Regency in 2019. Besides, the respondents sampled in this study were 200 MSMEs focusing on the culinary, handicraft, and fashion industry sectors. This study's results proved that the dynamic environment positively and significantly influenced product innovation strategies. Then, product innovation positively and significantly affected firm performance. Furthermore, the dynamic environment had a positive and significant influence on firm performance. The product innovation strategy mediated the relationship between the dynamic environment and firm performance. This study contributes to the MSMEs' owners being aware of the importance of improving company performance by continuously implementing product innovation strategies because consumers are smarter to choose and decide where and what products to consume as their needs and desires' fulfillment. This product innovation strategy could mediate the influence of the dynamic environment and company performance.

**Keywords:** Product innovation; Dynamic environment; Company performance.

## Introduction

In the era of globalization, more and more large-scale companies in Indonesia are competing with each other. This trend is indicated by increasingly intense competition. In a competitive business environment, the company must have the ability to distinguish itself in competition to maintain its viability. Based on the globalization phenomenon, it becomes essential for every company to have a strategic way of thinking by measuring performance. The performance measurement's existence is expected to improve the performance's achievement.

Micro, Small, and Medium Enterprises (MSME) have an essential and strategic role in national economic development. In addition to playing a role in economic growth and employment, MSME also plays a role in distributing development results. Based on Table 1 quoted from Bappeda DIY (2019), it was proven that after the 1997-1998 economic crisis, the

number of MSME did not decrease; instead, it continued to increase. The table shows that from 2016-2019, the number of MSME units with a large number of industrial units had a very different number of units. It proved that the number of MSME units per year has always increased and is still above the number of large industrial units in DIY. It indicated that MSME was not affected by the crisis when the monetary crisis hit Indonesia in 1997-1998.

**Table 1** Data on Number of MSME Units and Number of Large Industrial Units in DIY Region

Number	Subelement	Year			
		2016	2017	2018	2019
1	Microbusiness	130.525	135.799	141.991	<b>143.610</b>
2	Small business	59.655	62.042	64.896	<b>65.642</b>
3	Medium Business	36.031	37.472	39.196	<b>39.647</b>
4	Large Industry	12.408	12.904	13.498	<b>13.653</b>

Source: BAPPEDA DIY (2019)

The current era of globalization development has an increasingly fierce impact on business competition, including MSME. The existence of a dominant Micro and Small Business Sector as a national economic actor is also a vital subject in development, particularly in the context of expanding business opportunities for new entrepreneurs and employment and reducing unemployment (depkop.go.id, 2019). The companies' types, especially those based on MSME, must undoubtedly have a business competition strategy plan appropriate and efficient in carrying out their business processes not to be left behind by other business competitors and can run according to the initial establishment objectives of the company or organization. This excellent opportunity is, in fact, not supported by the readiness of the company or organization, management, and production to be innovative, creative, and always oriented to market needs. As a result, the MSME's ability in Indonesia to compete with other business actors is still low. As an entity that carries out activities such as business or industry in general, MSME requires proper strategic planning, innovation, and product quality improvement. Thus, it needs to be designed as an innovation strategy where the strategy will ultimately improve company performance. The company can face a very dynamic business environment that demands business activities always to innovate continuously. (Dibrell, Davis, & Craig, 2008); (Budiarto, Prabowo, & Herawan, 2017). The following Table 2 explains the criteria for MSME based on Law RI No. 20 (2008). Table 2 facilitates classification and finds out the differences between micro, small, and medium enterprises.

**Table 2** MSME Criteria According to Law RI No. 20 of 2008

Explanation	Microbusiness	Small business	Medium Business
<b>BAB II Principle and Purpose Clause 6</b>	Has a maximum net worth of Rp 50,000,000.00, excluding land and buildings for businesses	Has a net asset of more than Rp 50,000,000, up to a maximum of Rp 500,000,000.00	Has a net worth of more than Rp.500,000,000.00 up to a maximum of Rp10,000,000,000.00 excludes land and buildings for business locations
	Has annual sales results of at most Rp.300,000,000.00	Has annual sales results of more than Rp.300,000,000.00 up to a maximum of Rp2,500,000,000.00	Has annual sales results of more than Rp 2,500,000,000.00 up to a maximum of Rp 50,000,000,000.00

Source: Law RI No.20 (2008)

The Kulon Progo Regency Cooperative and SME Office stated that the poverty rate in Kulon Progo Regency in 2018 reached 18% and was the highest among regencies/cities in DIY. Therefore, the Kulon Progo Regency Government tried to overcome this with various programs massively. One of them was through developing cooperatives and MSME as the spearhead of people's economy. Besides, improving Kulon Progo's local product competitiveness and facing the Industrial Revolution 4.0, the MSME are demanded to be more dynamic, innovative, and revolutionary not to be involved with these increasingly complex and complicated conditions. Based on the economic sector data of the Kulon Progo Regency/City (2019), currently, the number of MSME in the Kulon Progo Regency as of December 2019 was 40,730 units (Department of Cooperatives and MSME, 2019). Meanwhile, the number of productive poor MSME was 1,281 units. Thus, increasing competitiveness that focuses on product innovation strategies must be exceptionally supported because it is related to the collaboration developed by various partners in Kulon Progo, such as partnerships with large businesses, namely PT Indomarco Prismatama, with cooperatives in Kulon Progo in the form of People Owned Stores (TOMIRA), Wheat Flour Producer PT Sriboga, and hundreds of SMEs in the entire Kulon Progo District (Abdul, 2019).

Over time, many problems are faced by SMEs; one of them is product innovation (Lee, Kim, Choi, & Lee. 2009). Many researchers have conducted research related to the MSME's performance in Indonesia. However, this problem is still critical because most MSME in Indonesia are traditional companies with low productivity and lack of product innovation (Tambunan, 2011). Further, performance measurement is a process of evaluating work progress towards targets in a corporate entity. In line with the technology and science development, the community as consumers will be more selective in choosing products needed so that companies must anticipate changes in the environment, in this case, a product demand. SMEs must start thinking to defeat their competitors and change their way of thinking, which previously only thought to seek profit; now, they must think to win the competition through an innovation strategy and dynamic environment (Moeheriono, 2012).

The innovation's role in boosting company performance includes all essential aspects that can add value to its competitiveness: processes, products, markets, management, and others. According to Klein and Sorra (1996), innovation activities generally have two models. First, the source-based model is a model based on the developer's perspective or innovation source. Developers create new products or services with original ideas for final product marketing. Second, the user-based stage model is based on the user's perspective. The company makes an innovation process based on the awareness of the need or opportunity for change to link innovation in user behavior. Organizations in innovation need to develop a formal and comprehensive strategy. This strategy expresses the organization's innovation goals, namely by explaining what will be innovated and how. Variable dimensions of the innovation strategy consist of leadership orientation, process innovation, product innovation, internal innovation sources, external innovation sources, innovation implementation, and investment levels (Zahra & Das, 1993).

## Literature Review and Hypotheses Development

### **The dynamic environment influences the product innovation strategy**

Research conducted by Popa, Acosta, and Conesa (2017) has proven the influence of a dynamic environment on innovation. This study took a sample of 429 SMEs in Spain, and it had very valuable benefits for SMEs in implementing or intending to implement an innovation strategy. The dynamic environment influences innovation because the environment's power is considered to produce tremendous pressure in the innovation strategies' formation and outcome. Subsequent research aimed at revealing how dynamic environmental conditions impacted leadership has led to innovation (Jansen, Vera, & Crossan, 2009). Regarding the dynamic environment context with product innovation, there was a positive relationship between the dynamic environment and product innovation, which was the strongest factor (Acosta, Popa, & Conesa, 2018).

*H<sub>1</sub> : The dynamic environment influences the product innovation strategy.*

### **The product innovation strategy influences the company's performance**

Muchlas (2015) revealed that innovation is a vital process in general, and if it is carried out based on the product's forward vision and is appropriate in accordance with the product and business's characteristics. It was proven to improve SMEs' performance. Simultaneous test results showed that innovation source, leadership orientation, innovation type, and innovation level were proven to affect SMEs' performance significantly. Individually, the leadership orientation variables and innovation type significantly influenced SMEs' performance. Meanwhile, innovation sources and innovation levels showed no significant effect on SMEs' performance. Innovation is a self-concept consisting of several dimensions of various types. Product innovation is developing defined or new components, features, and new technologies for new

products. Product innovation has attracted a large amount of attention in the literature (Carranza, 2010); (Corsino & Gabriele, 2010); (Fontana & Nesta, 2009); (Kusiak, 2009), and research have shown its direct effect on company performance. Research carried out by Han and Gao (2019), with empirical tests from survey data collected from 303 companies in China, supported a positive relationship between innovation strategies with company performance. It was because, specifically, the innovation strategy could improve competitiveness associated with company performance.

**H<sub>2</sub>** : *Product innovation strategies affect company performance.*

### **Dynamic environment influences company performance**

Research conducted by Acosta et al. (2018) confirmed a positive relationship between a dynamic environment and company performance. The research was conducted on respondents as many as 429 manufacturing SMEs in Spain. Besides, research done by Sanchez, Morales, & Rojas (2017) analyzed how factors such as the environment could influence organizational performance. The hypothesis was empirically tested using a sample of 160 existing technology companies in Europe. A positive relationship was found about the environment in which the organization operated required it to pay attention to changes in their environment to maintain and improve its performance.

**H<sub>3</sub>** : *Dynamic environment influences company performance.*

### **Dynamic environment influences company performance through product innovation strategy**

Research uncovered that companies in an unstable environment and a high environmental competition level would increase their innovation to achieve higher performance. Companies that can survive under unfavorable environmental conditions must generally achieve higher profitability and efficiency level through a high innovation level (Raju, Lonial, & Crum, 2011). The literature has shown that business performance did not only depend on environmental conditions but also balanced with an innovation strategy (Omri, 2015). In general, a dynamic environment refers to the change rate and the environmental variability level. Therefore, MSME can adopt a product innovation strategy in a complex and uncertain environment because an environment offers important opportunities related to growing market demand (Schweitzer, Gassmann, & Gaubinger, 2011).

**H<sub>4</sub>** : *Dynamic environment influences company performance through product innovation strategies.*

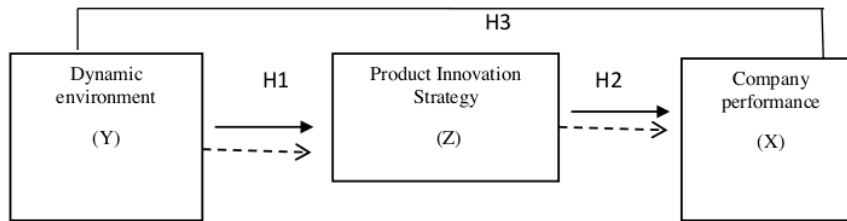


Figure 1 Framework of Thinking

## Research Method

The population in this study was MSMEs in Kulon Progo district in 2019, amounting to 40,730. The number consisted of various economic sectors: agriculture and fisheries, manufacturing, building, trade, hotels, restaurants, transportation and communication, finance, leasing, and services. This study's sample determination employed probability sampling techniques. This study's sampling design type was cluster sampling. It is a heterogeneous sampling and heterogeneous characteristics of population members in one group. In this case, the population was very heterogeneous, consisting of various economic sectors, then classified in different industries. The sample in this study chose MSME engaged in the economic sector of the manufacturing industry. In the processing industry, various types of business units were engaged in different fields. The sample taken was enough to take the processing industry, which focused on culinary, handicraft, and fashion.

This study's total sample would be determined by researchers as many as 200 samples. Researchers distributed 200 questionnaires in the form of hardcopy and google form. The questionnaire's distribution was carried out to the maximum and always ensured that the returned questionnaires were also 200, and in the end, the returned questionnaires were 200. The questionnaire was distributed by distributing it to MSME's owners. The decision to determine a sample of 200 was based on Hair Jr, Black, Babin, and Anderson (2014), who considered a research model using the Structural Equation Modeling (SEM) model. In SEM, the ideal number of samples was between 100-200 and must consider the number of model indicators. The number of samples can be 5-10 of the number of indicators. In this study, there were 21 indicators so that the number of samples could range from 105-210 respondents.

### Measurement of Research Variables

#### Independent Variable

This study's independent variable was a dynamic environment, an environment that can affect business/company activities' course. It could be influenced by the level and stability of changes in the company's external environment. According to Wu (2010), to measure dynamic environments, the following indicators can be used:

- Products or services in the industry are updated quickly.
- Business actors have difficulty predicting changes in competitors.
- Technology is developing rapidly.
- Business practitioners have difficulty predicting changes in customer needs.
- Customers often ask for new products and services.
- The market has changed in a year.
- Demand for the number of products or services in the market changes very often.

#### **Dependent Variable**

<sup>17</sup> The dependent variable in this study was the company performance, which resulted from the achievement level or company/business's achievement within a specific time it carried out a business activity. According to Munizu (2010); Rehman, Wong, Sultan and Merrilees (2018), to measure company performance, the following indicators can be used:

- sales are always increasing monthly.
- capital is always increasing.
- increasing the labor force every year
- market growth is always good.
- profit growth is getting better.
- Overall, its financial performance is very good.
- has controlled the market share for the past year.

#### **Intervening Variable**

This research's intervening variable was a product innovation strategy, a strategy built by businesses to make or offer new or different and innovative products to consumers to adjust their tastes and accustomed to changes in the business environment. According to Lukas and Ferrell (2000); Prajogo (2016), to measure the product innovation strategy, the following indicators can be used:

- Providing new products that do not yet exist in other competitors
- Modifying pre-existing products
- Having a high level of product innovation
- Using new components in product development
- Using new materials in product development
- Developing new technologies for increasing product innovation
- Developing new product features

### <sup>10</sup> **Result and Discussion**

<sup>10</sup> The analysis was employed to prove the hypothesis in this study, namely using the Structural Equation Model (SEM) calculation with AMOS 23 software. Before proving the



hypothesis, this study would describe the respondents' characteristics. The following is the respondents' descriptive analysis:

**Table 3** Respondents' Gender

Number	Gender	Quantity	Percentage (%)
1	Male	93	46,5%
2	Female	107	53,5%
<b>Total</b>		200	100 %

Source: Primary Data (2020)

**Table 4** Respondents' Age

Number	Respondent Age	Quantity	Percentage (%)
1	17-22 year	34	17%
2	23-30 year	65	33%
3	>30 year	101	51%
<b>Total</b>		200	100 %

Source: Primary Data (2020)

**Table 5** Respondents of MSME Industry Sector

Number	Industry Sector	Quantity	Percentage (%)
1	Handicraft	74	37%
2	Culinary	89	45%
3	Fashion	37	19%
<b>Total</b>		200	100 %

Source: Primary Data (2020)

**Table 6** MSMEs' Age

No	MSME Age	Quantity	Percentage (%)
1	0-1 Year	27	14%
2	2-5 Years	94	47%
3	6-5 Years	40	20%
4	>10 Years	39	20%
<b>Total</b>		200	100 %

Source: Primary Data (2020)

**Table 7** Turnover of Month

Number	Turnover of Month	Quantity	Percentage (%)
1	< Rp 5.000.000	48	24%
2	Rp 5.000.000 – Rp 10.000.000	12	6%
3	Rp 10.100.000 – Rp 50.000.000	77	38.5%
4	Rp 50.100.000 – Rp 100.000.000	29	14.5%
5	Rp 200.100.000 – Rp 500.000.000	29	14.5%
6	Rp 500.100.000 – Rp 1.000.000.000	5	2.5%
<b>Total</b>		200	100%

Source: Primary Data (2020)

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**Table 8** Employees' Quantit<sup>12</sup>

Number	Quantity of Employees	Quantity	Percentage (%)
1	1 – 5 People	123	62%
2	6 – 10 People	49	24,5%
3	> 10 People	28	13,5%
<b>Total</b>		200	100%

Source: Primary Data (2020)

The next analysis was the analysis using the Structural Equation Model (SEM) calculation with AMOS 23 software. The sequence of the analysis steps included:

Normality Test Results

**Table 9** Normality Test

Variable	min	max	skew	c.r.	kurtosis	c.r.
KP7	2,000	5,000	-,990	-5,716	,344	,994
KP6	2,000	5,000	-,910	-5,253	,454	1,310
KP5	2,000	5,000	-,690	-3,984	,119	,344
KP4	2,000	5,000	-,768	-4,436	,258	,745
KP3	2,000	5,000	-,701	-4,050	-,099	-,285
KP2	2,000	5,000	-,494	-2,849	-,400	-1,155
KP1	2,000	5,000	-,725	-4,187	-,075	-,216
LD7	2,000	5,000	-,815	-4,706	,220	,635
LD6	2,000	5,000	-,790	-4,561	,183	,529
LD5	2,000	5,000	-,961	-5,549	,093	,267
LD4	2,000	5,000	-,637	-3,678	,054	,156
LD3	2,000	5,000	-,768	-4,436	,258	,745
LD2	2,000	5,000	-,696	-4,019	,125	,360
LD1	2,000	5,000	-,566	-3,268	,098	,282
SIP1	2,000	5,000	-,691	-3,990	,076	,221
SIP2	2,000	5,000	-,802	-4,629	,349	1,006
SIP3	2,000	5,000	-,566	-3,265	-,144	-,415
SIP4	2,000	5,000	-,758	-4,376	-,063	-,181
SIP5	2,000	5,000	-,876	-5,058	,206	,596
SIP6	2,000	5,000	-,677	-3,907	,345	,996
SIP7	2,000	5,000	-,668	-3,857	,069	,199
<b>Multivariate</b>					10,339	2,352

Source: Primary Data (2020)

The normality test results in Table 9 show that the multivariate CR value was 2.352. Therefore, the CR value was in the range  $\pm 2.58$ . Therefore, the data in this study could be said to be normally distributed.

Outliers Test Results

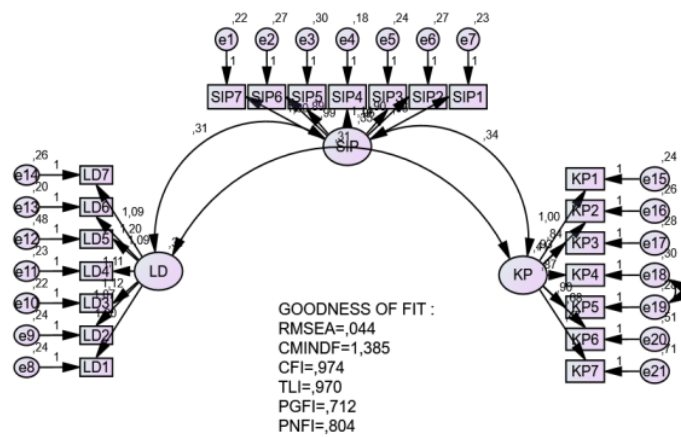
**Table 10** Outliers Test

Observation number	Mahalanobis d-squared	p1	p2
91	45,082	,002	,287
102	40,274	,007	,401
135	37,402	,015	,584
69	36,375	,020	,562
155	36,054	,022	,433
158	35,447	,025	,391
134	34,271	,034	,519
87	34,004	,036	,438
172	33,465	,041	,445
157	33,382	,042	,336
86	32,167	,056	,575
95	32,113	,057	,470

Source: Primary Data (2020)

In table 10, it was found that there were values more than 38.93, namely data 91 and 102. Data containing outliers should be removed, and after the data was removed, it could be concluded that there were no outliers data.

Confirmatory Test Results



**Figure 2** Confirmatory Analysis Results

Source: Primary Data (2020)

With the loading factor values, as in table 11:

**Table 11** Loading Factor Value

			Estimate
SIP7	<---	SIP	,786
SIP6	<---	SIP	,714
SIP5	<---	SIP	,730
SIP4	<---	SIP	,849
SIP3	<---	SIP	,756
SIP2	<---	SIP	,717
SIP1	<---	SIP	,763
LD1	<---	LD	,753
LD2	<---	LD	,772
LD3	<---	LD	,802
LD4	<---	LD	,791
LD5	<---	LD	,659
LD6	<---	LD	,831
LD7	<---	LD	,767
KP1	<---	KP	,795
KP2	<---	KP	,725
KP3	<---	KP	,750
KP4	<---	KP	,714
KP5	<---	KP	,740
KP6	<---	KP	,422
KP7	<---	KP	,340

Source: Primary Data (2020)

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From the analysis, it was found that there were two indicators with loading factor values below 0.5, namely KP6 and KP7. They should be removed from the analysis. After two invalid indicators were deleted, all indicators in this study could be said to be valid.

The Goodness of Fit Test Results

**Table 12** The goodness of Fit Confirmatory Factor Analysis

Fit Indeks	Goodness of Fit	Criteria	Cut-off value	Explanation
<b>Absolute Fit</b>	RMSEA	≤ 0.08	0.044	Fit
	CMINDF	≤ 2,00	1,385	Fit
<b>Incremental Fit</b>	TLI	≥ 0.90	0.974	Fit
	CFI	≥ 0.90	0.970	Fit
<b>Parsimony Fit</b>	PGFI	≥ 0.60	0.712	Fit
	PNFI	≥ 0.60	0.804	Fit

Source: Primary Data (2020)

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From the goodness of fit test results in Table 12, it appears that all the criteria have been fulfilled. Thus, it could be said that the model in this study has been fit.

Reliability Test Result

The reliability coefficient ranges from 0-1, so the higher the coefficient (close to number 1), the more reliable the measuring instrument. It is good construct reliability if construct reliability value > 0.7 and extracted variance value > 0.5. From the calculation, the results obtained as Table 13:

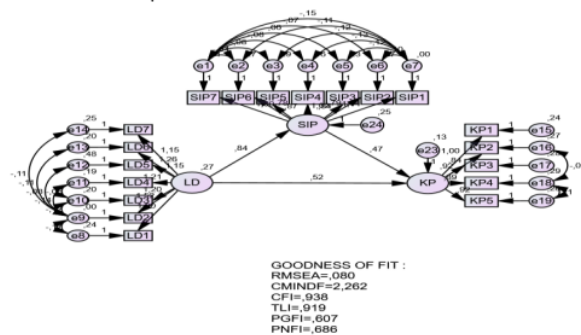
**Table 13** Reliability Test

Variable	Indicator	Loading Standard	Loading Standards <sup>2</sup>	Measurement Error	CR	VE
<b>Strategy Innovation Product</b>	SIP7	0,786	0,618	0,382	0,9	0,6
	SIP6	0,714	0,510	0,490		
	SIP5	0,730	0,533	0,467		
	SIP4	0,849	0,721	0,279		
	SIP3	0,756	0,572	0,428		
	SIP2	0,717	0,514	0,486		
	SIP1	0,763	0,582	0,418		
<b>Environment Dynamic</b>	LD1	0,753	0,567	0,433	0,9	0,6
	LD2	0,772	0,596	0,404		
	LD3	0,802	0,643	0,357		
	LD4	0,791	0,626	0,374		
	LD5	0,659	0,434	0,566		
	LD6	0,831	0,691	0,309		
	LD7	0,767	0,588	0,412		
<b>The performance Company</b>	KP1	0,795	0,632	0,368	0,9	0,6
	KP2	0,725	0,526	0,474		
	KP3	0,750	0,563	0,438		
	KP4	0,714	0,510	0,490		
	KP5	0,740	0,548	0,452		

Source: Primary Data (2020)

From Table 13, it can be seen that all variables' construct reliability had already shown  $\geq 0.7$ . As for the variance extracted in this study, each variable also had a value above 0.5. Therefore, it could be concluded that the questionnaire used for this study was declared reliable.

Model Modification and Complete GOF Test Model Result



**Figure 3** Final Model Path Diagram  
Source: Primary Data (2020)

The goodness of fit test results has shown that all criteria have been met. Besides, the model could be said to Fit, as in Table 14:

**Table 14** The Goodness of Fit Test

Fit Indeks	Goodness of Fit	Criteria	Cut-off value	Explanation
Absolute Fit	RMSEA	≤ 0.08	0.080	Fit
	CMINDF	≤ 2,00	2,262	Marginal Fit
Incremental Fit	TLI	≥ 0.90	0.938	Fit
	CFI	≥ 0.90	0.919	Fit
Parsimony Fit	PGFI	≥ 0.60	0.607	Fit
	PNFI	≥ 0.60	0.686	Fit

Source: Primary Data (2020)

#### Hypothesis Testing Result

The next analysis was the Structural Equation Model (SEM) analysis in a full model to test the hypotheses developed in this study. The regression weight test results in this study are as in table 15:

**Table 15** Regression Weight Test Results

				Estimate	S.E.	C.R.	P	Label
<b>H1</b>	SIP	<---	LD	,843	,096	8,756	***	
<b>H2</b>	KP	<---	SIP	,474	,070	6,812	***	
<b>H3</b>	KP	<---	LD	,521	,082	6,322	***	

Source: Primary Data (2020)

The hypothesis accepted or rejected could be seen at the Critical Ratio (CR) value, and the probability value (P) from the data processing results. If the test results show a CR value above 1.96 and a probability value (P) below 0.05/5%, the proposed research hypothesis is accepted. In detail, the research hypothesis testing was discussed in stages according to the hypothesis that has been proposed. In this research, four hypotheses were proposed, the discussion of which is elaborated as follows:

**H<sub>1</sub>** : The dynamic environment positively and significantly impacted product innovation strategies.

**H<sub>2</sub>** : Product innovation strategy positively and significantly affected company performance.

**H<sub>3</sub>** : The dynamic environment positively and significantly influenced company performance.

#### Mediation Testing

Mediation testing was seen from the significance of the indirect effect between variables, seen from the indirect effect-two-tailed significance table. The indirect effects' analysis results are in Table 16:

**Table 16** Mediation Test Results

	LD	SIP	KP
LD → SIP → KP	...	,004	...

Source: Primary Data (2020)

Based on Table 16, it could be concluded that:

*H<sub>4</sub>: Product innovation strategies mediated the relationship between dynamic environments and company performance.*

#### Discussion

##### The relationship between dynamic environmental variables and the product innovation strategy

The analysis results proved a significant and positive influence between the relationship of dynamic environment to the product innovation strategy at MSME in Kulon Progo district. Dynamic environments are characterized by technological changes, variations in customer preferences, changes in product demand, and changes' uncertainty (Jansen et al., 2009). Companies' dynamic environment can encourage companies to engage in the exploitation and exploration of innovation simultaneously (Chang, Hughes, & Hotho, 2011). As a result, to remain competitive in a dynamic environment, companies must pursue exploitation activities and develop new products and services as they already exist; otherwise, they will quickly become obsolete.

Product innovation is the process of introducing new products and the level of the newness of customer perception about new products. Product innovation implies increased benefits for customers related to functional or other improvements in products or services (Zaefarian, Forkmann, Mitrega, & Henneberg, 2017). Based on the above conclusions, that MSME involved in Kulon Progo district is in line with the above theory, where MSME owners could adapt to the surrounding environment, directly influencing the operating businesses. Thus, those changes in the environment made a business strive for a strategy product innovation to meet customers' needs and desires.

This research has proven that the dynamic environment influenced the product innovation strategy at SMEs in Kulon Progo Regency. This research is in line with previous research conducted by Tsai and Yang (2013), where the research proved a significant influence of a dynamic environment on innovation. In line with Prajogo (2016) research, the study's results indicated that the dynamic environment was

positively related to product innovation strategies in manufacturing companies in Australia.

#### **The relationship of product innovation strategy variables to company performance**

Based on the analysis results, it was proved that there was a significant and positive influence between the relationship of product innovation strategies to company performance at MSME in Kulon Progo district. The product innovation strategy is the scope of product improvements, such as small changes to existing products and new product development. Then, it is essential to understand how to develop new products. The company's new product development must succeed successfully (Zaefarian et al., 2017). Product innovation is successfully considered with the entire company's performance. Without successful product innovation, most companies will not be able to improve their performance. Therefore, from an innovative perspective, product innovation is the success of making innovative offers. If it is successfully applied, it will be deemed valuable by the customer.

Company performance is a picture of a company that can explain the situation of its performance results, for organizations or companies looking for profit, stability, and improvement in economic situations that ensure the commercial continuity of the company (Rehman, 2018). Based on these explanations, MSME operating in Kulon Progo district is in line with the theory explained above; namely, the MSMEs' owners realized the importance of implementing product innovation strategies to meet customers' needs and desires. It directly influenced company performance. Thus, with innovation, these products made MSME owners able to maintain or improve their performance.

This research proves that the product innovation strategy impacted its performance at MSME in Kulon Progo Regency. This research is supported by previous research conducted by Heimonen (2012); Rosenbusch, Brinckmann, and Bausch (2011) that SMEs are very innovation-oriented to develop innovative products and services; thereby, increasing the ability of innovation and offering in markets that influence company performance. Zehir, Altindag, and Acar (2011) suggest that companies that encourage the creation and introduction of new products or technologies often have superior performance results. The current research underlines the importance of innovative behavior that must be owned by the MSMEs' owners.

#### **Relationship between dynamic environment variables and company performance**

Based on the analysis results, it was confirmed that there was a significant and positive influence between the relationship of the dynamic environment on company performance at MSME in Kulon Progo district. A dynamic environment is a change marked by technological changes, variations in customer preferences, demand fluctuations; in this case, the dynamic environment causes uncertainty that leads to anxiety in the company (Jansen et al. 2009). Based on these explanations, it is clear that the dynamic environment is influenced by external factors; external factors will describe the level and stability of each company's environmental changes.



Company performance is the company's ability to achieve its goals by efficiently and effectively using all company resources (Arshad & Arshad, 2019). Company performance can be measured by using a comparison between actual output and input. Therefore, performance measurement allows organizations to emphasize units that need improvement by assessing the level of work progress in terms of cost, time, and quality together by utilizing the capacity of a larger output (Pesalj, Pavlov, & Micheli, 2018). Based on these explanations, MSME in Kulon Progo district is in line with the theory explained above. MSMEs' owners realized the importance of adapting to dynamic environments because it influenced company performance.

This study proved that a dynamic environmental influenced company performance at MSME in Kulon Progo district. This study is in line with research conducted by Munizu (2010) that a dynamic environment influenced by external factors consisted of government policies, social economy, culture, and aspects of the related institutions' role, which had a significant and positive effect on the MSEs' performance in South Sulawesi. Research with the same analysis results was also conducted by (Boyne & Meier, 2009). The dynamic environment displayed by environmental turbulence when unexpected changes occurred. The greater the unexpected changes, the greater the negative impact on company performance. If a company can predict and adapt to changes in its environment, it will positively impact company performance.

### 3 The variable relationship of the product innovation strategy mediates the relationship between the dynamic environment and company performance

Based on the analysis results, it was verified that there was a positive and significant effect on the relationship of a dynamic environment and company performance mediated by the product innovation strategy at MSME in the Kulon Progo district. (Valencia, Valle, & Jimenez, 2010) underlined that innovation determinants can be grouped as individual factors, organizational factors, and environmental factors. Environmental turbulence is the most critical feature of the contemporary business environment. Environmental turbulence with a dynamic environment has in common that it is influenced by external factors and unexpected environmental changes (Wong, 2014); (Tsai & Yang, 2014); (Wheelen & Hunger, 2012).

3 Tsai and Yang (2014) note that environmental changes can produce opportunities and obstacles to innovation. Alexiev, Volberda, and Bosch (2016) state that environmental turbulence is an aspect of the organizational environment associated with innovation. Wong (2014) affirms that environmental turbulence forces companies to leave their comfort zones and compete with new capabilities and offerings that present opportunities to develop new products, master new technologies, engage with new customers, and reach new markets at additional costs, which ultimately increase company performance.

## Conclusion

In data management, it was known that there was a positive and significant influence of dynamic environments on product innovation strategies at MSME at Kulon Progo. It was because MSMEs' owners in the Kulon Progo district realized the importance of adapting to a very dynamic environment and the ability to adapt to the environment that will encourage them to carry out product innovation strategies.

In managing data, it was known that there was a positive and significant influence between product innovation strategies and company performance at MSME in Kulon Progo district. It was because the MSMEs' owners in the Kulon Progo district realized the importance of implementing a product innovation strategy to meet customers' various needs and desires, which would have an impact on the always good company's performance.

Data management showed a positive and significant influence between dynamic environments on company performance at MSME in Kulon Progo district. It was because the MSMEs' owners in the Kulon Progo district realized the importance of adapting to a challenging predicted environment to have a positive impact on company performance.

Data management revealed that product innovation strategies positively and significantly mediated the relationship between dynamic environments and company performance. It was because the MSMEs' owners in the Kulon Progo district realized the importance of adapting to changes in a very dynamic environment so that this ability would improve company performance by implementing a product innovation strategy.

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