Relationship between Competitive Strategy and Firm Performance: Moderated by Environmental Dynamism (ED) and Competitive Intensity (CI)

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Abstract: – This study is intended to examine the effects of strategy on performance moderated by environmental dynamism (ED) and competitive intensity (CI). Survey data was obtained from Batik MSMEs in Central Java - Indonesia. Sampling was carried out in the Yogyakarta, Surakarta, Pekalongan, and Rembang areas with a total sample of 150 Micro, Small, and Medium Enterprises (MSMEs). The results show that the effect of differentiation strategy (DS) on performance is stronger in more dynamic environments. However, this environmental dynamism (ED) weakens the effect of cost leadership strategy (CLS) on firm performance. Furthermore, competitive intensity can increase the effect of CLS and decrease the effect of DS on firm performance.

Key-Words: - differentiation strategy, cost leadership strategy, environment dynamism, competitive intensity, firm performance, MSMEs.

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1 Introduction

Based on the resource-based view (RBV), the firm's capabilities determine sustainable competitive advantage (SCA) and firm performance (FP), [1]. However, a competitive advantage requires resources that are valuable, rare, hard to imitate and have no substitutes, [2]. Furthermore, competitive strategy influences FP and creates competitive advantage, [3]. Furthermore, this advantage can be achieved through the company's strategic activities. By developing strategic activities (differentiation and cost leadership), CA can be achieved, [4]. These strategies will generally affect FP, [5], [6]. Meanwhile, tactically, this strategy is a company's action in choosing its strategy, [2]. Therefore, firms need to carry out strategies to improve their performance.

Previous studies show that the effect of strategy on performance shows inconsistent results, [7], [8], [9], [10]. On the other hand, firm strategy hurts FP, [11], [12]. When the relationship between two variables in a model is inconsistent or weak, this can be overcome by including a contingency variable that functions as a moderator variable, [13].

The two moderating variables most widely used in business research are environmental dynamism (ED) and competitive intensity (CI), [14]. ED refers to environmental changes that can affect the relationship between strategy and performanc. [15], [16], [17], [18], [19], [20]. Meanwhile, the CI in an industry puts pressure on each other and limits each other's potential profits, [14], [21]. In addition, previous studies focused more on large firms and construction in developed countries, [12], [22], [23], [24]. Therefore, this study aims to fill this gap by studying the effects of ED and CI that moderate the strategy-performance relationship in MSMEs in Indonesia. Testing for moderation effects can clarify that the strength of strategy's influence on performance is determined by ED and competitive intensity.

2 Literature Review and Hypothesis Development

2.1 Competitive Strategy and Firm Performance (FP)

A company's sustained success depends on its capability to attain either a CLS or DS, both of

which stem from the industry's structure, [3]. Therefore, firms can sell their products at prices that exceed production costs by differentiating products to obtain premium prices or produce products at lower costs than their competitors. In high competition, firms can reduce their capabilities with low-cost strategies. On the other hand, in a more oligopolistic (less competitive) industry, firms can influence prices by showing different product positions.

In competition, firms need a strategy which provides a competitive advantage through its strategic activities, [2], [25]. In developing these strategies, it can be done by increasing consumer utility according to changes in consumer needs. The next effect of competitive strategy is the creation of conditions for sustainable competitive advantage. However, the firm's resources will impact the competitive strategy. The more resources a company has, the better its ability to create strategies, which in turn leads to improved performance. Additionally, enterprises have the option to select differenttiation strategy (DS) or cost leadership strategy (CLS), [4]. DS is a form of strategy where a firm attempts to be different from others or unique in its industry along several dimensions widely valued by buyers, [4]. Aspects like solid brand recognition, creative marketing methods, management of distribution channels, and advertising play a role in the DS. Additionally, the DS needs to solidify its position in order to generate a premium that surpasses the costs incurred by the strategy, [26]. Therefore, in carrying out a DS, firms must be able to improve product quality and brand so that customer loyalty can be maintained.

While DS may not always lead to improved performance according to some studies [12], much of the strategy literature has confirmed that DS enhance organizational performance, [9]. Others DS positively impacts both financial and operational performance, [27], [28], [29]. Therefore we propose :

H_1: DS has a positive effect on FP.

Furthermore, in comparison [30] describes that the CLS is the ability to produce cost efficiencies without delving into the basis for differentiation. A CLS should produce a product comparable to its competitors but at lower costs [26]. A CLS refers to a series of combined actions to create products that customers want and at the lowest possible cost compared to competitors, [31]. Firms will gain profits and control prices that are almost the same as the industry average if they implement cost savings such as operating, sales, facilities, services, and research and development costs, [32], [33]. By implementing this CLS, the firm's operational and financial performance will be improved. The CLS and performance relationship is supported by previous research that shows that CLS has a positive correlation with the performance of a firm, [10], [12], [34], [35], [36]. Therefore, in this research, a hypothesis is proposed:

H_2: CLS has a positive effect on FP.

2.2 The Moderating Effect of Environmental Dynamism (ED)

The business environment broadly refers to the conditions around an object or business. The firm's dependence on other organizations is a source of uncertainty, [37].

ED is a component of the surroundings that represents the frequency of changes and shifts in marketing forces felt in the external/task environment, [38]. Dynamism as uncertainty indicates the pace at which innovation is evolving within a particular sector, and the unpredictability of competitors' and customers' actions, [39]. Furthermore, ED refers to the rate and strength of changes in the environment, [40]. This construct is referred to as environmental variability or volatility [41] and is considered a dimension of environmental uncertainty, [42]. ED indicates changes in technology, customer preferences, and competitor actions. The higher the level of change in these dimensions, the more dynamic the environment. Thus, companies will face technological and market changes, shorter product life spans and uncertain competitor actions. Firms in this scenario will encounter the risk of their products becoming outdated and competition in the market, therefore they need to innovate by creating new products, exploring new markets, and advancing technologies. When firms operate in a ED, they need to concentrate on the process of innovation when creating new products and exploring new markets, [43].

As mentioned earlier, the main focus of this paper is to investigate the role of ED in strengthening or weakening the effect of DS and CLS on FP. In particular, uncertainty in the environment plays a key role in moderating the connection between factors unique to the firm and its performance, [44]. According to contingency theory, in organizing, leading and making company

decisions there is no best way except to adjust to the internal and external conditions of the company. Hence, the beneficial impacts of DS on firm's success will be greater in more dynamic environmental conditions. Therefore, firms that innovate their products will be able to maintain and increase their sales and share. On the other hand, firms that are unable to innovate their products will fail to increase their sales and share, [45]. Thus, Batik MSMEs in Indonesia that implement DS by trying to improve the quality and innovate their products are more prone to thrive in a changing environment compared to those lacking differentiation. Firms will have high performance if they implement a DS (quality, delivery, flexibility) as a response to ED, [46]. This argument is also in line with the strategic fit view, where firms can produce good performance when their strategy aligns with the external business environment, [47]. Moreover, various past research has indicated that the effect of strategy on FP is more robust in highly dynamic environmental conditions, [16], [17], [18], [19], [20]. Therefore, in this research, a hypothesis is proposed:

H_{3a}: The higher levels of ED strengthen the positive effect of DS on FP.

Consumers of batik products in Indonesia do not care more about product quality but more care about lower prices. MSME players tend to reduce human resource costs and other transaction costs such as raw material, distribution, and financial costs, [35], [48]. For Batik MSMEs in Indonesia and other developing countries, it may be easier to gain positive benefits from a CLS in less dynamic situations. Furthermore, in an environment that is less conducive or less dynamic, a CLS can enhance the performance of a firm, [49]. Thus, we contend that implementing a low-cost approach will enhance performance in times of unfavourable environmental changes. Therefore, in this research, a hypothesis is proposed:

H_{3b}: The higher level of ED weakens the positive effect of CLS on FP.

2.3 The Moderating Effect of Competitive Intensity (CI)

Competition implies the behavior displayed by an organization's competitors to gain an advantage over others, [50]. CI is an environmental factor that reflects the competitive action of an industry, [51]. Thus, increasing competition means that organizations become more aggressive in fighting competitors, [52]. The level of competition within an industry can be evaluated based on the quantity of competitors, the degree of product differentiation offered, the nature of the technology used, the prices offered and the services provided, [53]. According to the Structure-Conduct-Performance paradigm, a firm's capacity to achieve excellent performance diminishes when faced with strong competition, as the competitive pressure hinders the firm from effectively executing its strategic measures during competition, [54].

An organization that fails to implement strategies in dealing with its competitors will not be able to achieve its goals, [55]. At high CI, management always looks for the best way to maintain or increase existing market share, [56]. Academics have debated for a considerable time about the impact of competition on FP, [57]. In general, firms develop solutions to achieve targets because of the threat of decreasing profitability due to firms operating passively in high competition, [58], [59]. The CI brings uncertainty that influences firm decisions, [60], [61], [62]. Thus, the nature of CI in an industry motivates for management to design strategic programs. Therefore, the influence of CI determines the effect of strategy implementation on FP, thus determining the firm's strategic actions, [52].

CI is commonly used as a moderating variable in management research according to many studies, [63]. High CI will reduce a firm's ability to obtain superior performance because it puts pressure on implementing strategic actions to compete effectively, [64], [65]. Previous studies have identified that CI negatively moderates the effect of strategy on FP, [64]. As a result, the greater competitiveness will lessen the strong effect of innovation and firm success. Therefore, in this research, a hypothesis is proposed:

H_{4a}: The higher levels of CI weaken the positive effect of DS on FP.

On the other hand, the increasing intensity of competition requires firms to implement CLS, especially for MSMEs that have a client base that is relatively price-conscious. This relationship is supported by several previous findings which reveal that CI enhances the positive effect of CLS on FP, [10], [66], [67]. Therefore, in this research, a hypothesis is proposed:

H_{4b}: The higher levels of CI strengthen the positive effect of CLS on FP.

Based on literature reviews and hypothesis development, we propose a research model shown in Figure 1.

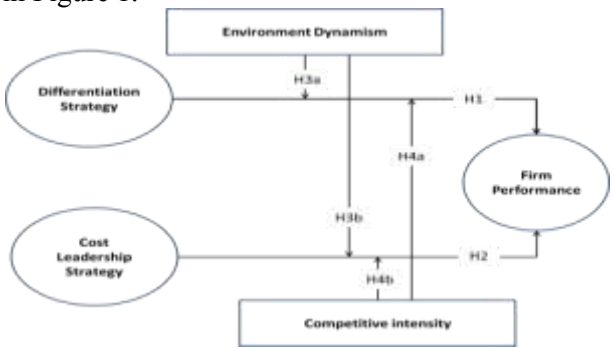

Fig. 1: Research Framework

3 Method

3.1 Data Collection and Analysis

This research is quantitative research conducted through a survey implemented by Batik MSMEs in Central Java and the Special Region of Yogyakarta, Indonesia. The sample size is determined according to [68], determined by the quantity of observations and variables in the model. Therefore, 150 questionnaires were distributed directly to Batik MSME owners in Batik Industry Centers in Surakarta, Pekalongan, Yogyakarta, and Rembang as in Table 1.

Table 1. Research sample descriptions

Indicator		Freq.	%
Location	Yogyakarta	36	24.00
	Surakarta	25	16.67
	Pekalongan	84	56.00
	Rembang	5	3.33
Gender	Male	94	62.67
	Female	56	37.33
Education	Elementary School	3	2,00
	Junior High School	22	14,67
	Senior High School	55	36,67
	Bachelor	66	44,00
	Master	4	2,67
Total manpower	1-10	118	78.67
	11-20	21	14.00
	>20	11	7.33

3.2 Measurements

The measurement information for all variables utilized in this study uses firsthand information from respondents' opinions. This information was collected by distributing a closed questionnaire with a Likert scale. (1) **Competitive strategy.** According to [4], competitive strategy variables are differentiated between DS and CLS. The assessment of the DS involved 6 items and CLS using 5-items, both of which were adopted from previous research, [35], [49]. (2) **Firm performance.** Due to the unavailability of objective data regarding the performance of MSMEs, FP information was measured subjectively by requesting participants to evaluate their companies according to their achievements measures of profit, sales, number of customers, market, and costs, which were adopted from previous research [68], with 5 statement items (increase in profit; sales, number of customers, market and cost reduction). (3) **Enviroment dynamism**. In this study, we adopted and used a set of items that have been used in previous research, [69], [70]. ED includes three dimensions: dynamism in industry, competition, and consumers. (4) **Competitive intensity**. CI refers to the degree of competition that a company encounters. This intensity is measured by the number of companies and market share, [71]. This research uses 3 statement items (the intense competition, the existence of strong competitors, and the existence of intense price competition) that were adopted from previous research, [58], [72].

4 Results and Discussion

4.1 Validity and Reliability

Before running the model estimation, the primary data collected by questionnaire needs to undergo assessment for accuracy and consistency. PLS-SEM consists of two validity types.

First, convergent validity describes how much a measure correlates with other measures within a construct. To determine convergent validity, factor weights (FL) and average variance extracted (AVE) values were used. Suggested indicator loadings are in the range of 0.70 and statistically significant at 0.05 or lower (equal to t-statistic ± 1.96). However, values between 0.40 and 0.70 are justified. Therefore, each item is considered a satisfactory item when the item loading is larger than 0.70 [68]. The outcomes of the validity test show that the measures have demonstrated convergent validity with a loading coefficient exceeding 0.7. In PLS, a satisfactory AVE value is 0.50 or above, showing that the construct accounts for at least 50 percent of the variance in the items, [73]. Table 2 (Appendix) displays that the AVE value for each variable

exceeds 0.5. Therefore, these variables meet the validity requirements for further analysis.

Second, discriminant validity is when two distinct concepts must demonstrate sufficient differentiation, showing they are conceptually different. This discriminant validity illustrates that the variants of a latent variable have similarities compared to other latent variables. Based on [74], if the square root of AVE is greater than the correlations between other latent variables, then the latent variable is valid. Table 3 (Appendix) demonstrates that all latent variables meet the necessary criteria for discriminant validity. While to assess reliability is based on the results of the Cronbach's Alpha (CA) and composite reliability (CR) values. Although many authors determine that the lower limit of the CA value is 0.7 [74], [75], in empirical CA 0.6 is also acceptable, [76]. Meanwhile, the rule of thumb used for the CR value is more than 0.7, [77]. Table 2 (Appendix) displays the values for CA and CR. These results illustrate that the variable items studied meet the reliability requirements.

4.2 Hypotheses Testing and Discussion

4.2.1 Direct Effect

Table 4 (Appendix) displays a synopsis of the findings from hypothesis testing. The hypothesis is tested by comparing the t value to 1.96 or the significance value to 0.05. The hypothesis is supported if the t value is more than 1.96 or the probability value is smaller than 0.05.

H_1 suggests that FP is positively correlated with DS. The analysis findings indicate that adopting a DS positively influences FP (b = 0.291; t >1.96; p < 0.050). These findings support H_1. Thus, if a firm implements a strategy to improve the quality of its products that can make it different from its competitors, it will increase sales, number of customers, market size, and profits. These findings align with prior studies that demonstrate a positive correlation between DS and FP, [27], [28], [29]. Thus, implementing a DS for Batik MSMEs in Indonesia can improve FP.

Furthermore, H_2 proposes that CLS has a positive correlation with FP. The correlation between the two factors indicates that implementing a CLS greatly improves FP (b = 0.516; t >1.96; p < 0.050). These findings support H_2. Thus, if a firm implements a strategy to reduce the costs incurred, it will improve its performance (sales, number of customers, market size, and profits). This result is in line with the results of previous empirical research which shows that CLS has a positive effect on FP, [12], [10], [34], [35], [36], [75]. Thus, implementing the CLS in Batik MSMEs in Indonesia can increase FP.

The CLS coefficient holds more value than the DS coefficient, suggesting that the CLS plays a bigger role in enhancing FP. Therefore, Batik MSMEs should emphasize a CLS by developing strong skills in negotiating with suppliers, controlling all costs, and maximizing the use of existing capacity.

4.2.2 Moderation Effect

The moderation effect test was carried out using the interaction method, [76]. H_{3a} suggests that the impact of DS on FP is influenced by ED, with higher levels of dynamism enhancing the positive effect of DS on FP. Table 4 (Appendix) displays the significant positive beta coefficient that indicates the presence of this moderation effect (b = 0,218; t >1,96; p <0,050). These findings support H_{3a}. In other words, the positive influence of DS on FP increases as ED increases. This finding aligns with prior studies showing that ED can can enhance the beneficial impact of DS on FP, [16], [17], [18], [19], [20]. Furthermore, to describe the moderation or interaction effect we use plus one standard deviation, minus one standard deviation, or average, [77]. Figure 2 presents the flow of this interaction, which shows the effect of DS on FP in varying levels of ED: +1 SD (standard deviation), average, and -1 SD (standard deviation). Additionally, we carried out a basic slope analysis, revealing that the slope of DS on FP is positive and significant in situations of high ED. This figure illustrates this relationship which shows that as ED increases, the impact of DS on FP becomes stronger. This provides further support in support of H_{3a}.

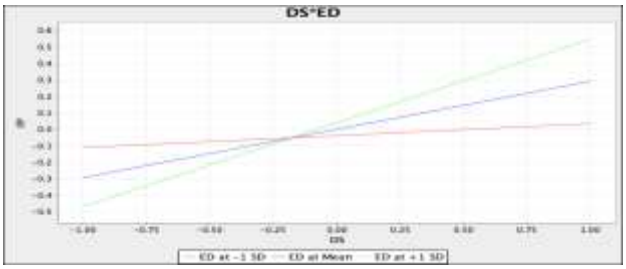

Fig. 2: Effect of interaction between DS (differentiation strategy) and ED (environmental dynamism) on FP (firm performance)

H_{3b} proposes that CLS and FP is influenced by CI such that higher levels of CI strengthen the positive effect of CLS on FP. Table 4 (Appendix) shows the significant positive beta coefficient indicating the presence of this moderation effect (b = -0,217; t >1,96; p <0,050). Thus, there is support for H3b. Put simply, the beneficial impact of CLS on FP diminishes with increased ED. Figure 3 presents the flow of this interaction, demonstrates how the level of ED influences the connection between CLS and FP. The illustration indicates that the CLS greatly impacts FP in situations of low ED. Furthermore, these negative effects are reduced when the ED becomes stable and not dynamic. This provides further support for H_{3b}. This finding is by previous research which shows that a CLS is more advantageous for enhancing financial results in an unfavorable setting [49]. However, in a better ED, the impact of implementing a DS on overall performance will be greater.

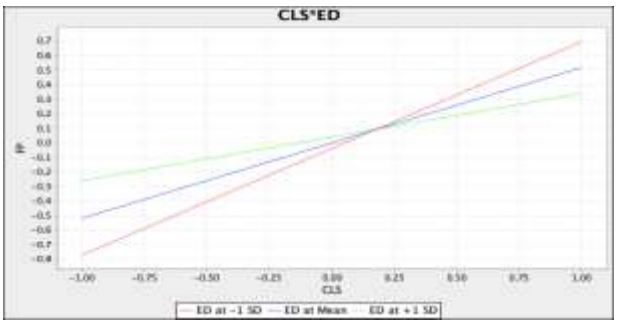

Fig. 3: Effect of interaction between cost leadership strategy (CLS) and environmental dynamism (ED) on firm performance (FP)

H_{4a} proposes that higher levels of CI weaken the positive effect of DS on FP. Table 4 (Appendix) shows a negative beta coefficient representing this moderating effect (b = -0,100; t <1,96; p >0,050). Thus, this finding is not sufficient to accept H_{4a}. In other words, the positive influence of DS on FP is not significant when CI is high. Figure 4 presents the flow of this interaction, which shows the effect of DS on FP in the presence of different CI condition: +1 SD (standard deviation), average, and -1 SD (standard deviation). This figure shows that the effect of DS on FP is partially and negatively determined by CI. This figure strengthens the rejection of H_{4a}. This preliminary finding aligns with the findings of past studies which indicates that increased levels of CI can weaken the beneficial link between DS and firm success, [64], [78].

H_{4b} states that higher levels of CI strengthen the positive effect of CLS on FP. Table 4 (Appendix) displays the significant positive beta coefficient that indicates a moderation effect (b = 0.175; t >1.96; p <0.050). Therefore H4b is supported. Thus, the impact of utilizing CLS on FP is more pronounced in situations of high CI.

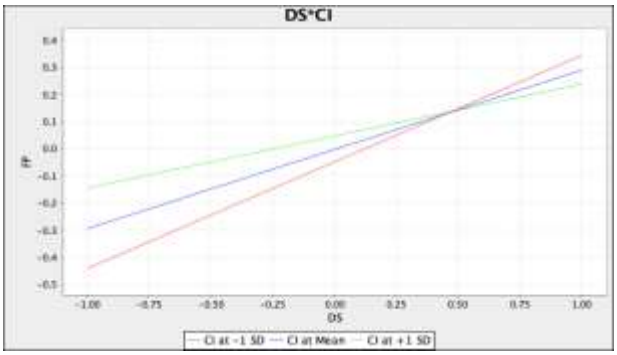

Fig. 4: Effect of interaction between differentiation strategy (DS) and competitive intensity (CI) on firm performance (FP)

The findings align with prior studies indicating that the connection between CLS and FP is more pronounced in highly CI, [10], [66], [67]. Figure 5 illustrates how CLS and CI impact on FP through interaction flow, which shows the effect of CLS on FP in the presence of CI: +1 SD (standard deviation), average, and -1 SD (standard deviation). The figure illustrates that if the CI are high, CLS will have a more pronounced impact on FP. Conversely, low intensity will weaken the impact of CLS on outcomes. This picture strengthens support for the acceptance of H_{4b}.

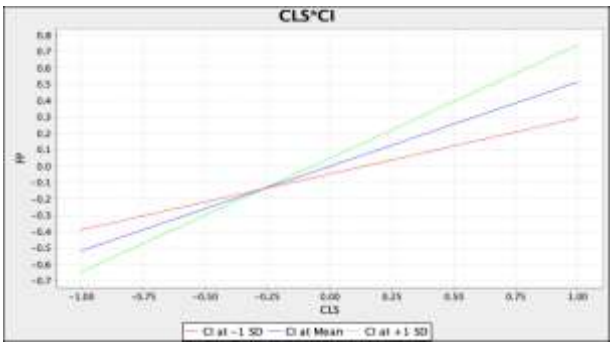

Fig. 5: Effect of interaction between cost leadership strategy (CLS) and competitive intensity (CI) on firm performance (FP

5 Conclusion and Suggestion

5.1 Conclusion

This research examines how ED and CI influence the link between strategy and performance in MSMEs in emerging markets (e.g. Indonesia). Can including moderating variables (ED and CI) impacts how strategy influences performance?. These results explain how business environmental factors are directly considered in individual decision-making behavior in firms in developing countries. For this purpose, we tested our model empirically by analyzing a sample of 150 Batik MSMEs in Central Java Indonesia using SEM analysis. These findings indicate that DS and CLS significantly have a positive effect on FP. Additionally, it is recognized that environmental complexity has a positive moderating effect on the correlation between DS and MSME performance, while it has a negative moderating effect on the relationship between CLS and MSME performance. While the level of competition enhances the impact of CLS on MSME's performance, it does not have the same effect on the relationship between DS and MSME's performance.

5.2 Recommendation

The high level of environmental change is appealing for development, therefore MSMEs should prioritize DS over CLS. Meanwhile in highly competitive environments, MSMEs should opt for a CLS instead of a DS and vice versa. Therefore, MSME managers and owners must increase their knowledge and skills in applying company strategies by attending training. In addition, MSME managers can motivate their employees to improve their skills and knowledge so as to achieve high FP. For this purpose, collaboration can be carried out with other regulatory bodies, such as chambers of commerce and industry, and the study center in Indonesia aims to enhance the skills and knowledge of small and medium industries on these concepts. Future research needs to address the various limitations of this study:

1) This research utilized cross-sectional data; upcoming studies could employ longitudinal research to grasp the traits of strategic variables, ED, and FP over time in emerging MSME markets;
2) This research uses subjective measurements, further research can be done not only using primary data but can be supplemented with secondary data so that the results are more reliable.;
3) Finally, further research can include leadership and organizational culture variables so that the model is more complete and comprehensive in answering firm performance.

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APPENDIX

Table 2. Construct reliability and indicator factor loadings

Construct, Label, and indicators	Factor Loadings	CA	CR	AVE
Differentiation Strategy (DS)				
DS-1. We are always developing new products	0,800	0,867	0,900	0,600
DS-2. We use new methods to create superior products	0,741			
DS-3. We offer unique products	0,782			
DS-4. We try to create a name and image for the product	0,763			
DS-5. We offer new products more often	0,810			
DS-6. We always increase advertising intensity	0,749			
Cost Leadership Strategy (CLS)				
CLS-1. We can negotiate with suppliers to reduce material prices	0,888	0,875	0,910	0,672
CLS-2. We always strive to control all costs	0,897			
CLS-3. We can find ways to reduce costs	0,845			
CLS-4. We can utilize the maximum capacity we have	0,745			
CLS-5. We can offer lower prices than other firms	0,706			
Environment Dynamism (ED)				
ED-1. Environmental changes support our market growth	0,918	0,813	0,890	0,732
ED-2. Competitors tend to make product changes	0,721			
ED-3. Our customers regularly request new products & services	0,912			
Competitive Intensity (CI)				
CI-1. The level of competition in our market is very high.	0,809	0,832	0,899	0,747
CI-1. Our organizational unit faces a fairly formidable rival.	0,903			
CI-1. Competition based on prices is a defining feature of our market.	0,879			
Firm Performance (FP)				
FP-1. Our profits have increased	0,895	0,912	0,935	0,745
FP-2. Our sales have increased	0,928			
FP-3. We can lower costs	0,737			
FP-4. Our number of customers is increasing	0,826			
FP-5. We can expand the market	0,914			

Table 3. Correlations and square roots of average variance extracted

	CI	CLS	DS	ED	FP
CI	(0,865)				
CLS	0,723	(0,820)			
DS	0,528	0,721	(0,775)		
ED	0,608	0,396	0,417	(0,856)	
FP	0,583	0,753	0,701	0,332	(0,863)

Notes: The square roots of the average variance extracted are shown in parentheses. CI = competitive Intensity, CLS = Cost leadership strategy, DS = differentiation strategy, ED = environment dynamism, FP = firm performance

Table 4. Hypotheses test results

		Expected	Original Sample (O)	T Statistics (|O/STDEV|)	P Values	Keputusan
H_1	DS → FP	+	0,291	3,521	0,000	Supported
H_2	CLS → FP	+	0,516	4,844	0,000	Supported
H_{3a}	DS*ED → FP	+	0,218	2,880	0,004	Supported
H_{3b}	CLS*ED → FP	-	-0,217	2,508	0,012	Supported
H_{4a}	DS*CI → FP	-	-0,100	1,019	0,308	Not Supported
H_{4b}	CLS*CI → FP	+	0,175	2,127	0,034	Supported