




# “The role of innovation in business strategy as a competitive advantage: Evidence from Indonesian MSMEs”

<b>AUTHORS</b>	Elkana Timotius  
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Elkana Timotius, Dr., Assistant  
Professor, Department of Industrial  
Engineering, Faculty of Engineering  
and Computer Science, Universitas  
Kristen Krida Wacana, Indonesia.



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Elkana Timotius (Indonesia)

# THE ROLE OF INNOVATION IN BUSINESS STRATEGY AS A COMPETITIVE ADVANTAGE: EVIDENCE FROM INDONESIAN MSMES

## Abstract

The rapidly changing business climate and competition that has been getting stricter demand companies to have a proper strategy to grow and sustain their business. The objective of this quantitative study is to analyze the benefits of innovation in business strategy to create a competitive advantage for micro, small and medium enterprises (MSME). Inferential statistical analysis was performed on three mediating variables: people innovation, process innovation, and product innovation, in their involvement in business strategies as an independent variable, against competitive advantage as a dependent variable. Twenty-nine MSMEs in Indonesia were used as a sample of this study to examine four hypotheses. Thirty indicators of five variables were transformed into 50 questions in a Likert-scale questionnaire distributed to selected respondents using purposive sampling. The results of the T-test show that business strategy has a significant effect on competitive advantage, which means that business strategy without innovations creates only 20.2% of its competitive advantage. On the other hand, Sobel test results demonstrate that innovations significantly mediate the influence of business strategies on companies' competitive advantages. Finally, product innovation potentially increases the competitive advantages by 53.1%, followed by process innovation and people innovation by 47.2% and 44.5%.

## Keywords

business competition, business model, people  
innovation, process innovation, product innovation

## JEL Classification

J24, L25, M13, O14, O31

## INTRODUCTION

All business sectors must change their business model to excel in competition. Innovation involvement as part of business strategy is expected to be the strength of a company to grow and sustain. Unfortunately, not all companies encourage innovation in their business activities. It is because innovation is commonly associated with the application of advanced technologies that require significant investments to ignore other aspects that are no less important.

Continuous innovation is one of the demands in today's modern industrial era. The existence of digital technology increasingly encourages all business sectors to adapt and modify their business models. Relying on the company's popularity, networks, and capital to excel in competition is no longer a critical performance. The dynamics of the business world have changed dramatically. Innovation encourages companies to improve their activities, or at least improve the ability to survive in increasingly unpredictable conditions (Adam & Alarifi, 2021). Unfortunately, many companies, especially micro, small and medium enterprises (MSMEs), ignore the role of innovation in their

business. As a result, they are reluctant to involve innovation as part of their business strategy. Cantwell (2017) believes that one of the keys to success in the global business environment is the speed with which companies innovate effectively and adapt to change.

Although micro, small, and medium enterprises are classified differently in each country, according to Gherghina et al. (2020), their existence is crucial for economic growth. Generally, its classification is determined based on the amount of income, assets owned, and the number of employees employed. In Indonesia, based on government regulation number 7 of 2021, micro-scale businesses have a business capital of fewer than 1 billion rupiahs (about 69,000 USD), and their annual income is a maximum of 2 billion rupiahs (138,000 USD). Small-scale businesses have a capital of between 1 to 5 billion rupiahs (69,000-345,000 USD) with annual revenues between 2 and 15 billion rupiahs (138,000-1,035,000 USD), and medium-sized businesses own a capital between 5 to 10 billion rupiahs (345,000-690,000 USD) with revenues between 15 to 50 billion rupiahs a year (1,035,000-3,450,000 USD). Business capital does not include the land assets and buildings.

MSMEs are an indicator of economic conditions, at least in Indonesia (Hamza & Agustien, 2019). Juminawati et al. (2021) found a 90.1% influence of MSMEs in Indonesia on national economic growth. They proved that MSMEs could encourage economic equality, increase employment opportunities, contribute foreign exchange to the country, and help meet the community's needs. 2021 data reinforce that MSMEs contribute 61% to Gross Domestic Product, absorb 97% of the total workforce, and collect 60% of total investment in Indonesia (Nurhaliza, 2022). However, the fact that MSMEs lose the competition because they failed to empower their resources cannot be denied. Moreover, MSME entrepreneurs need more knowledge to innovate as part of their business strategy. As a result, they have no competitive advantage.

The Ministry of Cooperatives and Small and Medium Enterprises noted that 99.9% or 65.4 million businesses in Indonesia are micro, small, and medium-sized enterprises (Mahdi, 2022). The most are micro-scale businesses, which are 64.6 million, followed by small-scale businesses (798 thousand) and medium-sized enterprises (65 thousand). This figure continues to increase by about 2-3% every year. About 17.2 million MSME actors were connected to the digital ecosystem in February 2022 and are targeted to be 30 million MSMEs by 2024 (Catriana, 2022). This leads to the fact that MSMEs must have a competitive advantage through innovations in their business strategies. It is also built on the thinking of Yuan et al. (2020) that companies with innovation-oriented strategies will work better and survive the development of the times. In short, it is imperative and urgent for MSMEs to innovate in their businesses, particularly in Indonesia.

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## 1. LITERATURE REVIEW AND HYPOTHESES

Business activities are a dynamic process. It takes a good plan before running a business activity. However, even though it has been planned, the implementation of business activities can still change depending on the actual situation. Therefore, a company needs to be careful and dexterous when carrying out business activities. Business performance is determined by the company's business strategy (Karel et al., 2013).

Yuliansyah et al. (2017) formulated a business strategy as policies set by a company and used it as

a guideline for carrying out various business actions. Business strategy must be performed with a strong commitment and in an integrated process to build competitive advantage as a business goal. Business strategies are developed to minimize problems during the implementation and prepare the anticipations. Many business strategies can be implemented. However, without proper structured strategic planning, any business strategy can fail (Barbosa et al., 2018).

A business strategy must be able to optimize the resources owned by a company, including its advantages and disadvantages. Business strategies should be reviewed continuously and updated as

soon as necessary. Therefore, business strategy variables are shaped by indicators when the company's management is committed to:

- 1) identifying strengths, weaknesses, opportunities, and threats;
- 2) choosing a strategy;
- 3) developing its vision; and
- 4) measuring its performance in an integrated manner.

Competition in business is normal and reasonable. It cannot be avoided, let alone stopped. All businesses must face competition. Therefore, all businesses must have a competitive advantage if they do not want to lose to compete. Tobing et al. (2018) reported that the competitive advantages of MSMEs are indicated by implementing innovative ideas. The higher the ability of MSMEs to apply innovative ideas, the greater the competitive advantage owned by MSMEs. Sabihaini and Prasetyo (2020) also agree that innovation is part of the strategy to achieve a competitive advantage; the right strategy is believed to improve overall business performance. To achieve a competitive advantage, Qosasi et al. (2019) suggest that MSME entrepreneurs can take advantage of technology to be more agile when competing with their competitors.

Competitive advantage is capital for companies to face competition (Alalie et al., 2018). Competitive advantage is the added value for a company. Therefore, every company must have added value to distinguish itself from its competitors (Strakova et al., 2021). Referring to the value chain analysis proposed by Porter (1985), a company is encouraged to analyze its internal activities, both main and supporting activities, to determine its advantages and disadvantages. The main activities in the value chain are:

- 1) inbound logistics;
- 2) operations;
- 3) outbound logistics;
- 4) marketing and sales; and
- 5) service.

Supporting activities in the value chain are:

- 1) procurement;
- 2) technology development;

- 3) human resources management; and
- 4) firm infrastructure.

This study uses these activities as nine indicators for competitive advantage variables. Innovation, defined differently by Kogabayev and Maziliauskas (2017), is a significant action taken to develop and make all activities economically productive. There is a link between innovation that results in productivity and business performance. Aini et al. (2013), analyzing hundreds of MSMEs in Indonesia, found that the ability to innovate is essential for business performance. They strongly recommend that MSME players innovate through the development of learning orientation, especially in information technology. The same opinion was also conveyed by Susanto and Wasito (2017) that innovation is a driver of MSME performance, so organizations need to develop a culture of strategic and structured innovation.

In subsequent developments, innovation is not only related to technology, but non-technological innovation also pays attention to other things that are more complex and engaged in business (Edwards-Schachter, 2018; Nguyen-Thi & Mothe, 2010; Pereira & Romero, 2013). Lemonis (2022) advises entrepreneurs to carefully prepare people, processes, and products to achieve business success. Innovation needs to be done toward people, processes, and products. Human empowerment in business is more important than just focusing on consumers because if one successfully manages people, the business can succeed more successfully because they are the ones who will manage the business. Likewise, with processes, a business relies heavily on the optimality of the processes because it is related to costs, systems, and how to utilize them. Finally, products, including services, produced by entrepreneurs must meet consumers' needs and expectations, even if they can exceed them or at least well than competitors. These three innovations need to be utilized in business strategies because they can create a competitive advantage for MSMEs.

Humans are living things that need to socialize. Unlike machines, humans have the initiative to do an activity that they desire. However, such initiatives must be managed to adapt to the organization's goals (Akram et al., 2011). According to

Sartori et al. (2013), humans are a positive psychological capital for organizations, so they need to develop people innovation in organizations. People innovation is related to developing ideas, skills, and competencies that benefit organizations. Lasisi et al. (2020) recommend that organizations carry out people-based innovations by focusing on:

- 1) cooperation training;
- 2) cohesive development;
- 3) increasing trust in each other; and
- 4) strengthening support from colleagues.

The study made the four recommendations as indicators of people innovation variables. Business processes are continued phases as interrelated activities that determine the final result. To optimize it, business processes require an innovative strategy to carry out activities effectively, use funds efficiently, and benefit optimally (Scafuto et al., 2018; Widya-Hasuti et al., 2018). Ashok et al. (2016) define process innovation as a new or significantly improved implementation for added value for its users. However, Žižlavský (2013) reported that process innovation is not aimed at improving a single activity but continuing activities that are included in all business processes. Process innovation improves every phase of continuous activity, such as:

- 1) order acceptance process;
- 2) material handling process;
- 3) production process;
- 4) quality control process;
- 5) inventory process;
- 6) delivery process;
- 7) data recording process; and
- 8) customer service process.

The eight processes act as research indicators for process innovation variables. Products, including services, are the keys to business continuity as the consumers will pay for products or services offered. The willingness of consumers to pay supports companies in financing their activities. Therefore, product innovation is needed. Waribugo et al. (2016) define product innovation as an effort to improve the quality and benefits of products that can significantly satisfy their users. They believed that product innovation could arouse consumer

motivation to buy the product. The five indicators for product innovation variables used in this study refer to Maier (2018), namely:

- 1) display;
- 2) usefulness;
- 3) durability;
- 4) quality; and
- 5) competitiveness in the market.

Empirical conditions have demonstrated the enormous contribution of MSMEs to the national economy, while theoretical studies demand that MSMEs must have a competitive advantage through innovation. Both things lead to an important and urgent question: how much the benefits of innovation in business strategies will become a competitive advantage for MSMEs? Moreover, the literature review supports the need for innovations in a business strategy for a competitive advantage. It further supports the need to establish if such is occurring in the current business setting, even more so from a lower middle-income country perspective such as Indonesia.

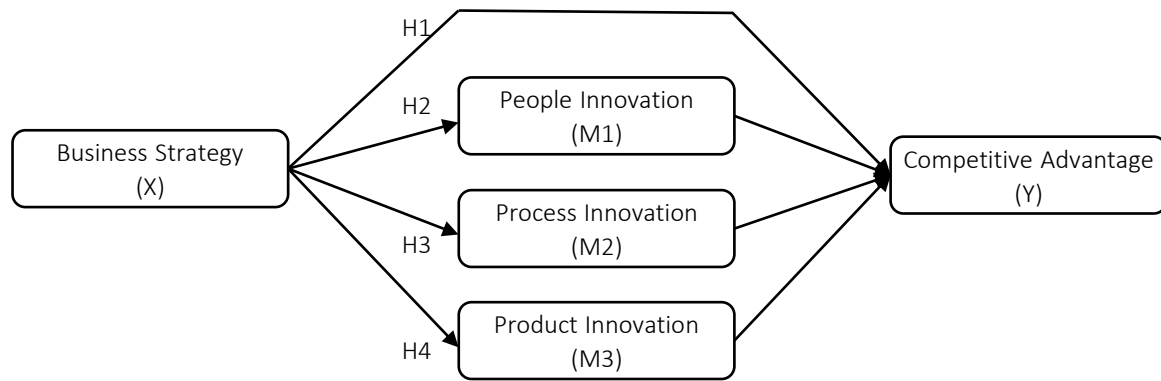
This study is motivated to help MSME entrepreneurs understand the magnitude of the benefits of people innovation, process innovation, and product innovation in business strategies to generate competitive advantages. The influence and relationship between these variables are revealed through this quantitative study. The findings will be helpful for MSME entrepreneurs to prioritize the development of innovations that are required. Therefore, this study aims to disclose the magnitude of benefits of people innovation, process innovation, and product innovation in a business strategy to become a competitive advantage for MSMEs in Indonesia. Therefore, this study formulates the following hypotheses:

$H_1$ : *There is a significant direct effect of business strategy on competitive advantage.*

$H_2$ : *There is a significant indirect effect of business strategy on competitive advantage through people innovation.*

$H_3$ : *There is a significant indirect effect of business strategy on competitive advantage through process innovation.*





**Figure 1.** Conceptual framework

$H_4$ : *There is a significant indirect effect of business strategy on competitive advantage through product innovation.*

## 2. METHODS

A conceptual framework is built on a logical understanding and literature review of the problems that have been formulated. As the main goal to be achieved, competitive advantage acts as a dependent variable (Y), and business strategy acts as its independent variable (X). The roles of people innovation (M1), process innovation (M2), and product innovation (M3) are three intervening variables that each mediate the relationship between an independent variable and a dependent variable. The conceptual framework presented in Figure 1 shows the relationships between these variables.

Referring to the conceptual framework (Figure 1), there are four relationships between business strategy (X) and competitive advantage (Y). The hypotheses that have been formulated are tested for the influence between variables. Each variable was formed through several relevant indicators to the collected data. All variables and indicators in this study are summarized in Table 1.

There is a total of 30 indicators of 5 variables involved in the study. The thirty indicators were transformed into 50 questions in a Likert-scale questionnaire distributed to selected respondents using purposive sampling. The non-probabilistic selection was applied to ensure that questions were answered only by competent respondents, including MSME owners or leaders in Indonesia who have been developing and responsible for their business performance for at least five years. Data on respondent demographics,

**Table 1.** Research variables and indicators

Variables	Indicators	Sources
Business Strategy (X)	Identifying the strengths, weaknesses, opportunities, and threats (X.1)	Yuliansyah et al. (2017)
	Setting the strategy (X.2)	
	Developing the vision (X.3)	
	Measuring the performance in an integrated manner (X.4)	
Competitive Advantage (Y)	Outstanding performance in inbound logistics (Y.1)	Strakova et al. (2021)
	Outstanding performance in operations (Y.2)	
	Outstanding performance in outbound logistics (Y.3)	
	Outstanding performance in marketing and sales (Y.4)	
	Outstanding performance in service (Y.5)	
	Outstanding performance in procurement (Y.6)	
	Outstanding performance in technology development (Y.7)	
	Outstanding performance in human resources management (Y.8)	
	Outstanding performance in firm infrastructure (Y.9)	
People Innovation (M1)	Innovation in conducting the teamwork training program (M1.1)	Lasisi et al. (2020)
	Innovation in developing cohesiveness (M1.2)	
	Innovation in increasing mutual trust (M1.2)	
	Innovation in supporting the working partners (M1.4)	

**Table 1 (cont.).** Research variables and indicators

Variables	Indicators	Sources
Process Innovation (M2)	Innovation in the order receiving process (M2.1)	Scafuto et al. (2018). Widya-Hasuti et al. (2018)
	Innovation in the material handling process (M2.2)	
	Innovation in the production process (M2.3)	
	Innovation in the quality control process (M2.4)	
	Innovation in the inventory process (M2.5)	
	Innovation in the delivery process (M2.6)	
	Innovation in the data recording process (M2.7)	
	Innovation in the customer service process (M2.8)	
Product Innovation (M3)	Innovation in product visualization (M3.1)	Maier (2018)
	Innovation in product usefulness (M3.2)	
	Innovation in product durability (M3.3)	
	Innovation in product quality (M3.4)	
	Innovation in product competitiveness (M3.5)	

such as age, gender, marital status, education level, background of experience, etc., were not collected in this study because the study focused more on business characteristics unrelated to the respondent's profile. Twenty-nine respondents representing an MSME participated in the data collection from January to March 2022 (Table 2).

The data analysis in this study was conducted with classical assumption tests through normality tests, multicollinearity tests, and heteroskedasticity tests. If the data pass the classical assumption test, meaning that the data are distributed normally and there was no multicollinearity and heteroskedasticity, then testing can be continued to determine

**Table 2.** Profile of participated MSMEs

Respondent	Location	Years of service	Industry	Business scale
1	Jakarta	15	Restaurant	Middle
2	Semarang	8	Food	Micro
3	Tasikmalaya	6	Garment	Small
4	Solo	9	Building Material	Micro
5	Jember	12	Garment	Micro
6	Kudus	7	Natural Resources	Small
7	Jakarta	5	Footwear	Micro
8	Yogyakarta	12	Restaurant	Micro
9	Surabaya	9	Handicraft	Small
10	Tegal	8	Garment	Small
11	Madiun	13	Transportation	Middle
12	Purwokerto	14	Education	Micro
13	Tangerang	11	Food	Micro
14	Bandung	10	Restaurant	Middle
15	Kediri	9	Automotive	Small
16	Subang	8	Garment	Small
17	Bogor	9	Garment	Micro
18	Yogyakarta	6	Footwear	Small
19	Makassar	16	Handicraft	Micro
20	Bekasi	17	Footwear	Middle
21	Denpasar	15	Restaurant	Micro
22	Cirebon	12	Handicraft	Small
23	Sukabumi	11	Building Material	Middle
24	Banjarmasin	13	Automotive	Micro
25	Gresik	12	Food	Micro
26	Jambi	10	Natural Resources	Micro
27	Balikpapan	8	Handicraft	Micro
28	Gianyar	9	Transportation	Small
29	Karawang	8	Footwear	Small

the causality of the hypothesis predictively. Path analysis was applied to determine the magnitude of influences between variables, while hypothesis tests using the T-test and the Sobel test were used to determine the significance of each effect.

### 3. RESULTS

Before analyzing each hypothesis, a classical assumption test needs to be performed for each regression to ensure that the constructed equation is precise, unbiased, and consistent. This study used three classical assumption tests: the normality test, the multicollinearity test, and the heteroskedasticity test. Normality tests ensure that the data are distributed normally and that no data differ to the extreme. Multicollinearity tests are performed because there is more than one independent variable, so it is necessary to ensure that there is no correlation that is too strong between the independent variables. Finally, heteroskedasticity tests are performed to avoid the inequality of error variants from one observation to another.

For the normality test in the first regression equation, the business strategy variable (X) against the people innovation (M1), process innovation (M2), and product innovation (M3) variables obtained asymp value. Sig. (2-tailed) of 0.200, 0.131, and 0.200, as indicated in Table 3. The results showed that the data were distributed normally because all the numbers were greater than 0.05 for a 5% signification rate.

**Table 3.** Normality test for the 1<sup>st</sup> regression

Variable	Asymp. Sig. (2-tailed)
People Innovation (M1)	.200
Process Innovation (M2)	.131
Product Innovation (M3)	.200

For the multicollinearity test on the first regression equation, the business strategy variable (X) against the people innovation (M1), process innovation (M2), and product innovation (M3) variables obtained all its Collinearity Tolerance values of 1 and all its Variance Inflation Factor values of 1. The results in Table 4 conclude that there is no multicollinearity in the data used because Collinearity Tolerance is greater than 0.01 and VIF is less than 10.

**Table 4.** Multicollinearity test for the 1<sup>st</sup> regression

Variable	Collinearity tolerance	VIF
People Innovation (M1)	1.000	1.000
Process Innovation (M2)	1.000	1.000
Product Innovation (M3)	1.000	1.000

For Glejser’s heteroskedasticity test in the first regression equation, the results for the business strategy variable (X) against the people innovation (M1), process innovation (M2), and product innovation (M3) variables were the values of 0.356, 0.503, and 0.985, as shown in Table 5. These results indicated no heteroskedasticity because all values were greater than 0.05.

**Table 5.** Glejser’s heteroscedasticity for the 1<sup>st</sup> regression

Variable	Sig.
People Innovation (M1)	.356
Process Innovation (M2)	.503
Product Innovation (M3)	.985

For the normality test in the second regression equation, the variables of business strategy (X), people innovation (M1), process innovation (M2), and product innovation (M3) against the competitive advantage (Y) variable obtained asymp values. Sig. (2-tailed) by 0.200, as shown in Table 6. They indicated that the data were distributed normally because all the numbers were greater than 0.05 for a 5% signification rate.

For the multicollinearity test in the second regression equation, the business strategy (X), people innovation (M1), process innovation (M2), and product innovation (M3) variables against the competitive advantage (Y) variable obtained Tolerance Collinearity values of 0.870, 0.793, 0.846, and 0.935, while Variance Inflation Factor values were 1.149, 1.261, 1.183, and 1.070, respectively. The results in Table 7 conclude that there is no multicollinearity in the data. It is because Collinearity Tolerance is greater than 0.01 and VIF is less than 10.

For Glejser’s heteroskedasticity test on the second regression equation, the variables of business strategy (X), people innovation (M1), process innovation (M2), and product innovation (M3) against the competitive advantage (Y) variable obtained the values of 0.037, 0.292, 0.341, and 0.112, as shown in Table 8. These results indicated no heteroskedasticity because all the numbers were greater than 0.05.



**Table 6.** Normality test for the 2<sup>nd</sup> regression

One-Sample Kolmogorov-Smirnov Test				
Result		Unstandardized Residual	Unstandardized Residual	Unstandardized Residual
N		29	29	29
Normal Parameters <sup>a,b</sup>	Mean	.0000000	.0000000	.0000000
	Std. deviation	8.80537351	9.39914147	9.68037717
Most Extreme Differences	Absolute	.067	.144	.106
	Positive	.067	.082	.106
	Negative	-.067	-.144	-.099
Test Statistic		.067	.144	.106
Asymp. Sig. (2-tailed)		.200 <sup>c,d</sup>	.131 <sup>c</sup>	.200 <sup>c,d</sup>

Note: a. Test distribution is Normal; b. Calculated from data; c. Lilliefors Significance Correction; d. This is a lower bound of the true significance.

**Table 7.** Multicollinearity test for the 2<sup>nd</sup> regression

Coefficients <sup>a</sup>								
Model		Unstandardized coefficients		Standardized coefficients	t	Sig.	Collinearity statistics	
		B	Std. error	Beta			Tolerance	VIF
1	(Constant)	1.681	.782	–	14.107	.012		
	Business Strategy (X)	.123	.040	.202	3.225	.032	.870	1.149
	People Innovation (M1)	.269	.038	.487	5.367	.001	.793	1.261
	Process Innovation (M2)	.537	.017	.664	4.262	.000	.846	1.183
	Product Innovation (M3)	.416	.023	.604	4.675	.000	.935	1.070

Note: a. dependent variable: Competitive Advantage (Y).

The study applied a path analysis to predict a cause-and-effect relationship between two or more variables that are hypothesized on a conceptual framework. In the first regression, the effect of the business strategy variable (X) was tested on the people innovation (M1), process innovation (M2), and product innovation (M3) variables. Table 9 shows a Beta value of 0.499 for the effect of business strategy on people innovation (X → M1), 0.406 for the effect of business strategy on process innovation (X → M2), and 0.545 for the effect of business strategy on product innovation (X → M3).

**Table 9.** Path analysis for the 1<sup>st</sup> regression

Variable	Standard error	Standard coefficient beta	Sig
People Innovation (M1)	.054	.499	.002
Process Innovation (M2)	.078	.406	.000
Product Innovation (M3)	.034	.545	.000

Path analysis for the second regression tests the relationship of business strategy (X), people innovation (M1), process innovation (M2), and product innovation (M3) on competitive advantage (Y).

**Table 8.** Glejser’s heteroscedasticity for the 2<sup>nd</sup> regression

Coefficients <sup>a</sup>						
Model		Unstandardized coefficients		Standardized coefficients	t	Sig.
		B	Std. error	Beta		
1	(Constant)	3.484	2.467	–	1.045	.306
	Business Strategy (X)	.089	.187	.102	-.478	.037
	People Innovation (M1)	.015	.106	.031	.137	.292
	Process Innovation (M2)	.020	.100	.044	.203	.341
	Product Innovation (M3)	.093	.090	.015	.056	.112

Note: a. dependent variable: Competitive advantage (Y).

**Table 10.** Path analysis for the 2<sup>nd</sup> regression

Model		Coefficients <sup>a</sup>				
		Unstandardized coefficients		Standardized coefficients	t	Sig.
		B	Std. error	Beta		
1	(Constant)	1.681	.782	–	14.107	.012
	Business Strategy (X)	.123	.040	.202	3.225	.032
	People Innovation (M1)	.269	.038	.487	5.367	.001
	Process Innovation (M2)	.537	.017	.664	4.262	.000
	Process Innovation (M3)	.416	.023	.604	4.675	.000

Note: a. dependent variable: Competitive advantage (Y).

**Table 11.** Summary of direct and indirect effects

Regression	Relationship	Direct effect	Indirect effect	Total effect
1 <sup>st</sup>	X → M1	0.499	–	–
	X → M2	0.406	–	–
	X → M3	0.545	–	–
2 <sup>nd</sup>	X → Y	0.202	–	–
	M1 → Y	0.487	–	–
	M2 → Y	0.664	–	–
All	M3 → Y	0.604	–	–
	X → M1 → Y	–	0.499 x 0.487 = 0.243	0.243 + 0.202 = 0.445
	X → M2 → Y	–	0.406 x 0.664 = 0.270	0.270 + 0.202 = 0.472
	X → M3 → Y	–	0.545 x 0.604 = 0.329	0.329 + 0.202 = 0.531

Table 10 shows a Beta value of 0.202 for the effect of business strategy on competitive advantage (X → Y), 0.487 for the effect of people innovation on competitive advantage (M1 → Y), 0.664 for the effect of process innovation on competitive advantage (M2 → Y), and 0.604 for the effect of product innovation on competitive advantage (M3 → Y).

Based on the results of the path analysis for the first and second regressions, predictable direct effects and indirect effects of each relationship are summarized in Table 11.

To determine how significant the effects of each independent variable are, the study statistically analyzed each hypothesis that had been constructed. For the first hypothesis (H1), there is a significant direct effect of business strategy (X) on competi-

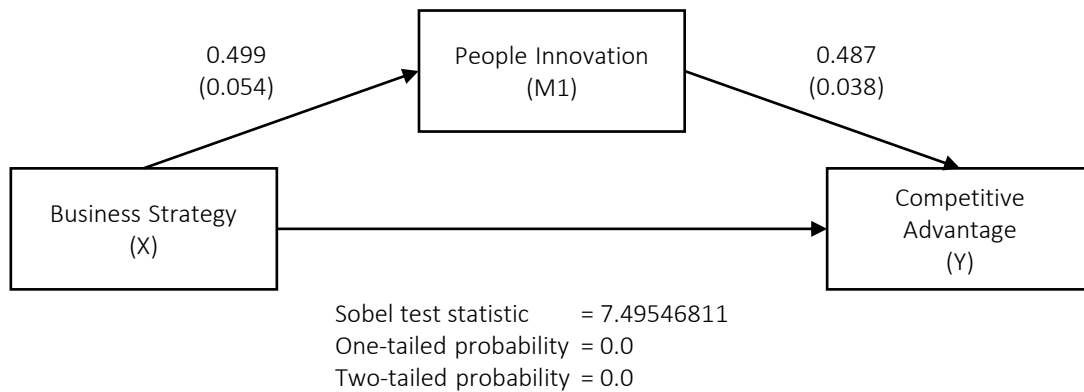
tive advantage (Y), the study applied the T-test. It produced  $t_{count}$  of 3.225, so the  $t_{table}$  is 2.473 for a significance level of 0.012 (Table 12). Theoretically, because  $t_{count}$  is greater than  $t_{table}$ , the first hypothesis is accepted, meaning that there is a significant direct effect of business strategy (X) on competitive advantage (Y).

The second hypothesis (H2), there is a significant indirect effect of business strategy (X) on competitive advantage (Y) through people innovation (M1), was determined using the Sobel test. The results presented in Figure 2 inform its one-tailed probability value of 0. Because the value is less than 0.05, theoretically, the second hypothesis is accepted, meaning that the people innovation variable (M1) significantly mediates the effect of business strategy (X) on competitive advantage (Y).

**Table 12.** T-test for H1

Model		Coefficients <sup>a</sup>				
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.681	.782	–	14.107	.012
	Business Strategy (X)	.123	.040	.202	3.225	.032

Note: a. dependent variable: Competitive advantage (Y).

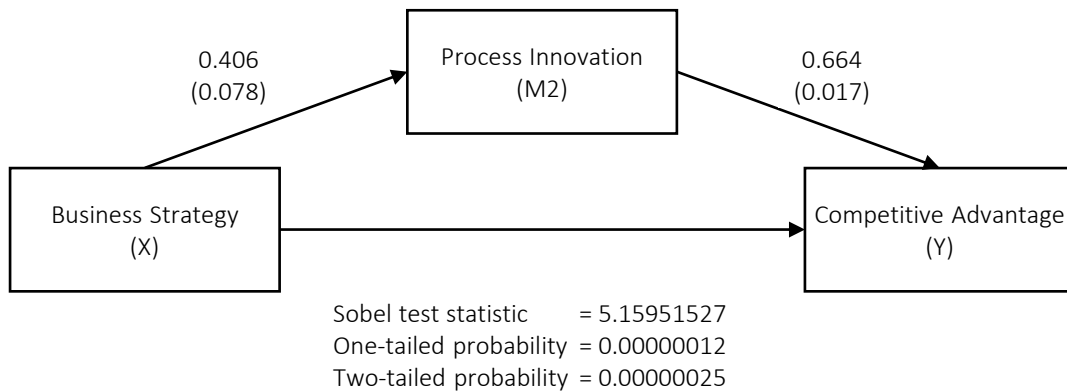


**Figure 2.** Sobel test results for H2

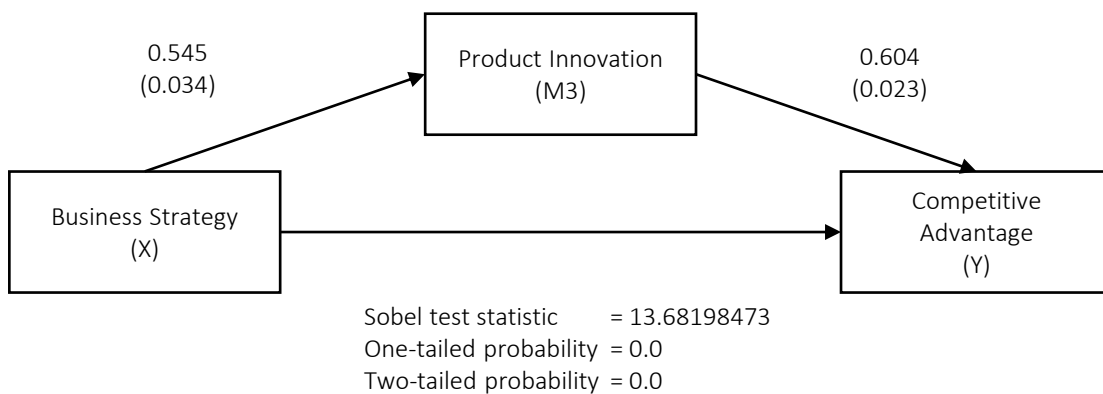
The third hypothesis (*H3*), there is a significant indirect effect of business strategy (*X*) on competitive advantage (*Y*) through process innovation (*M2*), was calculated using the Sobel test. The results presented in Figure 3 inform its one-tailed probability value of 0.00000012. Because the value is less than 0.05, theoretically, the third hypothesis is accepted, meaning that the process innovation variable (*M2*) significantly

mediates the effect of business strategy (*X*) on competitive advantage (*Y*).

The fourth hypothesis (*H4*), there is a significant indirect effect of business strategy (*X*) on competitive advantage (*Y*) through product innovation (*M3*), was calculated using the Sobel test. The results presented in Figure 4 inform its one-tailed probability value of 0. Because the value is less than 0.05, the-



**Figure 3.** Sobel test results for H3



**Figure 4.** Sobel test results for H4

oretically, the fourth hypothesis is accepted, meaning that the product innovation variable (M3) significantly mediates the effect of business strategy (X) on competitive advantage (Y).

## 4. DISCUSSION

The inferential statistical analysis applied to this study has revealed the magnitude of the benefits of people innovation, process innovation, and product innovation for the competitive advantages of MSMEs. These three kinds of innovations significantly mediate the effect of business strategies on the competitive advantages of MSMEs in Indonesia. In addition, the classical assumption test also reveals that location, age, business, and scale of the business do not show a difference, meaning that people innovation, process innovation, and product innovation are useful to produce competitive advantages for all MSMEs.

When comparing the effect of each variable, it turns out that without innovation, the business strategy only contributes 20.2% to a competitive advantage. However, when mediated by innovations, competitive advantages can be increased. Product innovation has the most significant influence over people innovation and process innovation. Product innovation involvement in competitive advantage was 53.1%, followed by process innovation at 47.2% and people innovation at 44.5%. This figure can be a reference for MSME entrepreneurs to prioritize product innovation in their business strategy. Product innovations have more potential to produce greater competitive advantages. However, process innovation and people innovation cannot be ignored because they contribute to the competitive advantages of MSMEs.

To win the competition, product innovation must immediately get special attention from MSME entrepreneurs. It is necessary due to the total changing of consumer behavior that tends to change frequently (Timotius & Octavius, 2021). The presence of social media supports the popularity of products faster; therefore, MSMEs must continuously improve the quality and features of products, be responsive to consumer dynamics, always create something unique, and not only focus on a mature market. Product visualization and information delivery are the keys to

the success of product innovation. However, it does not mean MSMEs must be sophisticated in marketing strategies and provide large budgets. Product innovation can be successful if it can exceed customer expectations and increase company revenue (Dai & Cheng, 2018; Christensen et al., 2016).

MSMEs are encouraged to not only innovate their products but also their business processes. As reported by Scafuto et al. (2018) and Widya-Hasuti et al. (2018), process innovation will be able to run business activities effectively at an efficient cost so that a company will get its benefits optimally. The use of information technology in business processes will facilitate data analysis and control of financial cash flow so that strategic decision-making can be done more quickly and precisely. In addition, the risk of inventory loss, cost wastage, loss of customers, delivery delays, and production errors can be overcome by implementing an integrated information system. However, Ilmudeen and Bao (2020) concluded that more than information technology management is needed to automatically boost company performance; it needs integration of information technology strategies with business strategies to enrich company performance in a superior manner. Another opinion conveyed by Gronum et al. (2016) claims that process innovation is also related to the business model developed and adjusted, meaning that it needs novelty and efficiency that is coherently embedded in every business activity of a company.

Considering the role of people innovation in competitive advantages, MSMEs need to review processes related to human resource management. It is not only recruiting, staffing administration, and compiling training programs. It also must maximize the potential of each employee in the organization. Talent management becomes an essential element of intangible human capital. The innovative culture and climate of learners must grow in the organization. Knowledge management is one of the triggers of people innovation, as recommended by Caloghirou et al. (2018). Along with the use of information technology in organizations, MSMEs should also consistently and continuously prepare their human resources as agents of change who are fluent in technology, able to think complexly and proactively, and are problem solvers (Vey et al., 2017).

In short, the findings of this study reinforce the belief that innovation is critical in creating a company's competitive advantage. This is also supported by the findings of Herlinawati and Machmud (2020) that innovation improves the business performance of MSMEs in Indonesia. Product innovation, process innovation, and people innovation should be part of the company's strategy. Indirectly,

this is following Fatemi's report (2016) that people, processes, and products can accelerate business growth. Companies in the global era are increasingly being made aware that innovation is fueled by creating added value by leveraging new knowledge and relevant resources. Ideas must be boldly transformed into real practice as markets and industries evolve (Varadarajan, 2018; Winarso, 2019).

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## CONCLUSION

Referring to the empirical findings that MSMEs need to innovate to build their competitive advantage, this quantitative study examined the role of innovation as part of the business strategy of MSMEs in Indonesia. The formularized conceptual framework leads to the findings that innovation is vital in business strategy and benefits business people. Therefore, it can increase the competitive strategy significantly. The study found that product innovation has the most significant effect on competitive advantage. At the same time, both process innovation and people innovation also have an essential contribution to business strategy to trigger the competitive advantage. They encourage MSMEs to do sustainable innovation by prioritizing innovation in products, processes, and people in their business to excel in competition.

Product innovation can be constructed by the attractive display and product knowledge that informs the usefulness, durability, and quality. However, MSMEs also need to be concerned about competitiveness in the market when innovating their product. Therefore, the recommendation for MSMEs to innovate the process included the order acceptance process, material handling process, production process, quality control process, inventory process, delivery process, data recording process, and customer service process. In addition, this study concluded that cooperation training, cohesive development, increasing trust in each other, and strengthening support from colleagues are recommended for MSMEs when innovating in people.

This study made MSMEs aware that innovation is not static and must be developed continuously following the development of science and market demands. However, MSMEs should not innovate without strategic planning to avoid financial losses. Therefore, innovation must be performed carefully and integrated as part of the business strategy so that the benefits can be maximized in creating the company's competitive advantage.

To maintain innovation, MSMEs need support from stakeholders. It is because MSMEs must be swifter to adapt to changes that are difficult to predict amid increasingly fierce competition. With competitive advantages, MSMEs can excel in competing so that their business can continue to grow and sustain, focus and prioritize product innovation, process innovation, and people innovation.

Although the object of this study is only MSMEs in Indonesia, the findings could be the same in other countries. The recommendation is also applicable in certain countries. However, data retrieval at different times can produce different findings. The expansion of research objects involving more respondents and the addition of relevant variables are recommended to minimize the limitations of this study. This study is expected to initiate future studies as a comprehensive comparison. The emerging new theories will be academically and practically useful for MSME entrepreneurs to excel in competing in the global era.



## AUTHOR CONTRIBUTIONS

Conceptualization: Elkana Timotius.  
Data curation: Elkana Timotius.  
Formal analysis: Elkana Timotius.  
Investigation: Elkana Timotius.  
Methodology: Elkana Timotius.  
Resources: Elkana Timotius.  
Validation: Elkana Timotius.  
Writing – original draft: Elkana Timotius.  
Writing – review & editing: Elkana Timotius.

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