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# MECHANISM OF INNOVATION AND DIGITALIZATION TO CREATE COMPETITIVE ADVANTAGE OF INDONESIAN'S **MSMES**

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#### **Abstract**

This study aims to analyse business performance models through innovation and digitalization approaches. This research identifies how innovation and digitalization create competitive advantages for MSMEs in Indonesia, especially in Semarang City, Central Java. This research method uses a quantitative approach involving 115 MSME respondents. The results of this study indicate that innovation and digitalization can create a competitive advantage and business performance for MSMEs in Semarang City. The research results also show that competitive advantage is also a mediator of the role of innovation and digitalization in the business performance of MSMEs. Thus, to create an increase in the business performance of MSME managers in Indonesia, it is necessary to pay attention to the ability of business innovation and digitalization. This means that the higher and better the innovation and digitization are owned by MSMEs, the more they will be able to create a highly competitive advantage and influence business performance.

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Keywords: Competitive advantage, digitalization, business performance, innovation, MSMES

#### 1. Introduction

MSMEs have an important role in the Indonesian economy because businesses in the MSME sector absorb a lot of labor in an area, besides that, businesses in the MSME sector can be a good alternative solution in opening job opportunities for people who cannot afford to work in companies or in the government (Widiatmo, 2019). Based on data from the Indonesian Ministry of Cooperatives and Small and Medium Enterprises (Kemenkop UKM) for March 2021, the number of MSMEs reached 64.2 million with a contribution to the Gross Domestic Product of 61.07 percent or IDR 8,573.89 trillion. MSMEs can absorb 97 percent of the total existing workforce and can collect up to 60.42 percent of total investment in Indonesia (Indonesian Ministry of Finance).

MSMEs in Indonesia are defined as productive businesses owned by individuals or business entities that meet the criteria for micro-enterprises. Businesses that fall under the criteria of micro-enterprises are businesses that have a net worth of up to IDR 50,000,000 and do not include buildings and land where the business is located. The maximum annual sales proceeds for micro businesses are IDR 300,000,000. Businesses included in the criteria for small businesses have a net worth of IDR 50,000,000 with a maximum requirement of IDR 500,000,000. The proceeds from business sales annually range from IDR 300,000,000.-. to a maximum of IDR 2,5,000,000,000.-. Medium businesses are often categorized as large businesses with the criteria for a net worth of more than IDR 500,000,000 to IDR 10,000,000,000 and do not include buildings and land where the business is located. Annual sales results reach IDR 2,5,000,000,000 billion to IDR 50,000,000,000 (laws and regulations No. 20 of 2008).

However, MSMEs in Indonesia are currently facing a difficult situation amid changes in the increasingly complex business environment and increasingly fierce competition along with the swift flow of free trade which makes competition come from all directions both domestically, regionally, and even globally (Aristiyo & Murwatiningsih, 2017). The existence of this competition makes companies face various opportunities and threats. Therefore, these MSMEs are required to think creatively to face increasingly dynamic market conditions (L. F. Sari, 2013).

One way to be able to judge whether a business has good progress or not is by looking at the performance of the business. Performance (business performance) refers to the level of achievement of the company in a certain period which is said to be good if marked by good sales growth, profits which are always increasing, and capital which is always increasing (Anomsari, 2011). Marketing performance is generally used to measure the impact of corporate strategy and is an aspect of determining business performance which can increase if the company is able to choose and implement the right approach (Tanoko, 2010).

Research conducted by Hasanah (2020), states that innovation has a partial influence on the performance of MSMEs. Meanwhile, in their research, Finoti et al. (2017) found that innovation does not directly affect business performance. Lestari et al. (2019) also stated that innovation significantly affects competitiveness. However, Bahren et al. (2018) stated that innovation activities, both product innovation, process innovation, marketing innovation, and organizational innovation, have no effect on competitive advantage.

The increasing number of MSMEs that are developing in Indonesia makes MSME actors also have to develop their companies' strengths so they can survive in increasingly fierce competition. Especially in this modern era, many small and medium businesses use technology to develop their business through product promotion, production, or marketing. In fact, now, more and more MSMEs do not have a physical place to sell. Instead, they use digital technology to trade.

The current industrial development is known as the Industrial Revolution 4.0, which relies on digital media and modern technology to produce, promote, and market products or services. The implementation of Industry 4.0 in large companies is by automating all forms of production without human intervention, known as Smart Factory. To implement Smart Factory, a large amount of money is definitely needed. So, for MSMEs, Industry 4.0 is shown by the development of the MSME market through digital media. MSMEs, which previously could only market their products in the vicinity of the shop, now have a wider market. This is aided by the emergence of many e-commerce recently, such as Shopee, Bukalapak, and Lazada. Apart from e-commerce, digital marketing is also implemented through online motorcycle taxi applications such as Gojek and Grab, which help MSMEs deliver their products to customers.

In line with this, Martín-Peña et al. (2020) in their research revealed that servitization and digitalization have a positive effect on firm performance. However, Sanchez-Riofrio et al. (2021) stated different things in their research which stated that market digitalization was negatively related to business performance. Furthermore, in his research, Swastuti (2020) stated that the adoption of digital marketing has an influence on competitive advantage. However, Lee and Falahat (2019) state that digitalization does not directly affect competitive advantage.

Implementing the two strategies above, which include innovation and digitalization, aims to achieve superior company conditions in a competition, leading to increased business performance. Competitive advantage itself is an advantage to exceed competitors obtained by offering greater value to consumers than competitors (Kotler & Keller, 2012). By having a competitive advantage, a business will be able to survive in competition, existing business competitiveness supports business performance (Nizam et al., 2020).

Husaeni et al. (2021) in his research found that the competitive advantage possessed by a company will affect the company's business performance. However, it is different from the research conducted by Bahren et al. (2018), who stated that competitive advantage has no effect on business performance. The growth of MSME business performance can be measured by the number of workers, fluctuations in sales, and net profits. MSME performance is strongly influenced by internal factors (coordination system and formalization) and external factors (competition, industry growth, and market concentration) (Rodrigues & Raposo, 2011). Internal factors include products, innovation, business models, and human resources, while external factors include government policies and regulations, market changes, competitors, and developments in information technology.

Based on data from the Semarang City Cooperatives and UKM Office, the performance of MSMEs from 2015 to 2018 in Semarang City was not stable. Especially in 2016, the performance of MSME businesses, as seen from the labor indicator, the number of MSMEs and business turnover decreased dramatically compared to the previous year. However, 2017, in addition to the increasing number of MSMEs, MSMEs in Semarang City began to show positive things by absorbing more workers and increasing overall turnover. This increase continued in 2018, as indicated by an increase in overall

data. Starting in 2017, MSMEs have been more able to optimize information technology that has developed.

MSMEs are seen as one of the most important components of the Indonesian economy. The central government even appealed to local governments to help improve the welfare of MSMEs in their respective regions. To support the economic development of MSMEs, the Semarang City government facilitated online entrepreneurship licensing by launching the I Jus Melon program, or Online Business Permits. Apart from being supported by the government, MSMEs in Semarang City have been able to grow rapidly since the existence of online motorcycle taxis. Online motorcycle taxis such as Gojek and Grab provide platforms for MSMEs to trade online, encouraging the growth of community entrepreneurial skills. This online-based business model is preferred by MSME players because it does not require large capital but can reach a broad market. However, that does not mean that trading using online media does not have problems. According to Fikri, Head of Business Operations from Blanja.com, the biggest challenge for MSMEs in trading through online platforms is the willingness of MSMEs to continue to improve product quality and update information and data on their respective online stores. This needs to be done, of course, so that MSMEs are not less competitive in the market and protect consumers. The description above explains that there are differences of opinion between researchers, the actual situation in the field, differences in variables, and differences in the samples taken in this study and other studies. It can be concluded that this topic requires further research.

#### 1.1. Business performance

Business performance is the result of management activities. Organizational performance can be measured by how satisfied consumers are with the products or services offered as a result of their subscriptions (Khadka & Maharjan, 2017). Business performance can also be measured from the company's internal factors by looking at financial information, or other reports related to the company's production activities. Performance appraisal aims to monitor how effective the company's operations are. For companies, knowing their performance is very profitable. If the performance in a period is not satisfactory, it will be evaluated at the end of the period, so that the next period can be run better. Heilbrunn et al. (2011) stated that managers and employees must know what things have significant implications for successful business performance

#### 1.2. Innovation

Innovation is one of the things that have implications for the success of the business performance, F. A. P. W. Sari and Farida (2020) stated that product quality is not the only factor in improving marketing performance that affects business performance. To be competitive, MSMEs must have innovation. A business venture that is capable of innovating can lead and minimize the possibility of competitors innovating earlier. Therefore, businesspeople must prepare an innovation strategy for their business ventures in order to create an advantage over competitors (Lestari et al., 2019).

Innovation is a company mechanism for adapting to a dynamic environment, so companies are required to be able to create new assessments and new ideas, offer innovative products, and improve service performance that satisfies customers (Utaminingsih, 2016). The application of innovation is not

only carried out on products and promotions but can also be applied to business models. There are three

ways to apply innovation in business models, namely by being first in the market, modifying internal

operating processes, to increase efficiency, without changing the products/processes delivered or

changing the entire business model to suit the business environment and consumers (Trimi & Berbegal-

Mirabent, 2012)

1.3. Hypothesis Development

Several studies regarding the effect of innovation on business performance say that there is a

positive influence between innovation and business performance, as research conducted by Hasanah

(2020), explained that innovation can improve a company's performance. Several studies regarding the

effect of digitalization on business performance say that there is a positive effect between digitalization

and business performance, as research conducted by Martín-Peña et al. (2020) explained that

digitalization can improve a company's performance. Several studies regarding the effect of competitive

advantage on business performance say that there is a positive influence between competitive advantage and business performance, as research conducted by Husaeni et al. (2021) and Mahmood and Hanafi

(2013) explains that competitive advantage can improve a company's performance. Several studies on the

mediating effect of competitive advantage in the relationship between innovation and business

performance say that there is a positive influence between innovation and business performance through

competitive advantage, as research conducted by Susana and Andarwati (2021) explained that

competitive advantage can mediate the influence of innovation on a company's performance. Several

studies on the mediating effect of competitive advantage in the relationship of digitalization to business

performance say that there is a positive influence between digitalization and business performance

through competitive advantage, as research conducted by Slamet et al. (2017) which explains that

competitive advantage can mediate the effect of digitalization on business performance company. So that

the hypothesis can be drawn as follows:

H1: Innovation has a positive effect on MSME performance.

H2: Digitalization has a positive effect on the performance of MSMEs.

H3: Competitive advantage has a positive effect on MSME performance.

H4: Innovation affects business performance through competitive advantage in MSMEs.

H5: Digitalization affects business performance through competitive advantage in MSMEs.

**Problem Statement** 

Based on data from the Semarang City Cooperatives and UKM Office, the performance of

MSMEs from 2015 to 2018 in Semarang City was not stable. Especially in 2016 the performance of

MSME businesses as seen from the labour indicator, the number of MSMEs and business turnover

decreased dramatically compared to the previous year. However, in 2017, in addition to the increasing

number of MSMEs, MSMEs in Semarang City began to show positive things by absorbing more workers

and increasing overall turnover. This increase continued in 2018, as indicated by an increase in overall

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data. Starting from 2017, MSMEs are considered to be more able to optimise information technology that

has developed. Based on the background above, the formulation of the research problem is as follows:

Does innovation, digitalization, and competitive advantage affect business performance in

MSMEs?

ii. Does innovation affect business performance mediated by competitive advantage in MSMEs?

Does digitalization affect business performance mediated by competitive advantage in iii.

MSMEs?

**Research Question** 

The research question in this research is how business performance models through innovation and

digitalization approaches. Does this research identify how innovation and digitalization play a role in

creating competitive advantages for MSMEs in Indonesia, especially in Semarang City, Central Java?

**Purpose of the Study** 

This study's purpose is to analyse business performance models through innovation and

digitalization approaches. This research identifies how innovation and digitalization play a role in

creating competitive advantages for MSMEs in Indonesia, especially in Semarang City, Central Java

**Research Method** 

The population in this study is SMEs in the city of Semarang, with a sample of 115 SMEs. This

study used data collection techniques with questionnaires, namely data collection carried out by giving

respondents a set of questions or written statements to answer.

5.1. Variable Measurement

This study observes four variables: Innovation, Digitalization, competitive advantage, and

Business performance. The first variable, namely Innovation, is the practical application of an idea into a

new product or process. To measure this variable, three indicators are used as parameters: product/service

innovation, process innovation, and market innovation (Lestari et al., 2019). Meanwhile, the digitization

variable in this research is defined as changes that occur in companies and their business models due to

the increasing use of digital technology to improve performance and business scope. This variable is

measured by three measurement tools: access, use, and skills (Sanchez-Riofrio et al., 2021). Then the

competitive advantage variable is defined as a benefit that exists when a company has and produces a

product or service that is seen by its target market as better than its closest competitors. This variable is

measured through three parameters, namely competitive prices, production costs, and product quality (Li

et al., 2006). Finally, the business performance variable is defined as the company's level of success in

achieving its goals through the use of its various resources. These variables have three indicators: growth,

profitability, and internal efficiency (Suprantiningrum, 2002).

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## 5.2. Data Analysis

In this study, path analysis was used which aims to identify the path that causes a certain variable to other variables it influences.

## 6. Findings

All figures and tables should be referred to in the text and numbered in the order in which they are mentioned.

## 6.1. Partial Test (Test Statistical t)

The t-statistical test is used to test the hypothesis partially. The t-statistical test shows how far the influence of the independent variables individually explains the variation of the dependent variable (Ghozali, 2018). The basis for decision-making can be seen from the significant probability value. If the probability number is significant > 0.05, there is no influence between the independent and dependent variables. If the probability number is significant <0.05, then there is an influence between the independent variables and the dependent variable.

Based on Table 1, the innovation variable has a t count of 3.891 and a significant value of 0.000 <0.05. Then H1, which states that innovation positively affects business performance, is accepted. The digitization variable has a t count of 2.657 and a significant value of 0.009 <0.05. Then H2, which states that digitization positively affects business performance, is accepted. Based on table 1, the competitive advantage variable has a t count of 3.484 and a significant value of 0.001 <0.05. Then H3 which states that competitive advantage has a positive effect on business performance is accepted.

**Table 1.** Partial Test Results (Statistical Test t)

Coefficients <sup>a</sup>								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		В	Std. Error	Beta				
	(Constant)	2.119	2.466		.859	.392		
1	X1	.298	.077	.313	3.891	.000		
	X2	.203	.076	.217	2.657	.009		
	Y1	.330	.095	.292	3.484	.001		
a. Depo	endent Variable: Y2							

Source: Primary Data Processed, 2022

## 6.2. Path Analysis

According to Ghozali (2018), path analysis is the use of regression analysis to estimate the causal relationship between variables (causal models) that have been previously determined. The causality variables tested in this study are innovation and digitalization variables on business performance with competitive advantage as intervening variables. A comparison of the path coefficients is carried out to test whether there is a mediating effect. Path coefficients are calculated by constructing two regression model equations that show the hypothesized relationship. In this study, path analysis is explained as follows:

Analysis of the effect of innovation and digitalization on competitive advantage (Model 1).

Table 2. Competitive Advantage Summary Model

Model Summary <sup>b</sup>								
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate				
1	.444 <sup>a</sup>	.197	.183	1.495				
a. Predictors: (Constant), X2, X1								
b. Dependent Variable: Y1								

Source: Primary Data Processed, 2022

Based on Table 2, it is known that the R square value is 0.377, where this value is used to calculate the error value (e1) with the following formula:

$$e_1 = \sqrt{1 - R^2}$$
  
 $e_1 = \sqrt{1 - 0.197}$   
 $e_1 = 0.896$ 

Table 3. Effects of Innovation and Digitalization on Competitive Advantage

Coefficients <sup>a</sup>								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.		
		В	Std. Error	Beta				
	(Constant)	13.748	2.089		6.582	.000		
1	X1	.214	.074	.254	2.904	.004		
	X2	.252	.072	.305	3.487	.001		
a. Dep	endent Variable: Y	1						

Source: Primary Data Processed, 2022

Based on table 2 and table 3 above, it can be seen that the regression equation is as follows:

$$\begin{split} Y_1 &= \alpha + \beta_1 \, X_1 + \beta_2 \, X_2 + e_1 \\ Y_1 &= 13.748 + 0,254 \, X_1 + 0,305 \, X_2 + 0,896. \end{split} \tag{1}$$

The regression equation model 1 can be explained that:

- ii. The value of  $\alpha$  is a constant of 13,748 which means that business performance will continue to increase by 13,748 without the influence of independent variables.
- iii. Every time there is an increase in the innovation variable by 1 unit, it will be followed by an increase in competitive advantage by 0.254 units if other variables are assumed to be constant.
- iv. Every time there is an increase in the digitization variable by 1 unit, it will be followed by an increase in competitive advantage by 0.305 units if other variables are assumed to be constant.
- v. Every time there is an increase in the partnership variable by 1 unit, it will be followed by an increase in competitive advantage by 0.234 units if other variables are assumed to be constant.
- vi. e1 is an error with a value of 0.896.

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# 6.2.1. Analysis of the effect of innovation, digitalization and competitive advantage on business performance (Model 2).

Based on Table 4, it is known that the R square value is 0.373, where this value is used to calculate the error value (e2) with the following formula:

$$e_2 = \sqrt{1 - R^2}$$
  
 $e_2 = \sqrt{1 - 0.373}$   
 $e_2 = 0.791$ 

Table 4. Business Performance Summary Model

Tuble Business retromance summary moder								
Model Summary <sup>b</sup>								
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate				
1	.611ª	.373	.356	1.499				
a. Predictors: (Constant), Y1, X1, X2								
b. Dependent Variable: Y2								

Source: Primary Data Processed, 2022

Based on table 4 and table 5, it can be seen that the regression equation is as follows:

$$Y_2 = \alpha + \beta_3 X_1 + \beta_4 X_2 + \beta_5 Y_1 + e_2$$
  

$$Y_2 = 2,119 + 0,313 X_1 + 0,217 X_2 + 0,292 Y_1 + 0,791....(2)$$

The regression equation model 2 can be explained that:

- i. The value of  $\alpha$  is a constant of 2.119, which means that business performance will continue to increase by 2.119 without the influence of independent and mediating variables.
- ii. Every time there is an increase in the innovation variable by 1 unit, it will be followed by an increase in business performance by 0.313 units if other variables are assumed to be constant.
- iii. Every time there is an increase in the digitization variable by 1 unit, it will be followed by an increase in business performance by 0.217 units if other variables are assumed to be constant.
- iv. Every time there is an increase in the competitive advantage variable by 1 unit, it will be followed by an increase in business performance of 0.293 units if other variables are assumed to be constant.
- v. el is an error with a value of 0.791.

Table 5. Effects of Innovation, Digitalization, and Competitive Advantage on Business Performance

			Coefficients <sup>a</sup>			
Mode	el	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		В	Std. Error	Beta		
	(Constant)	2.119	2.466		.859	.392
1	X1	.298	.077	.313	3.891	.000
	X2	.203	.076	.217	2.657	.009
	Y1	.330	.095	.292	3.484	.001
a. De	pendent Variable: Y2					

Source: Primary Data Processed, 2022

Based on the calculation of the regression equation of the two models, it can be explained the regression of this study as follows:

$$Y_1 = 13.748 + 0.254 X_1 + 0.305 X_2 + 0.896...$$
 (1)

$$Y_2 = 2,119 + 0,313 X_1 + 0,217 X_2 + 0,292 Y_1 + 0,791...$$
 (2)

From the above equation, the following results are obtained:

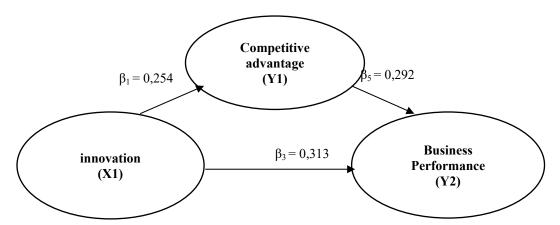
The effect of competitive advantage (Y1) on business performance (Y2)

The results of the calculation in Table 5 show that the effect of competitive advantage on marketing performance is indicated by  $\beta$ 5, which is equal to 0.292 with a significance value of 0.001 <0.05, which means that competitive advantage has an effect on business performance. So that H4, namely competitive advantage has a positive effect on business performance is accepted.

The indirect effect of innovation (X1) on business performance (Y2) through competitive advantage (Y1)

- i. The direct effect of innovation on business performance, which is denoted by  $\beta 3$ , is 0.313.
- ii. The indirect effect of innovation on business performance through competitive advantage can be seen by multiplying the innovation path coefficient ( $\beta$ 1) and competitive advantage ( $\beta$ 5), namely  $0.254 \times 0.292 = 0.074$
- iii. The total effect of the path coefficient can be determined by adding up the direct effect (point a) and the indirect effect (point b), namely  $\beta 3 + (\beta 1 \times \beta 5) = 0.313 + (0.254 \times 0.292) = 0.387$ .

Figure 1 is an image of path analysis to prove the mediating or intervening effect of competitive advantage on the effect of innovation on business performance:



**Figure 1.** Path analysis of the influence of innovation on business performance through competitive advantage

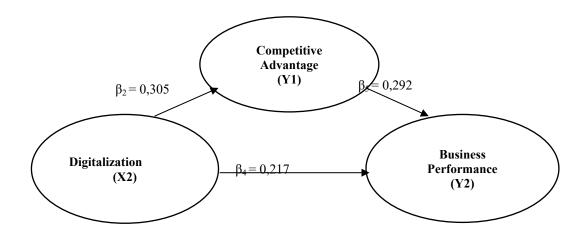
It can be seen from the calculation results that the total influence of the path coefficient is equal to 0.387 while the direct influence of the path coefficient of innovation on business performance is 0.313. So the total effect of the path coefficient is 0.387 > the direct path coefficient is 0.313 which indicates that competitive advantage is able to mediate innovation variables on business performance. This shows that

H4, which states that innovation positively affects business performance through competitive advantage, is accepted.

The indirect effect of digitalization (X2) on business performance (Y2) through competitive advantage (Y1)

- i. The direct effect of digitization on business performance, denoted by  $\beta 4$ , is 0.217.
- ii. The indirect effect of digitization on business performance through competitive advantage can be seen by multiplying the digitalization path coefficient ( $\beta$ 2) and competitive advantage ( $\beta$ 5), namely  $0.305 \times 0.292 = 0.089$ .
- iii. The total effect of the path coefficient can be determined by adding up the direct effect (point a) and the indirect effect (point b), namely  $\beta 4 + (\beta 2 \times \beta 5) = 0.217 + (0.305 \times 0.292) = 0.306$ .

Figure 2 is a path analysis image to prove the mediating effect of competitive advantage on the effect of digitalization on business performance:



**Figure 2.** Path Analysis of the Effects of Digitalization on Business Performance Through Competitive Advantage

It can be seen from the calculation results that the total influence of the path coefficient is 0.306 while the path coefficient of the direct effect of digitization on business performance is 0.217. So the total effect of the path coefficient is 0.306 > the direct path coefficient is 0.217 which indicates that competitive advantage is able to mediate the digitalization variable on business performance. This shows that H5, which states that digitalization has a positive effect on business performance through competitive advantage, is accepted.

Based on the above calculations, the overall research path analysis image can be seen in Figure 3.

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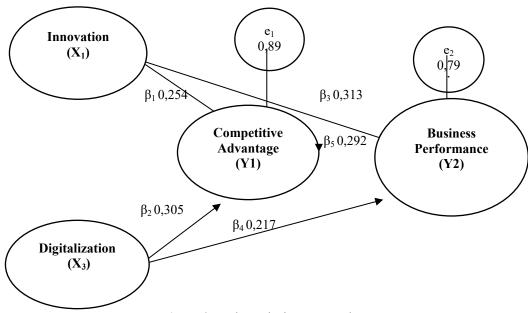


Figure 3. Path Analysis Test Results

Based on the results of the analysis above, the calculation of the direct, indirect, and total indirect effects between variables can be seen in Table 6.

Table 6. Direct Influence, Indirect Influence, and Total Indirect Influence

No.	Variable	effect	Competitive advantage	Business Performance	Description	
1	innovation	direct	0,254	0,313	0.207 > 0.212	
		indirect	-	0,074	0,387 > 0,313 mediate	
		Total	0,254	0,387	mediate	
	Digitalization	direct	direct	0,305	0,217	0.206 > 0.217
2		indirect	-	0,089	0,306 > 0,217 mediate	
		Total	0,305	0,306	mediate	

Source: Primary Data Processed, 2022

#### 6.3. Discussion

This discussion section contains an explanation of the results of the research and answers the hypotheses that have been previously set. Based on the results of research that examines the effect of innovation and digitalization on business performance through the competitive advantage of MSMEs in Semarang City, it can be seen as follows:

#### 6.3.1. The Effect of Innovation on Business Performance

Based on the data analysis test that has been carried out, the results of the partial test or statistical t-test on the innovation variable have a sig value. 0.000 the number is smaller than the significance value of  $\alpha$  0.05. So it can be said that the innovation variable positively affects business performance. The results of this study indicate that innovation consisting of product/service innovation, process innovation, and market innovation has a positive influence on efforts to improve business performance. This means

that the better the innovations implemented, the better the business performance of MSME actors in Semarang City.

The results of this study are supported by previous research conducted by Hasanah (2020) which shows a positive and significant relationship between innovation and business performance. Innovation is one of the main things that MSMEs need to pay attention to. According to Narver and Slater (1990), the company's success in product innovation makes it easier for companies to achieve the expected sales targets.

Innovation is also important for MSMEs, where the competition is getting tougher. With the implementation of innovation, business actors need to conduct research regarding changes or improvements that can be applied to their products; MSME actors must also be able to find alternative goods production processes with the aim of improving product quality; in market innovation, MSME actors are directed to be able to apply marketing methods, new or an improvement in their marketing strategy. All efforts made are aimed at improving the performance of the MSMEs they run. The results of this study indicate that to create good business performance, SMEs in Semarang City must have good innovation.

#### 6.3.2. Effect of Digitalization on Business Performance

Based on the data analysis test that has been carried out, the results of the partial test or statistical t-test on the digitization variable have a sig value. 0.009 the number is smaller than the significance value of α 0.05. So it can be said that the digitization variable positively affects business performance. The results of this study indicate that digitization, which consists of access, use, and skills, has a positive influence on efforts to improve business performance. This means that the better the application of digitization, the better business performance will be.

The results of this study are supported by previous research conducted by Martín-Peña et al. (2020) which shows that there is a positive and significant relationship between digitization and business performance, digital transformation is one of the main drivers for change in the business world, because companies are able to develop new technologies based on the internet with implications for society as a whole (Unruh & Kiron, 2017). In MSMEs, this has a positive impact on business performance.

Digitalization is affecting all sectors, including the business economy. In practice, digitalization has been described as all changes that occur in companies and their business models due to the increased use of digital technology to improve performance and business scope (Westerman et al., 2011). With the implementation of digitization in the form of using digital systems in running a business such as online marketing, the use of marketplaces will have a very good impact on marketing, ease of digital access (internet) is also a factor that has a very positive impact on business implementation, MSME players can get various kinds of information with internet access. Digital skills are also very important to improve in order to be able to take advantage of digitalization in various aspects of business processes.

## 6.3.3. The Effect of Competitive Advantage on Business Performance

Based on the data analysis test that has been carried out, the results of the partial test or statistical t-test on the competitive advantage variable have a sig value. 0.001 the number is smaller than the significance value of  $\alpha$  0.05. So it can be said that the competitive advantage variable positively affects business performance. The results of this study indicate that competitive advantage consisting of competitive prices, production costs, and product quality has a positive influence on efforts to improve

business performance. This means that the more superior MSMEs are in competition, the better the

business performance. This means that the more superior Misivilla are in competition, the o

business performance of MSMEs in Semarang City.

The results of this study are supported by previous research conducted by Husaeni et al. (2021)

which states that competitive advantage has a positive and significant effect on business performance.

Competitive advantage is a benefit that exists when a company has and produces a product or service that

is seen by its target market as better than its closest competitors (Saiman, 2012).

Competitive advantage is very important for MSMEs, which are currently faced with very tight

competition; in this case, competitive advantage can be obtained by carrying out various ways, some of

which are developing better product quality while still paying attention to production costs so that

production costs remain constant. affordable, so you get a product of good quality but at a competitive

price.

6.3.4. The Effect of Innovation on Business Performance through Competitive Advantage

Based on path analysis testing, the results of this study indicate that innovation has a positive

effect on business performance through competitive advantage. These results are based on the total

influence of the innovation path coefficient on business performance through competitive advantage of

0.387 > direct effect of 0.313. The results of this study are supported by previous research conducted by

Susana and Andarwati (2021) which states that competitive advantage acts as an intermediary between

innovation and business performance.

MSMEs in Semarang City have implemented innovation well. The way to do this is to innovate

products/services so that the products offered are more unique and different compared to competitors,

updating the production process can also be done in order to reduce production costs or improve product

quality, and marketing innovations are also implemented in order to expand the market so that it can

outperform the competition.

Based on the implementation of these innovations can encourage MSME actors to always excel in

competition; in this case, competitive advantage will further increase the influence of innovations

implemented by MSME actors to be able to improve their business performance, such as more efficient

production processes, faster revenue growth, and increased business performance. profit will increase.

6.3.5. Effect of Digitalization on Business Performance through Competitive Advantage

Based on path analysis testing, the results of this study indicate that digitalization has a positive

effect on business performance through competitive advantage. These results are based on the total

influence of the digitalization path coefficient on business performance through competitive advantage of

0.306 > direct effect of 0.217. The results of this study are supported by previous research conducted by

Slamet et al. (2017) which states that digitalization positively affects business performance through

competitive advantage.

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MSMEs in Semarang City have implemented digitization well. The way to do this is to use, namely using digital platforms, especially in marketing their products and expanding their market by entering the marketplace, MSME actors also apply for access where MSME actors begin to increase their access to digital platforms, especially the internet in order to get a lot of information that can they apply in their business, the skills of MSME actors are also increasing so that MSME actors can take advantage of digitization to excel in competition and will improve their business performance.

Based on the application of digitalization, it can encourage MSME actors to always excel in competition, in this case, competitive advantage will further increase the influence of digitalization applied by MSME actors to be able to improve their business performance, such as marketing products more broadly in the marketplace, getting more information they can apply it in their business based on the access they have, and are increasingly able to apply digitization in various business lines to be ahead of the competition so that in the end it will improve business performance.

## 7. Conclusion

Based on the research and discussion results, it can be concluded that innovation has a positive effect on business performance. This means that the better the innovation implemented by MSME actors will affect business performance. Furthermore, innovation has a positive effect on business performance through competitive advantage. Competitive advantage is able to mediate the effect of innovation on business performance. The higher and better the innovation that is owned by MSMEs, the more competitive advantage it will be able to create so that it can influence business performance. Then, digitization has a positive effect on business performance. This means that the higher and better digitization owned by MSME actors will affect business performance. Then, digitization has a positive effect on business performance through competitive advantage. Competitive advantage is able to mediate the digitalization of business performance. The more massive the application of digitalization to MSME players, the more competitive advantage they will be able to create, thereby influencing business performance. Furthermore, competitive advantage has a positive effect on business performance. This means that the more superior MSMEs in the competition will affect business performance.

This research still has some weaknesses and limitations, namely, the sample used in this study is a random sample given to business actors who have been involved in the MSME world for a long time and new business actors, besides that the object under study is also too broad or has not researched specifically on one business sector. Therefore, future researchers are expected to use a sample that is more focused on business actors who have been doing this business for a long time so that the information obtained is more relevant, narrowing the research object in an MSME sector can also be done in order to further reduce the bias of the research results.

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