


What was the impact of business performance on MSMEs during the COVID-19 pandemic?



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ABSTRACT

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The COVID-19 pandemic has caused changes in the pattern of interactions between people and has also had an impact on market traders in Indonesia. The purpose of this research is to increase the competitiveness of MSMEs through entrepreneurial orientation, market orientation and technology orientation toward product innovation and their impact on MSMEs' business performance. This study uses the partial least squares structural equation modeling (PLS-SEM), and convenience sampling was used to select 160 MSMEs for the study sample. Based on the path coefficients that lead to business performance, technology orientation has a value of 16.1, followed by product innovation with a value of 10.6, market orientation with a value of 0.009, and entrepreneurship orientation with a value of 0.004, which have a positive effect on business performance. But if you look at what influences product innovation, the first is technology orientation at 0.357, followed by market orientation at 0.325, and entrepreneurial orientation at 0.245. This means that technology orientation is vital in improving business performance and product innovation.

Contribution/Originality: This study contributes to the existing literature on business performance for MSMEs during the COVID-19 pandemic. The originality of this research is in its examination of the impact of the pandemic on MSMEs by looking at the impact of entrepreneurial orientation, market orientation, technology orientation, and product innovation on business performance, which has never been done by other researchers.

1. INTRODUCTION

Small and micro businesses and market traders in Indonesia reached 12 million in Indonesia according to data from the Indonesian Market Traders Association. According to the Indonesian Statistics Center data, market traders in Indonesia only grew by 12% between 2019 and 2021, with retailers showing the biggest growth.

The Covid-19 pandemic also had an impact on MSMEs, especially in weaving, tofu and tempeh production, pulses, and boarding houses. The government made efforts to prevent the spread of Covid-19 by imposing the Enforcement of Community Activity Restrictions, which prevents groups of people from gathering in one location. During the pandemic, the number of MSMEs in Indonesia decreased by 2% between 2019 and 2020 (during the pandemic). According to Purwantoro (2017), the measurements of MSMEs are related to entrepreneurial orientation factors, market orientation and technology orientation for product innovation and their impact on business performance.

Table 1. MSMEs' form in Indonesia in 2019, 2020, and 2021.

MSMEs	Micro, small and medium enterprises' (MSMEs) credit at commercial banks		
	2019	2020	2021
MSMEs	1,107,240	1,088,333	1,221,015
Business field	1,107,240	1,088,333	1,220,459
Agriculture, hunting and forestry	109,544	130,012	161,456
Fishery	9,379	11,416	14,751
Mining and excavation	8,544	8,039	8,969
Processing industry	111,401	112,601	128,136
Electricity, gas, and water	6,669	4,039	3,808
Construction	72,033	59,164	57,583
Wholesale and retail trade	548,276	530,653	601,384
Hospitality (Food and accommodation)	45,137	50,623	58,603
Transportation, warehousing, and communication	44,767	42,710	41,876
Scale enterprises	1,107,240	1,088,333	1,221,015
Micro enterprises	283,518	247,142	389,871
Small enterprises	343,245	352,923	459,541
Medium enterprises	480,477	488,268	371,603

Source: Indonesian Statistics Center, 2022.

Table 1 shows that entrepreneurial orientation (EO) has become one of the most established concepts in entrepreneurship and broader management research, and there have been several reviews of the EO literature in recent decades, including [Petković & Sorak \(2019\)](#). In marketing literature, the concept of market orientation is prominent and, although theoretically different, is seen as a recurring theme related to corporate sustainability in market-oriented conceptualizations.

However, there is a consensus regarding market-oriented influences in creating the actions and processes necessary to ultimately create greater value for consumers through the collection and dissemination of market information ([Appiah-Nimo & Chovancová, 2020](#)).

Small and medium-sized enterprises (SMEs) play an important role in the economic development of many countries around the world. As economies of scale shrink in the age of globalization, growth opportunities for SMEs are increasing ([Ravavi & Abaziz, 2017](#)).

Based on the study by [Somjai and Sangperm \(2019\)](#) on improving SME performance, the existing model can be further developed by adding two variables – customer value and strategic orientation – to improve SME performance. Also, SME performance should be divided into two parts: financial performance and non-financial performance.

1.1. Research Purpose

To test whether the entrepreneurial orientation, market orientation and technology orientation factors toward product innovation have an impact on business performance.

1.2. Benefit of this Research

From this research, the benefits of entrepreneurial orientation, market orientation and technology orientation factors toward product innovation and their impact on business performance in SMEs will be obtained.

2. THEORETICAL REVIEW

2.1. Entrepreneurial Orientation

According to [Kusa, Duda, and Suder \(2021\)](#), entrepreneurial orientation is generally defined as the ability to pursue a business opportunity. Entrepreneurial orientation is also an organizational characteristic and has three dimensions, namely risk-taking, innovativeness, and proactiveness.

Meanwhile, according to Wijayanto, Wahyullah, and Aribawa (2020), entrepreneurial orientation is the attitude of entrepreneurs toward running a business. Finally, according to Somjai and Sangperm (2019), entrepreneurial orientation is the process of making organizational strategies that become the basis for decisions and actions.

Entrepreneurial collaboration has been described as a precursor to organizational performance growth. Other factors, such as management skills, business strategies, and environmental factors, are also beginning to portend better performance for small and medium enterprises (SMEs) (Octavia, Indrawijaya, Sriyudha, & Hasbullah, 2020).

2.2. Market Orientation

Kohli, Jaworski, and Kumar (1993) defined all organizational activities related to current and future customer needs as a horizontal and vertical dissemination of intelligence information within the organization, and actions or responses throughout the organization are attributed market intelligent. Meanwhile, Atuahene-Gima (1996) stated that a series of activities reflect the marketing concept philosophy at the organizational level where the activities are divided into three; the first is to collect information from the market, the second is to disseminate the information to all parts of the organization, and the last is how the organization responds.

Furthermore, according to Jaworski and Kohli (1993), market orientation is the organization-wide generation of market intelligence, dissemination of intelligence across departments, and organization-wide responsiveness to it. Appiah-Nimo and Chovancová (2020) stated that market orientation is an organizational philosophy that creates the behaviours necessary for the creation of superior value for consumers, which will eventually lead to superior firm performance.

2.3. Technology Orientation

According to Masa'deh, Al-Henzab, Tarhini, and Obeidat (2018a), technology orientation is the product, service and technology provided by a company. Furthermore, according to Hunter and Perreault Jr (2006), internal technology support is the customer's approval of the use of sales technology, salesperson experience, and its consequences as well as the effectiveness of information, smart sales tasks, and sales performance results. Ramírez-Solis, Llonch-Andreu, and Malpica-Romero (2022) stated that technology orientation influences innovation and performance.

2.4. Innovation of Products

Purwanto (2017) stated that new products or services are introduced to the market to meet consumer needs. According to Ramírez-Solis et al. (2022), innovation is closely related to intellectual capital. Product innovation is defined as the creation of a product that is superior to competitors, the implementation of product changes, the development of new products on existing product lines, and the assessment of the degree to which a company is able to create new products.

Finally, according to Chumme (2022), product innovation is a new idea from a variety of data collection sources, such as a joint brainstorming by stakeholders, collecting information from customers or competitors, etc., and selecting new ideas to create a product to meet customers' needs.

2.5. Business Performance

According to Fitri, Putra, and Lusiana (2020), business performance is a situation where a person or group of people work to generate profits. McDowell (2013) stated that organizational efficiency affects business performance. According to Masa'deh, Al-Henzab, Tarhini, and Obeidat (2018b), a cost-based performance measure will represent whether the costs incurred for strategy and marketing are in accordance with the revenue and profit generated, and revenue-based performance will compare the revenue generated in accordance with the achievement targets.

2.6. The Positive Influence of Entrepreneurial Orientation on Product Innovation

According to Purwanto (2017), entrepreneurial orientation has a positive effect on product innovation, and according to Atuahene-Gima and Ko (2001), entrepreneurial orientation influences product innovation. Furthermore, Salavou and Lioukas (2003) stated that entrepreneurs influence product innovation. Based on the literature review above, the following hypothesis is proposed:

H1: Entrepreneurial orientation has a positive influence on product innovation.

2.7. The Positive Influence of Market Orientation on Product Innovation

Purwanto (2017) stated that market orientation has a positive effect on product innovation. Atuahene-Gima and Ko (2001) and Salavou and Lioukas (2003) also stated that market orientation influences product innovation. Based on the literature review above, the following hypothesis is proposed:

H2: Market orientation has a positive influence on product innovation.

2.8. The Positive Influence of Technology Orientation on Product Innovation

According to Purwanto (2017), technology orientation has a positive effect on product innovation. Likewise, Ramírez-Solis et al. (2022) stated that technology has an influence on firm performance. Furthermore, Salavou and Lioukas (2003) stated that technology has an influence on product innovation. Based on the literature review above, the following hypothesis is proposed:

H3: Technology orientation has a positive influence on product innovation.

2.9. The Positive Influence of Product Innovation on Business Performance

Chummee (2022) stated that product innovation has an effect on business performance. Furthermore, according to Khamaludin et al. (2022), product innovation affects marketing performance, and if marketing performance increases, business performance will also increase.

Finally, according to Fitri et al. (2020), there is a positive influence of product innovation on business performance. Based on the literature review above, the following hypothesis is proposed:

H4: Product innovation has a positive influence on business performance.

2.10. The Positive Influence of Entrepreneurial Orientation on Business Performance

According to Masa'deh et al. (2018a), entrepreneurial orientation has a positive effect on business performance. Khalid, Ahmed, Tundikbayeva, and Ahmed (2019) stated that entrepreneurial orientation influences organizational performance. Based on the literature review above, the following hypothesis is proposed:

H5: Entrepreneurial orientation has a positive influence on business performance.

2.11. The Positive Influence of Technology Orientation on Business Performance

According to Masa'deh et al. (2018a), technology orientation has a positive impact on corporate performance. According to Hunter and Perreault Jr (2006), technology orientation has a direct or indirect impact on a firm's internal performance.

Finally, Hunter and Perreault Jr (2006) found that in-house technical support, customer acceptance of the use of sales technology, and salesperson experience are closely related to business or sales performance (information effectiveness, intelligent sales tasks, and business performance results). Likewise, Ramírez-Solis et al. (2022) stated that technology plays a role in the performance of firms. Based on the literature review above, the following hypothesis is proposed:

H6: Technology orientation has a positive influence on business performance.

2.12. The Positive Influence of Market Orientation on Business Performance

Masa'deh et al. (2018a) and Jaworski and Kohli (1993) stated that market orientation has a positive effect on business performance.

According to Guðlaugsson and Schalk (2009), in the retail business, there is an influence between market orientation and business performance. Based on the literature review above, the following hypothesis is proposed:

H7: Market orientation has a positive influence on business performance.

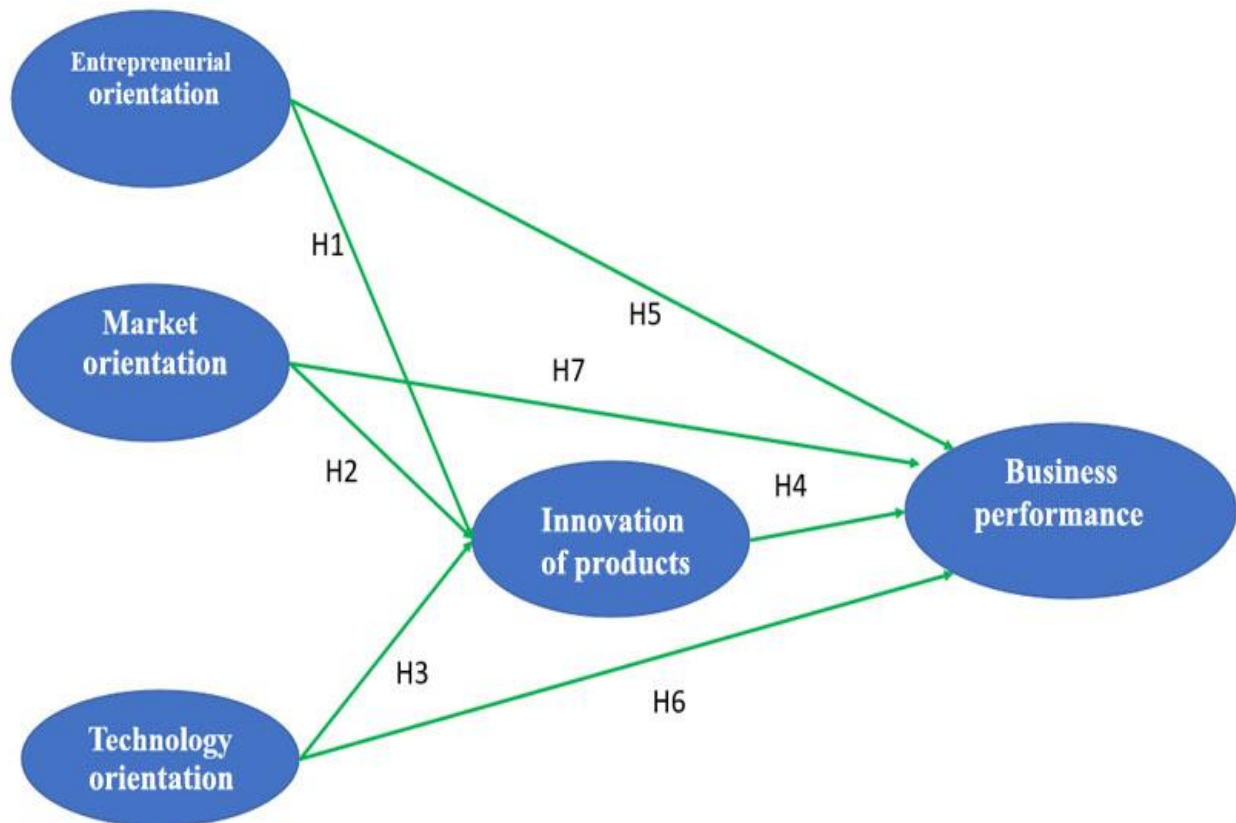


Figure 1. Research framework.

Based on the development of the hypotheses in this study, Figure 1 presents the conceptual framework with the relationships between entrepreneurial orientation, market orientation, technology orientation and product innovation and business performance.

3. RESEARCH METHODOLOGY

This research is quantitative, which tests whether enthusiasm, anxiety, and expertise in using computers have an impact on the intention to use technology.

Data were collected via Google Forms from 160 market traders, who were selected through the convenience sampling technique.

3.1. Variable Operationalization

The operationalization variables in this study are as follows:

Table 2. Variable operationalization.

Symbol	Construct	Variable operationalization	Source
MO1	Market orientation	We constantly monitor our level of commitment and orientation to serve customer needs	Masa'deh et al. (2018b)
MO2		Our business objectives are primarily driven by customer satisfaction	
MO3		Our business objectives are driven by creating greater value for our customers	
MO4		Our competitive strategies are based on our understanding of customer needs	
MO5		We measure customer satisfaction frequently	
MO6		We pay close attention to aftersales service	
MO7		Our sales people regularly share information concerning competitors' activities	
MO8		We rapidly respond to competitive actions that threaten us	
MO9		Our top managers regularly discuss competitors' strengths and actions	
MO10		We target customers where we have an opportunity to gain a competitive advantage	
MO11		Our top managers from every function regularly visit our current and prospective customers	
MO12		We freely communicate information about our successful and unsuccessful customer experiences across all business functions	
MO13		All our business functions are integrated in serving the needs of our target market	
MO14		All our managers understand how everyone in our business can contribute to creating value for customers	
MO15		We share resources with other business functions	
TO1	Technology orientation	Research and development activities are very important in our firm	Masa'deh et al. (2018b)
TO2		Advanced technologies and methods are used to develop new products in our firm	
TO3		New product development processes are directed by technical personnel	
TO4		New technologies are integrated into our firm rapidly	
TO5		Our firm initiates the development of new technologies and products	
TO6		Our products include high technology items	
TO7		We are very active in developing new technologies	
TO8		We intend to develop new technologies in order to respond to the changing expectations of our customers	
TO9		We have better technological knowledge than our competitors	
TO10		Our product development programs are more ambitious than our competitors'	
EO1	Entrepreneurial orientation	In our company, new ideas are put forward regularly	Masa'deh et al. (2018b)
EO2		Continuous renewal and innovation are important for our company	
EO3		Lately, we have launched many new products/services	
EO4		We invest heavily in developing new products, services and business practices	
EO5		Our company often acts before our competitors do	
EO6		We aim to be at the forefront of development in	

		our business sector	
EO7		We prefer the cautious line of action, even if some opportunities might be lost that way (reversed)	
EO8		Bold action is necessary to achieve our company's objectives	
EO9		In uncertain situations, we are not afraid to take substantial risks	
PI1	Product innovation	Our products are superior to those of our competitors	Masa'deh et al. (2018b)
PI2		Innovation for product changes are new developments	
PI3		We develop new products on existing product lines	
PI4		New product innovations have lower prices	
PI5		New product innovations have advantages over competing products	
PI6		Repairing old products has an advantage over competing products	
PI7		New product innovations have more features than old products	
BP1	Business performance	Sales growth	Sirat (2022)
BP2		Profit growth	
BP3		Capital growth	
BP4		Market growth	
BP5		Customer growth	
BP6		Asset growth	
BP7		Labor growth	

Table 2 presents the operationalization of the study's five variables which comprise 48 research indicators.

4. RESULTS

4.1. Results from the Quantitative Method

4.1.1. Outer Model

To prove the reliability and validity of the model, the first step is to test the indicator reliability (*outer loading*). According to Hair, Hult, Ringle, and Sarstedt (2019), an indicator is reliable if the value of the outer loading is > 0.708. Table 3 shows that all indicators are greater than 0.708, so it can be stated that all indicators representing each construct are considered reliable.

4.1.2. Construct Reliability (Cronbach's Alpha & Composite Reliability)

The second step is to test the construct reliability. This is measured by Cronbach's alpha, which must have a value above 0.7, and the average variance extracted (AVE) must be more than 0.5 (Hair et al., 2019). From Table 3, we can see that Cronbach's negligence is greater than 0.7 and the AVE is greater than 0.5, so it can be stated that all constructs are reliable.

The third step is to test the construct validity, as depicted in Table 4, which is measured by the discriminant validity test. The value must be greater than the value on the left-hand side and below it (Hair et al., 2019).

Table 4 shows that all variables have good reliability, because the Cronbach's alpha and composite reliability values are above 0.7 and are declared reliable.

Table 3. Outer loading.

Constructs and items		Loading	
CR = 0.972	AVE = 0.700		
MO1	Market orientation	We constantly monitor our level of commitment and orientation to serve the customers' needs	0.802
MO2		Our business objectives are primarily driven by customer satisfaction	0.796
MO3		Our business objectives are driven by creating greater value for our customers	0.805
MO4		Our competitive strategies are based on our understanding of customer needs	0.819
MO5		We measure customer satisfaction frequently	0.806
MO6		We pay close attention to aftersales service	0.865
MO7		Our sales people regularly share information concerning competitors' activities	0.885
MO8		We rapidly respond to competitive actions that threaten us	0.858
MO9		Our top managers regularly discuss competitors' strengths and actions	0.878
MO10		We target customers where we have an opportunity to gain a competitive advantage	0.884
MO11		Our top managers from every function regularly visit our current and prospective customers	0.824
MO12		We freely communicate information about our successful and unsuccessful customer experiences across all business functions	0.833
MO13		All our business functions are integrated in serving the needs of our target market	0.872
MO14		All of our managers understand how everyone in our business can contribute to creating value for customers	0.867
MO15		We share resources with other business functions	0.737
TO1	Technology orientation	R&D activities are very important in our firm	0.810
TO2		Advanced technologies and methods are used to develop new products in our firm	0.846
TO3		New product development processes are directed by technical personnel	0.909
TO4		New technologies are integrated into our firm rapidly	0.923
TO5		Our firm initiates development of new technologies and products	0.928
TO6		Our products include high technology items	0.871
TO7		We are very active in developing new technologies	0.922
TO8		We intend to develop new technologies in order to respond to the changing expectations of our customers	0.906
TO9		We have better technological knowledge than our competitors	0.914
TO10		Our product development programs are more ambitious than our competitors'	0.897
CR = 0.974		AVE = 0.809	
EO1	Entrepreneurial orientation	In our company, new ideas are put forward regularly	0.881
EO2		Continuous renewal and innovation are important for our company	0.866
EO3		Lately, we have launched many new products/services	0.897
EO4		We invest heavily in developing new products, services and business practices	0.872
EO5		Our company often acts before our competitors do	0.916
EO6		We aim to be at the forefront of development in our business sector	0.909

EO7		We prefer the cautious line of action even if some opportunities might be lost that way (reversed)	0.902
EO8		Bold action is necessary to achieve our company's objectives	0.923
EO9		In uncertain situations, we are not afraid to take substantial risks	0.926
CR = 0.972		AVE = 0.834	
PI1	Product innovation	Our products are superior to those of our competitors	0.875
PI2		Innovation for product changes are new developments	0.913
PI3		We develop new products on existing product lines	0.922
PI4		New product innovations have a more economical price	0.901
PI5		New product innovations have advantages over competing products	0.931
PI6		Improvements to old products have advantages over competing products	0.941
PI7		New product innovations have more features than old products	0.908
CR = 0.923		AVE = 0.706	
BP1	Business performance	Sales growth	0.846
BP2		Profit growth	0.846
BP5		Customer growth	0.785

Table 4. Construct reliability.

Variable	Cronbach's alpha	Composite reliability	Result
Business performance	0.897	0.923	Reliable
Entrepreneurial orientation	0.970	0.974	Reliable
Product innovation	0.967	0.972	Reliable
Market orientation	0.969	0.972	Reliable

4.1.3. Convergent Validity

The fourth step is to test the convergent validity. This is measured by the AVE, which must be more than 0.5.

Table 5. Convergent validity.

Variable	Average variance extracted (AVE)	Result
Business performance	0.706	Valid
Entrepreneurial orientation	0.809	Valid
Innovation of product	0.834	Valid
Market orientation	0.700	Valid

Table 5 shows that all variables have good convergent validity because they all have a value above 0.5 and can be declared valid.

4.1.4. Discriminant Validity

The next step is to test the construct validity, which is measured by the discriminant validity test.

Table 6. Discriminant Validity

Variable	Business performance	Entrepreneurial orientation	Product innovation	Market orientation
Business performance	0.840			
Entrepreneurial orientation	0.226	0.899		
Innovation of product	0.235	0.765	0.913	
Market orientation	0.178	0.682	0.697	0.837

Table 6 shows that all constructs have a value < 0.9 ; therefore, all constructs are reliable and valid.

4.1.5. Inner Model

The results of the inner model come from the bootstrapping process using SmartPLS, through which the t-statistic value for each path can be identified.

4.1.6. Inner VIF

The model quality parameters used in the inner model are the variance inflation factor (VIF), R-squared, and Q-squared (Hair et al., 2019).

Table 7. Inner VIF.

Independent variable	Business performance
Entrepreneurial orientation	4.335
Product innovation	3.130
Market orientation	2.202
Technology orientation	3.699

Table 7 shows that entrepreneurial orientation has little high, but have no multicollinearity. Also product innovation, market orientation and technology orientation have no multicollinearity.

Table 8. R-Squared.

Dependent variable	R-squared	Adjusted R-squared
Business performance	0.067	0.044
Product innovation	0.680	0.675

Table 8 shows that business performance has an adjusted R-squared value of 0.044, which means that 4.4% of business performance is influenced by entrepreneurial orientation, market orientation, technology orientation and product innovation. Product innovation has an adjusted R-Squared value of 0.675, which indicates that 67.5% of product innovation is influenced by entrepreneurial orientation, market orientation, and technology orientation.

4.1.7. R-Squared

The R-squared for business performance has value of 0.067 and is weak, so entrepreneurial orientation, market orientation, innovation product, technology orientation have a positive influence on business performance.

4.1.8. Q-Squared (Q^2)

The values of Q^2 range from 0 to 1 (Hair et al., 2019). Q^2 -squared values greater than 0 up to 0.25 indicate poor predictive power or low predictive relevance, Q^2 -squared values between 0.25 and 0.5 are considered to have a moderate predictive power or moderate predictive relevance, and Q^2 -squared values greater than 0.5 indicate good predictive power or predictive relevance. The higher the value of Q^2 -squared, or the closer it is to 1, the more accurate the predictive power of the variable is in predicting the outcome resulting from changes in data parameters (Hair et al., 2019). The Q^2 value indicates the quality of the empirically tested proposed model. The Q^2 values were obtained from calculations using the PLS-SEM blinded menu.

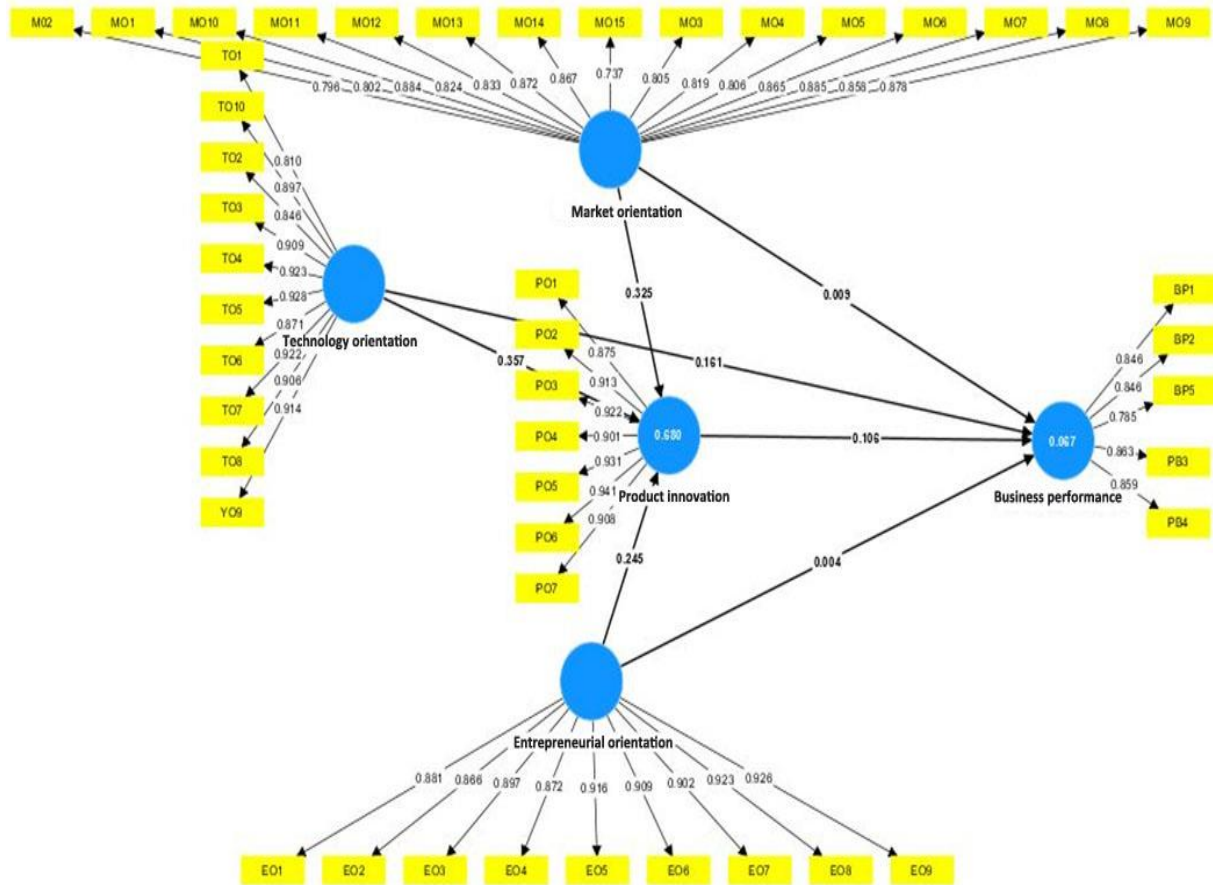


Figure 2. Hypothesis test.

Source: Processed data, 2022.

Figure 2 shows the results of the hypothesis testing between the variables of market orientation, technology orientation, entrepreneurial orientation, product innovation, and business performance.

Table 9. Q-squared and predicted Q-squared.

Dependent variable	Q-squared (Relevant)	Q-squared (Predicted)
Business performance	0.042	0.029
Product innovation	0.558	0.655

Source: Processed data, 2022.

Table 9 shows that business performance has a predicted Q-squared value of 0.029, and product innovation has a predicted Q-squared value of 0.655. Both have a predictive relevance value of more than 0, which means that they have a good predictive relevance value.

Table 10. Hypothesis test results.

Variable	Path coefficient	T-statistic	P-value	Result
Entrepreneurial orientation -> Business performance	0.004	0.031	0.488	Not supported
Entrepreneurial orientation -> Product innovation	0.245	1.682	0.047	Supported
Product innovation -> Business performance	0.106	0.837	0.201	Not supported
Market orientation -> Business performance	0.009	0.103	0.459	Not supported
Market orientation -> Product innovation	0.325	4.114	0.000	Supported
Technology orientation -> Business performance	0.161	1.357	0.088	Not supported
Technology orientation -> Product innovation	0.357	2.883	0.002	Supported

Source: Processed data, 2022.

Based on the data in Table 10, entrepreneurial orientation has an insignificant effect on business performance, while it has a significant effect on product innovation. Product innovation has an insignificant effect on business performance. Market orientation has an insignificant effect on business performance, while it has a significant effect on product innovation. And technology orientation has an insignificant effect on business performance, while it has a significant effect on product innovation.

5. DISCUSSION AND CONCLUSION

From the results of the hypothesis testing, it was found that entrepreneurial orientation does not have a positive effect on business performance; thus, H1 is rejected because the entrepreneurial ability of businesspeople is not enough to directly improve business performance.

Entrepreneurial orientation has a positive and significant effect on innovation of product, so H2 is accepted because increased revenue is a result of product innovation and technological orientation.

If product innovation is not accompanied by technology orientation, business performance will not improve; therefore, H3 is rejected.

Market orientation does not have a positive and significant effect on business performance; therefore, H4 is rejected because market changes are much faster than product innovation.

Market orientation has a positive and significant effect on product innovation, H5 is accepted.

Technology orientation does not have a positive and significant effect on business performance; therefore, H6 is rejected.

Technology orientation has a positive and significant effect on product innovation; therefore, H7 is accepted.

From the seven hypotheses, it can be concluded that technology orientation has a positive and direct impact on business performance. Because businesses have now entered the digital era, not least for SMEs, to succeed in the market they must use the right technology and improve business performance. When viewed from the path coefficient leading to business performance, technology orientation has a value of 16.1, followed by product innovation at 10.6, market orientation at 0.009, and entrepreneurial orientation at 0.004, which have a positive effect on business performance. But if you look at what affects product innovation, the first is technology orientation (0.357), followed by market orientation (0.325), and entrepreneurial orientation (0.245).

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Authors' Contributions: All authors contributed equally to the conception and design of the study.

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