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THE INFLUENCE OF PSYCHOLOGICAL CAPITAL IN SHAPING ENTREPRENEURIAL MINDSETS AND ENCOURAGING INNOVATION ORIENTATION AND BUSINESS RESILIENCE IN MSMES

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Abstract

This study aims to analyze the influence of Psychological Capital on Entrepreneurial Mindset and its impact on Innovation Orientation and Business Resilience in Micro, Small, and Medium Enterprises (MSMEs). This study uses a quantitative approach with the Partial Least Squares-based Structural Equation Modeling (SEM-PLS) method using SmartPLS software. The results show that Psychological Capital has a positive and significant influence on Entrepreneurial Mindset as well as Innovation Orientation and Business Resilience. However, Entrepreneurial Mindset does not have a significant direct effect on Innovation Orientation and Business Resilience. Nevertheless, Entrepreneurial Mindset is proven to have a role as a mediating variable in the relationship between Psychological Capital and Innovation Orientation and Business Resilience. This finding confirms that increasing innovation and business resilience in MSMEs is not only directly influenced by psychological capital, but also through the formation of a strong entrepreneurial mindset. Therefore, strengthening the psychological aspects of MSMEs is an important factor in increasing business competitiveness and sustainability.

Keywords: Psychological Capital, Entrepreneurial Mindset, Innovation Orientation, Business Resilience and MSMEs

1. Background

The development of Micro, Small, and Medium Enterprises (MSMEs) in Indonesia plays a highly strategic role in supporting the national economy, particularly in creating jobs, increasing public income, and maintaining economic stability amidst various crises. However, despite their significant contribution, MSMEs still face various structural and non-structural challenges, such as limited financial capital, limited access to technology, and weak managerial capacity. Among these factors, the psychological aspects of entrepreneurs are often overlooked, despite their crucial role in determining business success. In the context of modern entrepreneurship, business success is determined not only by economic resources but also by an individual's internal strengths known as psychological capital. Psychological capital encompasses four main dimensions: self-efficacy, optimism, hope, and resilience. These four aspects play a role in shaping an entrepreneurial mindset, which serves as the foundation for MSMEs in facing uncertainty, taking risks, and creating new opportunities amidst ever-changing market dynamics.

A strong entrepreneurial mindset will encourage entrepreneurs to be more adaptive, creative, and innovative in developing their businesses. However, in reality, many MSMEs still tend to have a conventional mindset, oriented towards survival, and lack the courage to innovate. This condition is exacerbated by low self-confidence and a fear of failure, which ultimately hinders business growth and competitiveness in the market. Furthermore, innovation orientation is a key factor in increasing the competitive advantage of MSMEs. Innovation is not only related to the creation of new products but also encompasses improvements in processes, marketing strategies, and business models. However, without the support of strong psychological capital, MSMEs tend to be reluctant to step out of their comfort zones and try new things. This indicates a close relationship between an individual's psychological state and innovative capabilities in running a business.

On the other hand, business resilience has become an increasingly important issue, particularly following various global and national crises that have directly impacted the sustainability of MSMEs. Business resilience is determined not only by external factors such as government policies or market conditions, but also by the internal capabilities of entrepreneurs to face pressure, adapt, and recover from failure. Strong psychological capital is believed to increase the resilience of entrepreneurs in facing these challenges. However, studies on the influence of psychological capital on entrepreneurial mindsets, innovation orientation, and business resilience in MSMEs are still relatively limited, particularly in the Indonesian context. Many studies focus more on financial and technical aspects, while the psychological dimension has not been explored in depth. Yet, a comprehensive understanding of these psychological factors is essential for formulating more holistic and sustainable MSME development strategies.

Table 1.1 Indonesian Entrepreneurship and Innovation Index

Indicator	Mark	Information	Source
Global Entrepreneurship Index	26.0	Middle rank	Global Entrepreneurship Development Institute (2022)
Global Innovation Index	30.3	World ranking 75	WIPO (2023)
National Entrepreneurship Level	3.47%	Of the total population	Ministry of Cooperatives and SMEs (2023)
Ideal Target of Entrepreneurship	4.0%	Developed country standards	World Bank

The Indonesian Entrepreneurship and Innovation Index table shows that the level of national entrepreneurship and innovation development is still in the medium category and has not been fully optimal in driving economic competitiveness. The Global Entrepreneurship Index score of 26.0 released by the Global Entrepreneurship Development Institute indicates that the entrepreneurial ecosystem in Indonesia still faces various obstacles, both in terms of human resource quality, access to business opportunities, and business environmental support. This position reflects that despite the large number of entrepreneurs, the quality of entrepreneurship demonstrated through innovation, risk-taking courage, and growth orientation still needs to be improved. Furthermore, the Global Innovation Index score of 30.3, ranking 75th in the world, reported by the World Intellectual Property Organization, indicates that Indonesia's innovation capacity is still relatively lagging behind other countries. This illustrates that the ability to create, adopt, and develop innovations in products, processes, and business models has not yet become a major strength in business development. This low level of innovation is often related to limited technological literacy, a lack of investment in research and development, and a weak innovative entrepreneurial mindset.

On the other hand, the national entrepreneurship rate, which reached 3.47% of the total population according to the Ministry of Cooperatives and SMEs of the Republic of Indonesia, indicates significant progress in increasing the number of entrepreneurs. However, this figure remains below the ideal target of 4.0% recommended by the World Bank as the minimum threshold for achieving a strong and highly competitive economic structure. This gap indicates that Indonesia still needs to increase both the number and quality of entrepreneurs capable of creating added value and sustainable innovation. When linked to this research, this condition indicates that the main problem lies not only in the quantity of entrepreneurs, but also in the psychological quality and entrepreneurial mindset they possess. Psychological capital such as self-confidence, optimism, hope, and resilience are important factors in encouraging individuals not only to start a business but also to develop it innovatively and sustainably. The low entrepreneurship and innovation index may reflect the suboptimal development of these psychological aspects among MSMEs.

Table 1.2 Development of the Number of MSMEs and Contribution to GDP in Indonesia

Year	Number of MSMEs (Units)	Contribution to GDP (%)	Absorbed Workforce (%)	Source
2019	65.5 million	60.3%	96.9%	Ministry of Cooperatives and SMEs (2020)
2020	64.2 million	60.5%	96.7%	BPS (2021)
2021	65.4 million	61.1%	97.0%	Ministry of Cooperatives and SMEs (2022)
2022	65.8 million	61.6%	97.1%	BPS (2023)
2023	66.0 million	61.9%	97.3%	Ministry of Cooperatives and SMEs (2024)

The table showing the development of the number of MSMEs and their contribution to Gross Domestic Product (GDP) in Indonesia shows a relatively stable trend with a tendency to increase in the 2019–2023 period. This data demonstrates that MSMEs remain the backbone of the national economy, both in terms of the number of business units, contribution to GDP, and employment. In 2019, the number of MSMEs was recorded at 65.5 million units, contributing 60.3% to GDP and absorbing 96.9% of the workforce. This figure demonstrates the strategic role of MSMEs in maintaining economic stability before the global crisis caused by the pandemic. However, in 2020, there was a slight decrease in the number of MSMEs to 64.2 million units. This condition can be understood as a direct impact of the COVID-19 pandemic, which caused many businesses to experience a decline in turnover and even cease operations. Despite this, their contribution to GDP actually increased slightly to 60.5%, indicating that MSMEs are still able to survive and contribute amidst economic pressures.

Entering 2021 and 2023, a significant recovery is evident. The number of MSMEs increased again to 65.4 million in 2021 and continued to grow to 66.0 million units in 2023. Correspondingly, the contribution of MSMEs to GDP also experienced a gradual increase from 61.1% in 2021 to 61.9% in 2023. This indicates that MSMEs are not only recovering but also strengthening as drivers of the national economy. This increase is inseparable from various economic recovery efforts, including business digitalization, government policy support, and business actors' adaptation to market changes. In terms of labor absorption, MSMEs consistently demonstrate a very dominant contribution, above 96% annually. In fact, this figure increased from 96.7% in 2020 to 97.3% in 2023. This confirms that MSMEs play a crucial role in reducing unemployment and improving public welfare. In other words, the resilience of the MSME sector not only impacts economic growth, but also social stability.

However, despite the positive trend in the data, the increase in the number of MSMEs and their contribution to GDP does not fully reflect improvements in business quality. Many MSMEs remain micro-scale with relatively low productivity and are limited to traditional economic activities. This situation suggests that the main challenge going forward lies not only in increasing the quantity but also in the quality and competitiveness of MSMEs. In the context of this research, this phenomenon is relevant for further study, particularly regarding internal factors of business actors, such as psychological capital. The ability of MSMEs to survive and thrive amidst economic dynamics is determined not only by external factors but also by their mental strength and entrepreneurial mindset. Psychological capital, such as optimism, self-confidence, hope, and resilience, is believed to play a crucial role in encouraging MSMEs to continue innovating and adapting.

Research conducted by Frederick Luthans and colleagues (2021) emphasized that the success of small businesses is determined not only by economic factors but also by psychological capital, including self-efficacy, optimism, hope, and resilience. This finding aligns with the condition of MSMEs in Indonesia, which remained resilient even during a decline in the number of business units in 2020. This resilience demonstrates the adaptive capacity of entrepreneurs, which is inseparable from individual psychological strengths. Furthermore, a study by Saras D. Sarasvathy (2020) on effectuation theory explains that entrepreneurs tend to rely on existing resources and flexibility in the face of uncertainty. This is relevant to the MSME recovery phenomenon in the 2021–2023 period, where entrepreneurs began to adapt through simple innovations, digitalization, and changes to their business models. However, the study also highlighted that not all entrepreneurs possess adaptive thinking skills, which are often influenced by an entrepreneurial mindset. Furthermore, research by Zoltan J. Acs et al. (2022) within the framework of the Global Entrepreneurship Index shows that countries with high levels of entrepreneurship are generally supported by the quality of innovation and individual capacity to manage risk. When compared to Indonesian data, although the number of MSMEs continues to increase, the quality of entrepreneurship remains relatively low. This is

evident in the limited contribution of innovation to increasing business added value, as confirmed in various international reports. Another study by the Organization for Economic Co-operation and Development (2021) also revealed that MSMEs in developing countries tend to face obstacles in innovation due to limited resources and low entrepreneurial orientation. This condition aligns with Indonesian data, which shows that the increase in the number of MSMEs has not been fully accompanied by an increase in quality, particularly in terms of innovation and global competitiveness.

Furthermore, a study by Thomas W. Zimmerer et al. (2020) emphasized that business sustainability is significantly influenced by the ability of entrepreneurs to develop a strong entrepreneurial mindset. In the Indonesian context, although MSMEs are capable of absorbing a large workforce and contributing significantly to GDP, many entrepreneurs are still oriented toward survival rather than growth. Based on this comparison, it can be concluded that data on MSME development in Indonesia not only reinforces the findings of previous research but also indicates a gap between the quantity and quality of entrepreneurship. Therefore, this study is crucial to fill this gap by emphasizing the role of psychological capital in shaping entrepreneurial mindsets, encouraging innovation, and increasing business resilience.

Formulation of the problem

Based on the background that has been described, the problem formulation in this research is as follows:

1. Does psychological capital (X) influence the entrepreneurial mindset (Z) of MSME actors?
2. Does psychological capital (X) influence innovation orientation and business resilience (Y) in MSME actors?
3. Does the entrepreneurial mindset (Z) influence innovation orientation and business resilience (Y) in MSME actors?
4. Does psychological capital (X) influence innovation orientation and business resilience (Y) through entrepreneurial mindset (Z) as a mediating variable?

2. Theoretical Basis

Developing quality human resources (HR) from an early age is the primary foundation for sustainable national development. Elementary school, as the initial phase of formal education, plays a strategic role in shaping children's cognitive capacity, character, and psychological readiness. However, the quality of

2.1. Psychological Capital

Psychological capital is a key concept in the study of organizational behavior and modern entrepreneurship, emphasizing individual psychological strength as a strategic resource. According to Carolyn M. Youssef-Morgan (2020), psychological capital is defined as a positive psychological state that develops in individuals, characterized by high levels of self-confidence, optimism about the future, hope for achieving goals, and the ability to recover from stress or failure. This concept demonstrates that individual success is determined not only by technical abilities or economic resources, but also by mental capacity.

Furthermore, James B. Avey (2021) explains that psychological capital has a significant influence on individual performance, especially in uncertain situations such as the world of entrepreneurship. Individuals with high psychological capital tend to be better able to face risks, make decisions confidently, and maintain motivation over the long term. This makes psychological capital a key factor in developing a resilient entrepreneurial character. In the context of MSMEs, psychological capital is particularly relevant because entrepreneurs often face limited resources and uncertain market dynamics. Therefore, psychological strength is a key asset in maintaining business continuity and driving growth.

2.2. Entrepreneurial Mindset

An entrepreneurial mindset is a way of thinking that reflects an individual's ability to recognize opportunities, take risks, and innovate to create added value. According to Heidi M. Neck (2020), an entrepreneurial mindset is a cognitive pattern that enables individuals to think creatively, adaptively, and solution-oriented in facing various business challenges. This mindset is not only formed naturally but can also be developed through experience and learning. Furthermore, Christopher N. Neck (2021) stated that an entrepreneurial mindset consists of several important elements, such as the courage to take risks, the ability to think innovatively, and a proactive attitude in seeking opportunities. Individuals with a strong entrepreneurial mindset tend to be better prepared for change and able to optimally exploit existing opportunities. In relation to psychological capital, an entrepreneurial mindset can be viewed as the result of internalizing positive psychological values. This means that individuals with high levels of self-confidence, optimism, and resilience will more easily develop a productive entrepreneurial mindset.

2.3. Innovation Orientation

Innovation orientation is the tendency of an organization or individual to actively create and implement new ideas in business activities. According to Joe Tidd (2021), innovation extends beyond the creation of new products and encompasses improvements in processes, marketing methods, and business models. Innovation orientation is a crucial indicator of a business's competitiveness amidst global competition. Furthermore, John R. Bessant (2020) emphasized that organizations with a strong innovation orientation tend to be more adaptive to environmental changes and able to maintain long-term business sustainability. This is because innovation enables businesses to continuously adapt to dynamic market needs. In the context of MSMEs, innovation orientation is often a challenge due to limited resources. However, with strong psychological capital and an adaptive entrepreneurial mindset, businesses can develop innovation gradually and sustainably.

2.4. Business Resilience

Business resilience is a company's ability to survive, adapt, and thrive amidst pressure or crisis. According to Erica Seville (2020), business resilience encompasses the ability to anticipate disruptions, respond to change, and recover quickly from adverse conditions. This concept becomes increasingly important in the face of global uncertainties such as economic crises and pandemics. Furthermore, David Smallbone (2022) stated that business resilience is influenced not only by external factors such as policies and market conditions, but also by internal factors, including the psychological characteristics of entrepreneurs. Entrepreneurs with high levels of resilience and optimism tend to be better able to survive and even thrive amidst crises. In this research, business resilience is the end result influenced by a combination of psychological capital and an entrepreneurial mindset. In other words, the stronger the psychological capital and the more adaptive the entrepreneurial mindset, the higher the level of business resilience.

3. Research Methods

3.1. Types and Approaches of Research

This study uses a quantitative approach with an explanatory research design, aiming to explain the causal relationship between psychological capital, entrepreneurial mindset, innovation orientation, and business resilience in MSMEs. The quantitative approach was chosen because it can objectively measure the relationship between variables through numerical data and statistical analysis. According to Marko Sarstedt (2021), quantitative research is highly relevant for testing theoretical models involving relationships between latent constructs, especially when variables cannot be directly measured. Therefore, this approach is suitable for examining the influence of psychological capital on entrepreneurial mindsets and their implications for innovation orientation and business resilience

3.2. Research Population and Sample

The population in this study comprised all MSMEs actively operating businesses in the research area. Given the large population, purposive sampling was used to select respondents based on specific criteria, such as entrepreneurs who have been in business for at least one year. According to G. David Garson (2020), purposive sampling techniques are widely used in Structural Equation Modeling (SEM)-based research because they allow researchers to obtain relevant data in accordance with the research objectives. The sample size in this study was adjusted to the needs of Partial Least Squares (PLS)-based SEM analysis. According to Hair Joseph F. Jr. (2021), the minimum sample size in PLS-SEM is 10 times the number of indicators or the largest structural path in the research model. Therefore, the sample size in this study was set at approximately 100–150 respondents.

3.3. Data Types and Sources

This study used primary data obtained directly from respondents through questionnaires. Primary data was chosen because it provides specific information relevant to the variables studied. According to Uwe Flick (2020), primary data has advantages in terms of relevance and accuracy because it is collected directly from primary sources, consistent with the research objectives.

3.4. Data Collection Techniques

The data collection technique in this study was conducted through a questionnaire designed based on indicators for each variable: psychological capital, entrepreneurial mindset, innovation orientation, and business resilience. The questionnaire was distributed both in person and through digital media. According to Bethlehem Jelke (2021), the

use of questionnaires in quantitative research allows for the efficient collection of large amounts of data and facilitates statistical analysis.

3.5. Operational Definition of Variables

The variables in this study consist of:

1. Psychological Capital (X): includes self-efficacy, optimism, hope, and resilience
2. Entrepreneurial Mindset (Z): includes creativity, innovation, risk-taking, and proactivity
3. Innovation Orientation (Y1): includes product, process, and marketing innovation
4. Business Resilience (Y2): includes the ability to survive, adapt and recover a business.

Each variable is measured using indicators that have been developed based on the latest literature.

3.6. Data Analysis Techniques (SmartPLS)

This study uses the Partial Least Squares (PLS)-based Structural Equation Modeling (SEM) method with the help of SmartPLS software. This method was chosen because it is able to analyze complex relationships between latent variables and does not require normal data distribution. According to Christian M. Ringle (2022), PLS-SEM is a flexible analysis method and is very suitable for use in exploratory and predictive research, especially in the fields of management and entrepreneurship.

The analysis stages in SmartPLS include:

a. Evaluation of the Measurement Model (Outer Model)

Used to test the validity and reliability of constructs, including:

1. Convergent validity (loading factor > 0.7)
2. Discriminant validity (HTMT or cross loading)
3. Composite reliability (> 0.7)
4. Average Variance Extracted (AVE > 0.5)

According to Jan-Michael Becker (2021), outer model evaluation is important to ensure that the indicators are able to represent the construct accurately.

b. Structural Model Evaluation (Inner Model)

Used to test the relationship between variables, including:

1. R-square (R^2) value
2. Path coefficient
3. Effect size (f^2)
4. Predictive relevance (Q^2)

According to Miranda Sarstedt (2020), a structural model shows the strength of the causal relationship between variables and the model's ability to explain the dependent variable.

c. Hypothesis Testing (Bootstrapping)

Hypothesis testing was carried out using bootstrapping techniques to obtain t-statistic and p-value values.

Testing criteria:

1. t-statistic > 1.96
2. p-value < 0.05

According to Edward Rigdon (2021), bootstrapping in PLS-SEM is used to test the significance of the relationship between variables without assuming a normal distribution.

4. Results and Discussion

4.1 Evaluation of the Measurement Model (Outer Model)

The measurement model (outer model) is a confirmatory factor analysis (CFA) that tests the validity and reliability of the latent constructs. The following are the results of the outer model evaluation in this study.

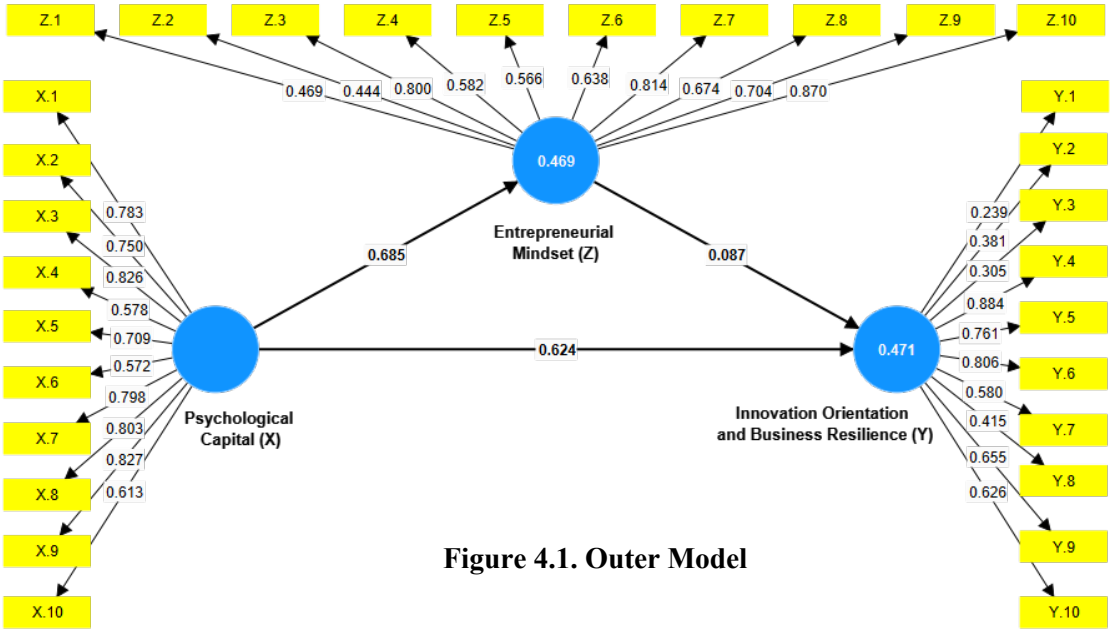

Figure 4.1. Outer Model

Convergent Validity

The convergent validity of the measurement model with the reflective indicator model is assessed based on the correlation between the item score/component score and the construct score calculated using PLS. The following are the results of the convergent validity measurement model test using loading factors:

Table 4.1
Results of Instrument Validity Test Using Loading Factor

	Entrepreneurial Mindset (Z)	Innovation Orientation _and Business Resilience (Y)	Psychological Capital (X)
X.1			0.783
X.2			0.713
X.3			0.750
X.4			0.826
X.5			0.778
X.6			0.709
X.7			0.772
X.8			0.798
X.9			0.803
X.10			0.827
Y.1		0.739	
Y.2		0.726	
Y.3		0.781	
Y.4		0.705	
Y.5		0.884	
Y.6		0.761	
Y.7		0.806	
Y.8		0.780	
Y.9		0.715	

Y.10		0.755	
Z.1	0.769		
Z.2	0.870		
Z.3	0.744		
Z.4	0.800		
Z.5	0.782		
Z.6	0.766		
Z.7	0.738		
Z.8	0.814		
Z.9	0.774		
Z.10	0.704		

Source :Primary data processed (2026)

Based on Table 4.1 above, all loading factor values have exceeded the 0.7 threshold, thus concluding that each indicator in this study is valid. Therefore, these indicators can be used to measure the research variables.

Reliability Test

An instrument can be considered reliable if its Average Variance Extracted value is greater than 0.5, Cronbach's Alpha value is greater than 0.6, and Composite Reliability value is greater than 0.7. The following table shows the results of the reliability calculations using Average Variance Extracted (AVE), Cronbach's Alpha, and Composite Reliability:

Table 4.2
Calculation of AVE, Cronbach Alpha, and Composite Reliability

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Entrepreneurial Mindset (Z)	0.902	0.904	0.887	0.549
Innovation Orientation _and Business Resilience (Y)	0.843	0.883	0.834	0.563
Psychological Capital (X)	0.921	0.926	0.919	0.536

Source :Primary data processed (2026)

The results of the outer model testing in this study indicate that all variable constructs, namely Psychological Capital (X), Entrepreneurial Mindset (Z), and Innovation Orientation and Business Resilience (Y) have met the validity and reliability criteria required in the Structural Equation Modeling (SEM) analysis based on Partial Least Squares (PLS).

1. Instrument Reliability (Cronbach's Alpha and Composite Reliability)

The results of the reliability test show that all research variables have a Cronbach's Alpha value above 0.7, indicating that all indicators within each construct have a good level of internal consistency. The Psychological Capital (X) variable has a Cronbach's Alpha value of 0.921, indicating a very high level of reliability. This indicates that the indicators used to measure psychological capital—such as self-efficacy, optimism, hope, and resilience—have very good consistency in representing the construct.

Furthermore, the Entrepreneurial Mindset (Z) variable obtained a Cronbach's Alpha value of 0.902, which also indicates excellent reliability. This confirms that indicators such as creativity, risk-taking, proactiveness, and adaptive ability have strong consistency in measuring entrepreneurial mindset. Meanwhile, the Innovation Orientation and Business Resilience (Y) variable had a Cronbach's Alpha value of 0.843, which is still in the high reliability category. This indicates that the indicators used in this variable are able to consistently measure innovation orientation and business resilience. According to Joseph F. Hair Jr. (2021), a Cronbach's Alpha value above 0.70 is considered to meet the criteria for good reliability in social and management research.

In addition to Cronbach's Alpha, the Composite Reliability (rho_c) value also showed excellent results. The variables Psychological Capital (0.919), Entrepreneurial Mindset (0.887), and Innovation Orientation and Business Resilience (0.834) were all above the minimum threshold of 0.70. This confirms that all constructs have strong and

stable internal reliability. According to Christian M. Ringle (2022), Composite Reliability is recommended in PLS-SEM because it provides more accurate reliability estimates than Cronbach's Alpha, especially for multidimensional constructs.

2. Convergent Validity (Average Variance Extracted / AVE)

The results of the convergent validity test show that all research variables have an Average Variance Extracted (AVE) value above 0.50, which means that all constructs have met the criteria for good validity. The Psychological Capital (X) variable has an AVE value of 0.536, which indicates that more than 53% of the indicator variance can be explained by the psychological capital construct. The Entrepreneurial Mindset (Z) variable has an AVE value of 0.549, while the Innovation Orientation and Business Resilience (Y) variable has an AVE value of 0.563. According to Jörg Henseler (2020), an AVE value above 0.50 indicates that the construct has adequate convergent validity, meaning that the indicators in each variable are able to represent the latent construct well.

Structural Model Evaluation (Inner Model)

Evaluation of the inner model can be seen from several indicators, including the coefficient of determination (R2), Predictive Relevance (Q2), and Goodness of Fit Index (GoF) (Hussein, 2015). The results of the structural model displayed by Smart PLS 3.0 in this study are as follows:

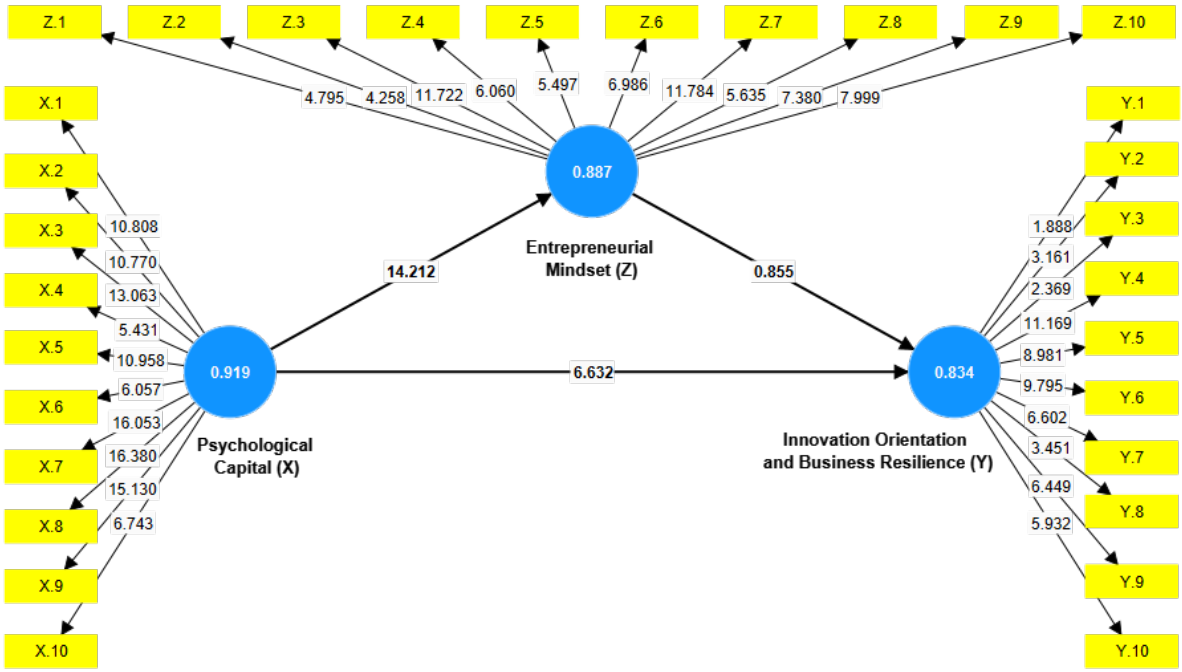

Figure 4.2 Structural Model (Inner Model)

R2 (R-square) results

In assessing a model using PLS, we begin by looking at the R-square for each dependent latent variable. The results of the r2 calculation in this study are as follows:

Table 4.3
Correlation Value (r2)

	R-square	R-square adjusted
Entrepreneurial Mindset (Z)	0.769	0.766
Innovation Orientation _and Business Resilience (Y)	0.771	0.764

Source :Primary data processed (2026)

The results of the coefficient of determination (R-square) test in this study were used to determine the level of ability of the independent variables to explain the dependent variable in the structural model tested using SmartPLS. The variables tested in this study included Psychological Capital (X) as an exogenous variable, Entrepreneurial Mindset (Z) as a mediating variable, and Innovation Orientation and Business Resilience (Y) as endogenous variables.

1. Entrepreneurial Mindset Determination Coefficient (Z)

The test results show that the R-square value for the Entrepreneurial Mindset (Z) variable is 0.769, with an adjusted R-square value of 0.766. This value indicates that 76.9% of the variation in entrepreneurial mindset can be explained by Psychological Capital (X), while the remaining 23.1% is influenced by other factors outside the research model.

The R-square value is categorized as strong (substantial). This indicates that psychological capital plays a significant role in shaping the entrepreneurial mindset of MSMEs. Individuals with high levels of self-efficacy, optimism, hope, and resilience tend to have a stronger entrepreneurial mindset, such as greater risk-taking, greater creativity, and greater proactiveness in identifying business opportunities. According to Joseph F. Hair Jr. (2021), an R-square value above 0.75 in a PLS-SEM model can be categorized as a model with strong explanatory power in explaining endogenous variables.

2. Coefficient of Determination of Innovation Orientation and Business Resilience (Y)

Furthermore, the test results show that the R-square value for the Innovation Orientation and Business Resilience (Y) variable is 0.771, with an adjusted R-square value of 0.764. This means that 77.1% of the variation in innovation orientation and business resilience can be explained by Psychological Capital (X) and Entrepreneurial Mindset (Z), while the remaining 22.9% is influenced by other variables not included in the research model.

This value is also categorized as strong (substantial), indicating that the research model has high predictive power in explaining innovation behavior and business resilience in MSMEs. This indicates that both psychological capital and entrepreneurial mindset significantly contribute to improving the ability of entrepreneurs to innovate and survive in the face of pressure and changes in the business environment. According to Christian M. Ringle (2022), a high R-square value in the PLS model indicates that the exogenous variables in the model have strong explanatory power over the endogenous variables, thus the model can be said to have good predictive quality.

Goodness of Fit Model

Goodness of Fit (GoF) in Structural Equation Modeling (SEM)-based research using the Partial Least Squares (PLS) approach is used to assess the overall level of model fit, both in terms of the measurement model (outer model) and the structural model (inner model). The GoF calculation aims to determine the extent to which the constructed research model is able to accurately represent empirical data.

According to Herman Wold (2020), PLS-SEM is more prediction-oriented so that Goodness of Fit is not only seen from one indicator, but from a combination of the strengths of the measurement model and the structural model.

1. Goodness of Fit (GoF) Calculation Formula

In PLS-SEM, Goodness of Fit can be calculated using the formula:

$$GoF = \sqrt{AVE \times R^2}$$

Information:

a) AVE = average Average Variance Extracted
b) R^2 = average value of the coefficient of determination (R-square)

2. Calculation of Average AVE and R^2

a. Average AVE

AVE:

a) X = 0.536
b) Z = 0.549

c) Y = 0.563

$$AVE_{rata2} = \frac{0{,}536 + 0{,}549 + 0{,}563}{3} = 0{,}549$$

b. Average R-square

R^2:

a) Z = 0.769
b) Y = 0.771

$$R^2_{rata2} = \frac{0{,}769 + 0{,}771}{2} = 0{,}770$$

3. Goodness of Fit (GoF) Calculation

$$GoF = \sqrt{0{,}549 \times 0{,}770}$$
$$GoF = \sqrt{0{,}42273}$$
$$GoF = 0{,}650$$

4. Interpretation of GoF Values

Based on the criteria proposed by Wetzels Joeri (2021), the Goodness of Fit value can be categorized as follows:

a) 0.10 = small (low fit)
b) 0.25 = moderate fit
c) 0.36 = high (high fit)

The results of this study's calculations show a GoF value of 0.650, which is well above the 0.36 limit. Thus, this research model falls into the very good fit category.

5. Discussion of Results

The GoF value of 0.650 indicates that the research model consisting of Psychological Capital (X), Entrepreneurial Mindset (Z), and Innovation Orientation and Business Resilience (Y) has very good fit with the empirical data.

This indicates that:

a) The constructs used in the research are able to explain the phenomenon strongly.
b) The relationship between variables in the model has high empirical validity.
c) The research model is suitable for further analysis such as hypothesis testing and causal relationship prediction.

According to Christian M. Ringle (2022), a model with a high GoF value indicates that the combination of measurement power and predictive ability of the model is at an optimal level.

Hypothesis Testing

Based on the results of the inner model, all tested hypotheses met the requirements and could therefore be used as an analysis model in this study. Hypothesis testing in this study used a 5% alpha, meaning that if the t-statistic value is ≥ 1.96 or the probability value is ≤ the level of significance (α = 5%), the analysis in this study continued by testing the direct and indirect effects between variables in the structural model. This test was conducted to determine the extent of each independent variable's contribution to the dependent variable, both directly and through mediating variables.

Table 4.4Direct Effect

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
Entrepreneurial _Mindset (Z) -> Innovation Orientation _and Business Resilience (Y)	0.087	0.084	0.101	0.855	0.393
Psychological _Capital (X) -> Entrepreneurial _Mindset (Z)	0.685	0.689	0.048	14,212	0,000
Psychological _Capital (X) -> Innovation Orientation _and Business Resilience (Y)	0.624	0.643	0.094	6,632	0,000

Source :Primary data processed (2026)

Hypothesis testing in this study was conducted using the bootstrapping method in SmartPLS, which aims to determine the significance of the influence between variables in the structural model. The bootstrapping method was chosen because it does not require normally distributed data and can provide more stable estimates of the relationships between constructs.

1. Hypothesis testing in this study was conducted using the bootstrapping method in SmartPLS to examine the relationship between Psychological Capital (X) and Entrepreneurial Mindset (Z) in MSMEs. This test aims to determine whether there is a statistically significant influence between the two variables in the research model. Based on the results of data processing using SmartPLS, a t-statistic value of 14.212 and a p-value of 0.000 were obtained for the relationship between Psychological Capital (X) and Entrepreneurial Mindset (Z). Because the t-statistic value is much greater than 1.96 and the p-value is smaller than 0.05, it can be concluded that the first hypothesis (H1) is accepted.

   These results indicate that Psychological Capital has a positive and significant influence on the Entrepreneurial Mindset of MSMEs. This means that the higher the psychological capital possessed by an entrepreneur, which includes self-efficacy, optimism, hope, and resilience, the stronger their entrepreneurial mindset. In the context of this study, these findings indicate that MSMEs with high levels of self-confidence tend to be bolder in making business decisions, better able to see business opportunities, and better prepared to face risks in running a business. In addition, optimism and strong hopes make MSMEs more focused on long-term business development, not just survival.

   These results also reinforce the idea that psychological capital is a crucial internal factor in shaping entrepreneurial thinking. An entrepreneurial mindset is not only shaped by business knowledge or experience but is also significantly influenced by an individual's psychological state in facing business challenges. According to Jörg Henseler (2020), psychological constructs in the SEM model play a crucial role in shaping an individual's cognitive orientation, particularly in the uncertain context of entrepreneurship. Individuals with high psychological capital tend to be more adaptive, innovative, and possess better decision-making abilities.
2. Hypothesis testing in this study was again conducted using the bootstrapping method in SmartPLS to examine the effect of Psychological Capital (X) on Innovation Orientation and Business Resilience (Y) in MSMEs. This test aims to see whether psychological capital can directly influence innovation capabilities as well as business resilience in facing business dynamics. Based on the results of data processing using SmartPLS, a t-statistic value of 6.632 and a p-value of 0.000 were obtained for the relationship between Psychological Capital (X) and Innovation Orientation and Business Resilience (Y). Because the t-statistic value is greater than 1.96 and the p-value is less than 0.05, it can be concluded that the second hypothesis (H2) is accepted.

   These results indicate that Psychological Capital has a positive and significant effect on innovation orientation and business resilience (Y) in MSMEs. This means that the higher the psychological capital possessed by entrepreneurs, the greater their ability to innovate and maintain business continuity amidst business challenges. In the context of this research, these findings indicate that MSMEs with high levels of self-efficacy will be more confident in trying new ideas and developing more innovative products or services. Furthermore, strong optimism and hope make entrepreneurs more courageous in taking strategic steps in facing market changes, including in carrying out digital transformation and business process innovation. Meanwhile, the resilience aspect of psychological capital plays a crucial role in shaping business resilience. MSMEs with strong resilience tend to be more resilient when facing crises, such as declining sales, changing market trends, or economic pressures. They don't give up easily and are instead able to adapt and continuously improve their

business strategies. These results also indicate that psychological capital not only plays a role in shaping an entrepreneurial mindset but also has a direct impact on innovative behavior and business resilience. Thus, psychological capital can be viewed as a key factor in increasing MSME competitiveness amidst a dynamic and uncertain business environment. According to Christian M. Ringle (2022), psychological constructs within the entrepreneurial model play a crucial role in enhancing adaptability and innovation, particularly in the context of small businesses facing limited resources and external environmental pressures.

3. Hypothesis testing in this study was again conducted using the bootstrapping method in SmartPLS to examine the effect of Entrepreneurial Mindset (Z) on Innovation Orientation and Business Resilience (Y) in MSMEs. This test aims to determine whether an entrepreneurial mindset can have a direct influence on innovation capabilities and business resilience. Based on the results of data processing using SmartPLS, a t-statistic value of 0.855 and a p-value of 0.393 were obtained for the relationship between Entrepreneurial Mindset (Z) and Innovation Orientation and Business Resilience (Y). Because the t-statistic value is smaller than 1.96 and the p-value is greater than 0.05, it can be concluded that the third hypothesis (H3) is rejected or insignificant.

   These results indicate that Entrepreneurial Mindset does not significantly influence Innovation Orientation and Business Resilience in MSMEs. This means that even though MSMEs possess a strong entrepreneurial mindset, such as the courage to take risks, creativity, and a proactive attitude, this does not necessarily directly improve innovation capabilities or business resilience. In the context of this study, these findings indicate that an entrepreneurial mindset alone is not strong enough to drive innovation and business resilience without the support of other factors, especially internal factors such as psychological capital. This may occur because some MSMEs still face limitations in resources, access to technology, and experience in implementing innovative ideas into business practices.

   Furthermore, the insignificant influence of entrepreneurial mindset on innovation and business resilience may also indicate that the entrepreneurial mindset among some MSMEs remains at the cognitive level, not yet fully implemented in concrete actions such as new product development, digital transformation, or business adaptation strategies. This finding contrasts with the initial theoretical assumption that entrepreneurial mindset should drive innovation and business resilience. However, in the context of MSMEs, these results indicate that this influence is not direct, but likely requires intermediary variables such as psychological capital or other external factors. According to Marko Sarstedt (2021), in certain structural models, not all relationships between cognitive and behavioral variables are directly significant, especially when there are limited resources or external conditions that influence the implementation of entrepreneurial behavior.

Table 4.5 Indirect Effect

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
Psychological _Capital (X) -> Entrepreneurial _Mindset (Z) -> Innovation Orientation _and Business Resilience (Y)	0.381	0.373	0.121	3,161	0.002

Source :Primary data processed (2026)

The indirect effect (intervening/mediation) testing in this study was conducted using the bootstrapping method in SmartPLS to test the role of Entrepreneurial Mindset (Z) in mediating the influence of Psychological Capital (X) on Innovation Orientation and Business Resilience (Y) in MSMEs. Based on the results of data processing, a t-statistic value of 3.161 and a p-value of 0.002 were obtained on the indirect path Psychological Capital (X) → Entrepreneurial Mindset (Z) → Innovation Orientation and Business Resilience (Y). Because the t-statistic value is greater than 1.96 and the p-value is less than 0.05, it can be concluded that the mediation (intervening) hypothesis is accepted and statistically significant.

These results indicate that Entrepreneurial Mindset (Z) acts as a significant intervening variable in the relationship between Psychological Capital (X) and Innovation Orientation and Business Resilience (Y). In other words, the influence of psychological capital on innovation capability and business resilience occurs not only directly, but also through the formation of an entrepreneurial mindset. In the context of this study, these findings indicate that the psychological capital of MSME actors such as self-efficacy, optimism, hope, and resilience first form an entrepreneurial mindset, which then encourages the emergence of innovative behavior and increases business

resilience. MSME actors who have high psychological capital tend to be more confident in making decisions, better able to see opportunities, and better prepared to face risks, thus forming a stronger entrepreneurial mindset. Furthermore, a developed entrepreneurial mindset will strengthen the ability of MSMEs to innovate products, processes, and marketing strategies, as well as enhance their ability to survive and adapt to changes in the business environment. This demonstrates that an entrepreneurial mindset is a crucial bridge in transforming psychological potential into concrete actions in business activities. These findings also confirm that the influence of psychological capital on innovation and business resilience is not only direct, but also indirect through an entrepreneurial mindset. Thus, an entrepreneurial mindset can be categorized as a partial mediation, as psychological capital still plays a significant role in shaping the final outcome, but some of its influence is channeled through an entrepreneurial mindset. According to Edward Rigdon (2021), testing mediation in PLS-SEM using bootstrapping is very effective for identifying indirect influence pathways and confirming the significance of relationships between constructs in a structural model.

Discussion of Research Results

The results of this study indicate that MSME development is influenced not only by financial capital alone, but also by sustainability factors such as green financing, sustainable innovation, and psychological factors of entrepreneurs. This finding aligns with various previous studies that emphasize the importance of integrating economic, environmental, and behavioral aspects in developing green economy-based businesses. Research on the role of green financing in promoting a green economy in the MSME sector in North Sumatra shows that access to environmentally friendly financing can increase the adoption of sustainable products and business practices. This aligns with the findings of HH Harahap, FRS Rajagukguk, and IW Arifin (2024), which explain that green financing plays a crucial role in encouraging MSMEs to switch to environmentally friendly products and strengthen green economy orientation at the local level.

Furthermore, the results of this study are also relevant to studies on green marketing and consumer purchasing decisions, which show that perceived product quality is an important intervening variable in influencing consumer behavior towards organic products. Research by IW Arifin, HH Harahap, and FRS Rajagukguk (IJEMA, 2023) confirms that green marketing strategies can increase consumer purchasing interest by improving perceived product quality. This suggests that the success of MSMEs in the green economy depends not only on production but also on sustainable marketing strategies. In the context of human resources, research on green HR and job satisfaction at eco-friendly hotels in Lake Toba shows that the work environment plays a role as an intervening factor in increasing employee job satisfaction. A study by FRS Rajagukguk, IW Arifin, and HH Harahap (IJEMA, 2023) indicates that the implementation of green human resource management can improve sustainability-based organizational performance. These findings reinforce that the success of the green economy is also strongly influenced by human factors and organizational culture.

Furthermore, research on green leadership and human resource management towards sustainable innovation in the green economy industry in North Sumatra shows that environmentally oriented leadership has a significant influence on sustainable innovation. FRS Rajagukguk, IW Arifin, and HH Harahap (2024) emphasized that innovation cannot be separated from managerial commitment to environmental sustainability. From a psychological perspective, research on marketing psychology factors and the decoy effect shows that consumer behavior can be influenced by psychological aspects in product purchasing decisions. A study by FRS Rajagukguk (2023) shows that psychological factors play a significant role in shaping product value perceptions, which ultimately influence purchasing decisions. Furthermore, research on the relationship between self-regulation and entrepreneurial readiness in adolescents in North Sumatra also provides an important contribution to this research. A study by FRS Rajagukguk, HH Harahap, and IW Arifin (2024) shows that self-regulation has a significant influence on future entrepreneurial readiness, indicating that psychological factors are an important foundation in developing an entrepreneurial spirit.

5. Conclusion

Based on the results of the discussion and analysis that have been carried out, the following points can be concluded:

Based on the results of data analysis using SmartPLS through the bootstrapping method, it can be concluded that Psychological Capital (X) has a positive and significant influence on Entrepreneurial Mindset (Z) as well as Innovation Orientation and Business Resilience (Y) in MSMEs. This indicates that the higher the psychological capital possessed by business actors, the stronger the entrepreneurial mindset formed and the increased ability to innovate and business resilience. In addition, the results of the study indicate that Entrepreneurial Mindset (Z) does not have a significant direct effect on Innovation Orientation and Business Resilience (Y). However, this variable is

proven to have a role as a significant intervening (mediating) variable in the relationship between Psychological Capital (X) and Innovation Orientation and Business Resilience (Y). This indicates that the influence of psychological capital on innovation and business resilience is more effective if mediated by an entrepreneurial mindset. Overall, this study proves that strengthening psychological capital is a key factor in increasing the competitiveness of MSMEs through the formation of a strong entrepreneurial mindset, which ultimately has an impact on increasing innovation and business resilience.

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