
The resilience of micro, small and medium enterprises in Indonesia: COVID-19 perspective

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Abstract: This study aims to investigate the effect of risk-taking on innovativeness, also the impact of entrepreneurial orientation, innovativeness, and adaptive strategy on the resilience of micro, small and medium enterprises (MSME). This study was conducted on MSME actors throughout Indonesia and the analysis used was structural equation modelling (SEM). The results show that risk-taking positively affects innovativeness, while entrepreneurial orientations, innovativeness, and adaptive strategy have a significant positive effect on resilience. This research implies that MSME actors who can survive the COVID-19 pandemic must consider taking risks, continuously innovate, have an entrepreneurial spirit, and are always adaptive to change. The innovations that MSME continues to make, increases the company's competitiveness under any circumstances, including during the COVID-19 pandemic. MSMEs that have high innovation will have high resilience under any circumstances.

Keywords: micro, small and medium enterprises; MSMEs; risk-taking; entrepreneurial orientation; innovativeness; adaptive strategy; resilience; COVID-19; Indonesia.

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1 Introduction

The COVID-19 pandemic in Indonesia was first reported on March 2020 and reached 3.87 million cases as of 16 August 2021. The Indonesian COVID-19 Task Force data reported 118,000 fatalities (BPS, 2019). The pandemic has affected the operations of several business actors in Indonesia due to the increasingly limited mobility of people. According to Soleha (2020), there are 61 types of businesses in Indonesia, with 33 kinds of companies in the prosperity business cycle, eight types of businesses in the recession cycle, 14 firms in the trough cycle, and six businesses in the recovery cycle. The types of businesses are categorised into five categories (or groups): trading, industrial, service, extractive, and real estate, service, is the most resilient industry to the pandemic, as 20 service businesses (from a total of 33) are on the prosperity business cycle.

Micro, small and medium enterprises (MSME) are recognised as an engine of sustainable economic development in Indonesia (Maksum et al., 2020; Prasanna et al., 2019; Zeb and Ihsan, 2020; Zuperkiene et al., 2021). The number of MSME actors in Indonesia is 59.2 million (Zeb and Ihsan, 2020). Like other business actors, MSMEs also experience the impact of the COVID-19 pandemic. According to Soleha (2020), MSME actors face several problems in their business operations, including declining sales, financing, distribution of goods, and raw materials. The COVID-19 pandemic affects industries like manufacturing, transportation, and tourism in the forms of a deteriorating supply chain, declining production capacity, factory closures, and travel restrictions (Bai et al., 2021; Chang and Cheng, 2019; Khurana et al., 2021; Zeb and Ihsan, 2020). Meanwhile, the most resilient industries are those fulfilling basic needs, such as electricity, clean water, agriculture, automotive, and banking. The results of (Zutshi et al., 2021) study also revealed that MSME experienced a decline in sales during the pandemic due to increasingly limited activities caused by the difficulty of raw materials, and culinary is the industry most affected by the pandemic due to declining public trust in culinary products during the outbreak. Businesses experienced a significant decline in

income during the pandemic, especially the tourism businesses that engage in the food and beverage business (Khanzad, 2021). The COVID-19 pandemic has affected MSME, especially during the implementation of the large-scale social restriction (PSBB) policy, where they experience a drastic decline in sales, marketing difficulties, capital problems, declining production and distribution activities, and delay in raw materials (Dyah et al., 2021).

MSMEs need good strategies to strengthen their marketing, finance, human resources, and operations management. MSME actors must have good management knowledge and absorptive capacity to improve operational performance (Dabi et al., 2021). During the COVID-19 pandemic, MSME needs to employ various strategies, especially digital marketing, to deal with the pandemic. The COVID-19 pandemic has also triggered the creation of a new ecosystem, namely digital entrepreneurship, because of declining consumers' purchasing power during the pandemic (Klein and José, 2021). Business actors need to employ several strategies to survive the pandemic: learning digital marketing, strengthening human resources, making creative innovations, and improving services, primarily related to product hygiene and safety.

The novelty of this present study is in the resilience of MSMEs during the COVID-19 pandemic. MSME plays a vital role in the Indonesian economy. The Indonesian government also views the importance of the existence of MSMEs. The proof is that MSMEs and cooperatives have a unique forum within the Ministry of Cooperatives and Small and Medium Enterprises. The intensive attention given to MSME members is nothing more than a form of government that supports the economy of the small people.

Furthermore, MSMEs can have a direct impact on people's lives in lower areas. Due to the effects of the pandemic, startups are more likely to fail or succeed more quickly than ever before. However, their challenges have not been studied explicitly (Salamzadeh and Dana, 2021). Previous studies (Rafa et al., 2021) focused more on the performance of MSMEs. In a pandemic condition, resilience is more important because the pandemic suddenly makes many MSME experience business difficulties or even go bankrupt. The version of MSME alone is insufficient and has not been able to examine the resilience of MSMEs during the COVID-19 pandemic. The contribution given by the present study is that the study does not focus only on the performance of MSMEs but also on the risk-taking side of innovation. Research on this topic has been carried out in several regions, such as India (Khurana et al., 2021), China (Chang and Cheng, 2019), and Europe (Zeb and Ihsan, 2020). Still, they focused only on examining the performance of MSMEs and not on the resilience area related to innovation and adaptation. The high number of MSMEs creates a strategic location to support the country's economy. As Indonesia's micro-business grows, despite its domestic and international market share, small communities do not need to flock to cities to earn a living. MSME are considered the key to driving economic development. Compared to large corporations, these entities are vulnerable and sensitive when dealing with any kind of crisis. Their approach to crisis management is under-explored and researched (Salamzadeh and Dana, 2021).

The paper is structured as follows. Section 2 develops a theoretical framework for this research. Section 3 provides the research methodology and the data analysis. Sections 4 and 5 present and discuss the research findings. Section 6 presents conclusions.

2 Materials and methods

2.1 Micro, small and medium enterprises and the COVID-19 pandemic

According to Law of the Republic of Indonesia No. 20 of 2008, MSMEs are categorised based on their assets and sales turnover. Micro-sized enterprises have the greatest assets of USD 3,484.56 and a maximum sales turnover of USD 20,907.81. Small-sized enterprises have total assets between USD 3,484.64 and USD 34,846.35, with a sales turnover between USD 20,907.82 and USD 174,231.75. Medium-sized enterprises have total assets between USD 34,846.35 to USD 696,927.00, with a sales turnover between USD 174,231.75 to USD 3,485,000.00. The establishment of MSME aims to develop their business to improve the national economy based on just economic democracy (Obiwulu et al., 2019; Phuangrod et al., 2017).

COVID-19 is a pandemic that began in 2019 and affected many parties, including MSMEs that play a pivotal role in the national economy (Obiwulu et al., 2019; Phuangrod et al., 2017; Rafa et al., 2021). During the implementation of the large-scale social restriction (LSSR) policy, where they experience a drastic decline in sales, marketing difficulties, capital problems, declining production and distribution activities, and delay in raw materials. In line with it, declining production and distribution activities and delays in raw materials supply led to a decline in MSME's sales turnover (Andalib and Halim, 2019). Policies rolled out by the government, such as social balance and LSSR, will lead to the issuance of work from home (WFH) for workers. However, it is different for workers such as shop owners, workers, motorcycle taxi drivers, and others who cannot implement the telework policy and are the most affected.

2.2 MSME resilience

Resilience is a trait or characteristic of individuals and firms emerging from the individual (psychological/cognitive), organisational, and institutional factors (Maksum et al., 2020). This resilience is critical for MSMEs, mainly because the COVID-19 pandemic hits MSMEs when viewed from the contribution of MSMEs to GDP, employment absorption, investment, and the economy in Indonesia (Nalini, 2021). At least five factors can enhance MSME resilience amidst the COVID-19 pandemic: collaboration, openness, victory, innovation, and durability. Collaboration signifies that MSMEs must establish partnerships with all stakeholders and focus on win-win outcomes (Baytiyeh, 2017; Prasanna et al., 2019; Siuta-tokarska, 2021). Openness implies that MSMEs must be more transparent with the stakeholders by maintaining open communication channels and allowing for a two-way input and feedback process. Victory suggests that MSMEs must accept external environmental threats while identifying and taking advantage of existing opportunities (Prasanna et al., 2019). Innovation means that MSMEs must combine different pieces of the puzzle with improving the skills of the organisation's resources. Durability suggests that MSMEs must adopt a resilient approach comprising unorthodox thinking and mindful execution.

In the context of entrepreneurship, creativity and high enthusiasm are always the main principles that must be possessed by an entrepreneur. The human resources of MSMEs are highly dependent on the role of business entrepreneurship. Hard skills and soft skills must be possessed in the face of intense business competition, especially

MSMEs. One form of entrepreneurship is risk taking. Risk taking is a component of the entrepreneurial spirit in addition to autonomy, proactiveness, and competitive aggressiveness. This component must be owned by an entrepreneur in facing obstacles both internal and external to the company or business. Risk taking relates to an optimistic and pessimistic choice in the context of courage, tolerance, and situation control.

In running the business, MSMEs also face various types of risks. The results of Soleha's (2020) study, which surveyed honey MSME in Kediri Regency during the COVID-19 pandemic, showed that MSMEs face systematic risks in the form of declining revenue. For this reason, the risk management that MSMEs can carry out is to implement elimination, substitution, and administration of the risks they face (Soleha, 2020). The Lasem Batik Tulis MSME in Rembang Regency during the COVID-19 pandemic also found that MSMEs are exposed to business uncertainties, including customers and supply infrastructure, finance, and the environment (McKibbin, 2020). Moreover, conceptualised either as a process or outcome, innovation capability affects MSME performance (Dyah et al., 2021). This study also revealed that MSMEs have several types of innovation capabilities, like process or product innovation, and so on. Risk and innovation are inseparable (Nurunnabi, 2020). Based on the literature review above, the hypotheses were proposed as follows:

Hypothesis 1 (H1) Risk-taking positively impacts innovativeness.

Entrepreneurial orientation is an activity that aims to make decisions by taking risky actions and always looking for business opportunities. The activities carried out can form an MSME system. Risk taking is seen in the form of organisational completion in new things so that it always energises new entry. Through entrepreneurial orientation, it is hoped that a company leader or MSME manager can have a clear direction to achieve his performance. In addition, the form of activity that always wants to take opportunities illustrates the spirit of the leader to survive in any condition, including in crisis conditions such as the COVID-19 pandemic.

Companies with entrepreneurial orientation tend to persistently identify and exploit new opportunities, create new values, and become market leaders (Zeb and Ihsan, 2020). Entrepreneurial orientation is a critical factor that leads to the successful development of new products, high financial and non-financial business performance, etc. Three dimensions test entrepreneurial orientation: innovativeness, risk-taking, and proactiveness (Zuperkiene et al., 2021). Innovativeness and proactiveness are significantly related to resilience (Rafa et al., 2021). Innovation and entrepreneurship are critical for the better performance of MSMEs by focusing on entrepreneurial traits like risk-taking and the need for achievement (Zeb and Ihsan, 2020). This better performance will undoubtedly build MSME resilience in the future. Similar findings by Dabí et al. (2021) admitted that improving market orientation can enhance MSMEs' innovativeness. Innovative behaviour can empower MSMEs to be more competitive to improve business performance. This study also found that the decision to innovate will determine MSME performance and good performance enables MSME to operate in the long term. Based on the literature review above, the hypotheses were proposed as follows:

Hypothesis 2 (H2) Entrepreneurial orientation positively impacts MSME resilience.

Innovation is an activity carried out by developing an organisational system either through the application of science or technology to produce a better production process. Innovation includes two things, namely new products and services. New products are

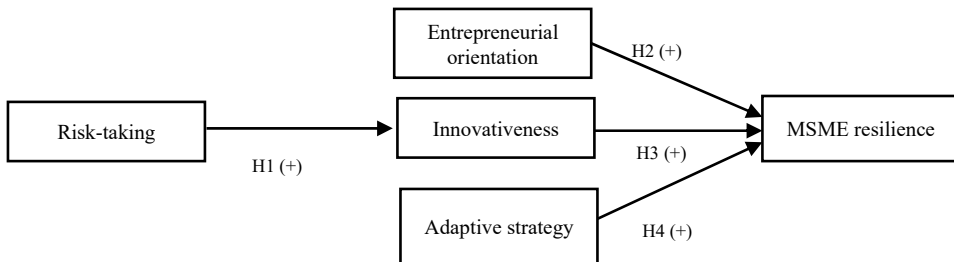
developed through company culture under any conditions. Service innovation is described in the process of serving buyers. One example of a form of innovation is digital marketing. Digital marketing allows MSMEs to create customers or buyers for existing and new products. Digitalisation helps the affordability of MSMEs in communicating with their stakeholders. This is done more effectively and efficiently to collaborate with anyone and anytime.

Following previous research (Baytiyeh, 2017; Sha et al., 2020; Siuta-tokarska, 2021), the present study analyses innovativeness’ impact on resilience. Another survey conducted during the economic crisis by (Dabí et al., 2021) found that one of the essential factors for MSME to survive is innovation. Innovation is not only limited to product innovation but also all aspects of the business. This present study aims to investigate innovation capability during the COVID-19 pandemic. Based on the literature review above, the hypotheses were proposed as follows:

Hypothesis 3 (H3) Innovativeness positively impacts MSME resilience.

The pandemic has impacted mobility so that the purchasing power and income of MSMEs has decreased drastically. The impact of this restriction is a decrease in production. Survival efforts such as adaptation may be a strategy to maintain or even increase the amount of production and support product distribution during a pandemic. Adaptive strategy is a strategy used by companies when facing a dynamic and unpredictable environment. MSMEs must be observant in capturing market tastes to be able to adapt to the crisis era such as COVID-19. Changes in routines due to the pandemic must be considered as challenging things so that MSMEs do not feel a big impact such as a decline in income. Adaptation strategies are considered capable of resilience for MSMEs in the pandemic era.

Figure 1 Theoretical framework



Adaptive strategy is a strategy implemented by a business reacting to environmental changes. This research suggested that MSMEs can carry out several strategies like waiting for the new normal, sticking with profitable products, and continuous innovation. Of the three possibilities, an ongoing innovation strategy can increase optimistic expectations for the future. A study by Rafa et al. (2021) stipulated that implementing innovative strategies can affect the growth and survival of MSMEs, where applying a higher level of entrepreneurial awareness and adopting a strategic vision for the business will result in a higher MSME growth rate. This proves that an adaptive strategy can produce a higher growth rate for MSMEs, ultimately enhancing MSMEs resilience to future crises. Based on the literature review above, the hypotheses were proposed as follows:

Hypothesis 4 (H4) Adaptive strategy positively impacts MSME resilience.

Figure 1 presents the theoretical framework.

3 Methodology

This study is causal research because it attempts to investigate a cause-and-effect relationship between the variables related to the survival ability of MSMEs amidst the COVID-19 pandemic. The data in this study were collected using three methods and conducted online. The first method was through the www.umkm-bank.com website. This website is a tool developed by researchers to help MSMEs analyse whether their business is bankable. It has a feature that requires users to complete personal data and a questionnaire statement. This research was conducted on SME communities throughout Indonesia and represented several strategic areas, namely provinces. There is a network of MSMEs that are given research questionnaires with specific requirements such as MSMEs, which can at least be detected on social media or online news so that fillers do not bias the filling results outside of MSME actors. The grouping of MSME sectors is used to facilitate the results of the categories because some industries have minimal numbers and should be categorised into one. This study used Google Forms disseminated through WhatsApp groups, Telegram, and Facebook of MSME groups. MSMEs were free to complete one (website or Gform) to see the similarity of the questionnaire contents. In addition, this study also took data from an MSME webinar themed 'Analyzing the financial capabilities of MSME through bankable software'. The respondents of this study were MSMEs throughout Indonesia. This study exercised a cross-sectional design. Due to the health protocol in the new average era of COVID-19 in Indonesia, the online questionnaires were distributed from 15 August to 10 October 2021, with as many as 261 respondents from Belitung, Makassar, Lahat, Bogor, Jakarta, Banjarnegara, Wonosobo, Surabaya, Situbondo, Mataram, Balikpapan, Kutai Barat, Manggarai, Bali, and several districts in Indonesia answered the online questionnaire (Table 1).

Descriptive statistics from respondents show that there are more men business actors than women. Men are considered more willing to take risks (Zeb and Ihsan, 2020), but globalisation and societal advancement have resulted in the visibility of females in the MSME world (Zeb and Ihsan, 2020). Although women are trying to grow their enterprises to become independent, when it comes to performance, they underperform compared to men (Zeb and Ihsan, 2020). Men are more likely to take risks, face all obstacles, and have a strong desire to achieve goals (Zeb and Ihsan, 2020). In addition, most respondents were from the food, beverage, and accommodation sector. MSMEs in the food, drink, and accommodation sectors must have appropriate methods and carry out innovations to drive their business growth and continuity (Phuangrod et al., 2017).

3.1 Statement/questionnaire

Following the theoretical framework described previously, the authors developed a self-administered statement to analyse the effect of MSME resilience during the COVID-19 pandemic in Indonesia (Table 2). The statement employed a five-point Likert scale (strongly disagree-strongly agree) to measure the following five variables: Risk-taking,

Entrepreneurial orientations, Innovativeness, Adaptive strategy, and MSME resilience. Respondents' answers to the selected scale can be interpreted that the smaller the numbers chosen by the respondents, the more respondents disagree (i.e., negative response) with the statements in the questionnaire. On the other hand, the higher the number chosen by the respondents, the more respondents agree or respond positively to the related questions. Table 2 presents the statement items for each variable.

Table 1 Descriptive statistics of respondents

<i>Characteristics</i>	<i>Category</i>	<i>N</i>	<i>%</i>
Gender	Women	114	44%
	Men	147	56%
Age group	17–26	48	18%
	27–36	57	22%
	37–46	69	26%
	46–56	51	20%
	>56	36	14%
Has branch	Yes	101	39%
	No	160	61%
Sector	Processing industry	21	8%
	Information and communications	11	4%
	Health services	17	7%
	Other services	29	11%
	Corporate services	17	7%
	Construction	26	10%
	Waste management	14	5%
	Water and waste supply	13	5%
	Food, beverages and accommodation	30	11%
	Wholesale and retail	23	9%
	Agriculture-forestry	13	5%
	Real estate	17	7%
	Vehicle repair	15	6%
	Transportation	15	6%
MSME location (provinces/cities)	Java	72	28%
	Sumatera	48	18%
	Kalimantan	41	16%
	Bali	49	19%
	Others	51	20%

3.2 Structural equation modelling

Structural equation modelling (SEM) is a powerful statistical technique that can identify, estimate, and investigate causal relationships among latent variables (Cortina et al., 2001). Supporting the analysis of the SEM model, six measurements were used to evaluate the model fit (Hauashdh et al., 2021; Kolozvri et al., 2018; Mai et al., 2021): incremental fit index (IFI), Tucker-Lewis Index (TLI), comparative fit index (CFI), the

goodness of fit index (GFI), adjusted goodness of fit index (AGFI), and root mean square error of approximation (RMSMEA) (Swami et al., 2021). IFI, TLI, and CFI values should be 0.9 or higher to have a good model. While to have a good model, GFI and AGFI values should be higher than 0.8 (Mai et al., 2021). Finally, the RMSMEA value should be less than 0.07 to indicate a good model (Hauashdh et al., 2021).

Table 2 Statement items and variables

<i>Statement</i>	<i>References</i>
1 New actions/strategies are needed in dealing with the COVID-19 pandemic	Dyah et al. (2021) and Nurunnabi (2020)
2 Work from Home has been implemented for all employees	
3 Resources need adjustment during the pandemic	
4 Capital was raised to increase sales amidst the pandemic	
5 Workforce training has been carried out to increase sales amidst the pandemic	
6 Employees feel ready if they have to work from home and apply social distancing	
7 Adjustment of products to consumer demand only needs to be done to deal with this pandemic	
1 Establishing partnerships and expanding connections among business actors are the appropriate strategy amidst the pandemic	Phuangrod et al. (2017) and Zeb and Ihsan (2020)
2 Technological advancements have been utilised to increase sales amidst the pandemic	
3 Product innovation is needed to maintain business continuity, especially during the pandemic	
1 The business owner fully makes all decisions related to strategy	Rafa et al. (2021) and Zeb and Ihsan (2020)
2 Decisions should be made after listening to employees' opinions	
3 Resources (labour, machinery, and capital) are very important factors for a business	
4 The existing strategies that have been implemented so far can minimise the decline in income	
5 The strategy applied can streamline the company's operational costs	
6 In addition to profits affected by the pandemic, social factors such as employment, customer service, and others play an essential role in business activities.	
1 Additional capital is effective in increasing income	Phuangrod et al. (2017), Rafa et al. (2021) and Zeb and Ihsan (2020)
2 During the pandemic, it is better to opt for a strategy that can minimise risk rather than maximise income	
3 Opening a new business/new product line is the appropriate strategy amidst the pandemic	
1 The existing resources (human resources/machinery, capital, technology) are sufficient to ensure business continuity in the next few years	Dyah et al. (2021) and Nurunnabi (2020)
2 Amidst the pandemic, the business can continue to grow, more than before the pandemic	
3 Existing resources are sufficient to carry out the business strategies	
4 We have sufficient capital to develop a business amidst the pandemic	

4 Results and discussion

Table 3 exhibits the results of the loading vector, validity, and reliability of each indicator. In addition, Table 4 describes the fit model of SEM, which complements the final results. The IFI, CFI, and TLI values are higher than the recommended limit of 0.900, indicating that the final model represents the studied data. Furthermore, the GFI and AGFI values show 0.871 and 0.853, respectively, indicating a good model. The RMSMEA value is 0.063, which is also below the recommended limit of 0.07, meaning a good model.

Table 3 Correlation matrix

<i>Variable</i>	<i>Item</i>	<i>Factor loadings</i>	<i>Cronbach's α</i>	<i>Average variance extracted (AVE)</i>	<i>Composite reliability (CR)</i>
Adaptive strategy	AS1	0.799	0.962	0.874	0.972
	AS2	0.978			
	AS3	0.974			
	AS4	0.966			
	AS5	0.946			
Innovativeness	IA	0.873	0.830	0.746	0.898
	IA	0.819			
	IA	0.897			
Entrepreneurial Orientations	EO1	0.841	0.817	0.732	0.891
	EO2	0.852			
	EO3	0.873			
Risk-taking	RT1	0.822	0.799	0.709	0.888
	RT2	0.883			
	RT3	0.820			
MSME resilience	R1	0.866	0.848	0.767	0.908
	R2	0.847			
	R3	0.914			

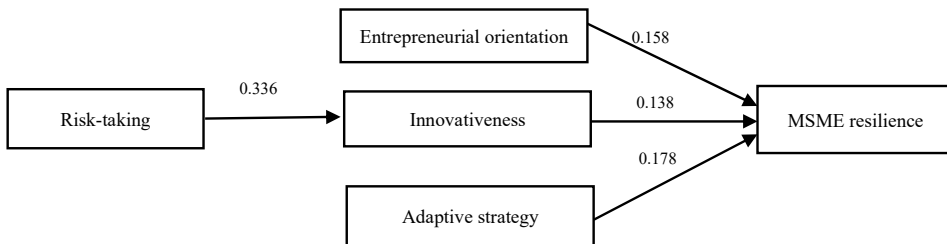
Table 4 Model fit

<i>Goodness of fit measures of SEM</i>	<i>Parameter estimates</i>	<i>Minimum Cut-off</i>
Incremental fit index (IFI)	0.914	>0.90
Tucker-Lewis index (TLI)	0.906	>0.90
Comparative fit index (CFI)	0.927	>0.90
Goodness of fit index (GFI)	0.871	>0.80
Adjusted goodness of fit index (AGFI)	0.854	>0.80
Root mean square error (RMSMEA)	0.063	<0.07

Figure 2 shows the results of hypothesis testing. From the results of Tables 3 and 4, it can be concluded that the results of testing the hypothesis are all proven. Risk-taking has a positive effect on innovation. Entrepreneurial orientation, innovation, and adaptive

strategies positively affect the resilience of MSMEs. MSMEs are vital element of the economy (Rafa et al., 2021). MSME help in creating employment opportunities, raising the standard of living, and reducing poverty (Zeb and Ihsan, 2020). MSME contributes 37.4% of the total gross domestic product in Thailand but has declined steadily due to several reasons of an increase in the requirements and complexities of the funding process from many financial institutions, lack of ability to develop products that meet standards, and lack of capacity to build market opportunity (Phuangrod et al., 2017). Resilience is understood as the ability to gain strength in recovery from disasters, failures, and trauma (Phuangrod et al., 2017). It is often associated with a team's ability to choose energy levels and remain professional despite deteriorating global business conditions. In the context of the COVID-19 pandemic, MSMEs are resilient if they persist despite the pandemic (Phuangrod et al., 2017).

Figure 2 Results for direct effects



Entrepreneurship is perceived as one of the characteristics of an organisation that shows the activity of pursuing opportunities (Rafa et al., 2021). Entrepreneurial orientation signifies MSMEs' willingness to engage in entrepreneurial behaviour (Rafa et al., 2021). Weak entrepreneurial character and non-optimal management make MSME resilience low. Entrepreneurial orientation is perceived as a spearhead in realising economic growth, including the COVID-19 pandemic (Prasanna et al., 2019). MSMEs with high entrepreneurial orientation will always try strategies to deal with uncertain conditions (Bukittinggi, 2021). In addition, entrepreneurial orientation reflects the MSME's ability to compete more effectively in the same marketplace (Supardi et al., 2020; Zutshi et al., 2021).

Entrepreneurial orientation refers to organisational processes, practices and decision-making activities that lead to new inputs to realise MSME resilience (Baytiyeh, 2017). High entrepreneurial orientation is closely related to the main drivers of profit; namely, an entrepreneur can take advantage and find new opportunities to build MSME resilience (Bukittinggi, 2021; Zuperkiene et al., 2021). The results of this study are in line with Rafa et al.'s (2021) study, revealing that entrepreneurial orientation strengthens MSME resilience. In a pandemic condition, MSMEs are required to read about and take new opportunities that exist.

Resilience is a management response to all types of risk, including the threat of competitors to natural disasters (Bukittinggi, 2021; Khanzad, 2021; Supardi et al., 2020). Amidst the COVID-19 pandemic, MSMEs must have the ability to adapt to the new environment and circumstances. In this perspective, MSMEs should be more adaptive to environmental changes, including in challenging conditions like the COVID-19 pandemic (Nalini, 2021; Rafa et al., 2021). Adaptive strategy is used to respond to the pandemic situation so that MSME will recover and be strong. Adaptive strategy in pandemic

conditions teaches that everything must be well prepared (Prasanna et al., 2019). The adaptive strategy allows MSMEs to act responsively, leading to resilience. Flexibility and adaptable behaviour are the main drivers of MSME resilience. Shocks caused by the COVID-19 pandemic require an adaptive strategy to build MSME resilience (Khanzad, 2021; Zutshi et al., 2021). MSMEs that can address changes and disruptions and maintain the same relationship are MSMEs that have resilience.

Innovation is a creative development process resulting in employment growth and technological changes (Phuangrod et al., 2017). It can happen only when an organisation emphasises innovation development (Phuangrod et al., 2017). The present study results are in line with a study by (Phuangrod et al., 2017) 2017 in Thailand, which found that the components of ability, knowledge, and management skills embodied by risk-taking are positively correlated with innovation (Phuangrod et al., 2017; Zeb and Ihsan, 2020). Risk-taking shows MSMEs' desire to take business risks that may cause losses or be incompatible with MSME goals. MSME owners apply their knowledge and skills in a challenging way to take business risks, including a financial loss (Phuangrod et al., 2017). If MSME are willing to accept the failures and are ready to take risks trying new things, they will have a passion for learning, resulting in business/organisation innovativeness (Phuangrod et al., 2017). In an entirely uncertain pandemic, risk-taking can be a strategy for MSME to increase creativity to keep innovating.

Innovation is a critical factor in organisations. Innovation signifies knowledge, skills, or experience in developing processes, products and services, and new technologies for business operations (Andalib and Halim, 2019; Obiwulu et al., 2019). Innovation is an attitude to creatively experiment with new ideas that allow generating new production methods to produce new products for existing and new markets. Innovation in MSMEs encourages survival, creates economic and market potential, and increases competitive advantage (Phuangrod et al., 2017). Through continuous innovation efforts, MSMEs generate profits by capturing a more significant market share and a competitive advantage (Zeb and Ihsan, 2020). The pandemic conditions lead to an uncertain environment. To survive in an uncertain environment, MSMEs are required to be able to continue operating. The innovations that MSME continues to make increase the company's competitiveness under any circumstances, including during the COVID-19 pandemic. MSMEs that have high innovation will have high resilience under any circumstances.

This research is limited to MSMEs in Indonesia, especially in 34 provinces spread across Indonesia. The implication of this research is for the Indonesian government to have a higher view of the existence of MSMEs. In a very strategic position in creating rapid economic development, micro businesses have a market share in the domestic arena and internationally. This strategy can be used to eradicate unemployment and poverty and even spearhead the driving force and rapid economic recovery during times of crisis such as a pandemic.

The second implication for MSMEs is that the innovations carried out by MSMEs continue to increase the company's competitiveness under any conditions, including during the COVID-19 pandemic. MSMEs with high innovation will have high resilience under any conditions, so MSME actors who can survive the COVID-19 pandemic must consider taking risks, continue to innovate, have an entrepreneurial spirit, and are always adaptive to change. This study uses only one country, and the role of government is not included as a variable. For further research, it is recommended to add a variable regarding

the government's involvement as part of the regulator that supports the sustainability of MSMEs in Indonesia.

5 Conclusions

The COVID-19 pandemic has affected the operations of several business actors in Indonesia due to the increasingly limited mobility of people. MSMEs play a critical role in the Indonesian economy. MSME actors face several problems in their business operations, including declining sales, financing, distribution of goods, and raw materials. Resilience is often associated with a team's ability to choose energy levels and remain professional despite deteriorating global business conditions. High entrepreneurial orientation is closely related to the main drivers of profit; namely, an entrepreneur can take advantage and find new opportunities to build MSME resilience. The adaptive strategy allows MSMEs to act responsively, leading to resilience. Flexibility and adaptable behaviour are the main drivers of MSME resilience. Shocks caused by the COVID-19 pandemic require an adaptive strategy to build MSME resilience. If MSMEs are willing to accept the failures and are ready to take risks trying new things, they will have a passion for learning, resulting in business/organisation innovativeness. In an entirely uncertain pandemic, risk-taking can be a strategy for MSMEs to increase creativity to keep innovating.

The innovations that MSME continues to make increase the company's competitiveness under any circumstances, including during the COVID-19 pandemic. MSMEs that have high innovation will have high resilience under any circumstances. This research implies that MSME actors who can survive the COVID-19 pandemic must consider taking risks, continuously innovate, have an entrepreneurial spirit, and are always adaptive to change. The limitations of this study are that the MSME used was only in one country, and the role of the government was not included as a variable in this study. For further research, it is recommended to add a variable regarding the government's involvement as part of the regulator that supports the sustainability of MSME in Indonesia.

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