Impact and resilience strategy of MSMEs in facing the COVID-19 pandemic: An empirical study on MSMEs in Indonesia

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Abstract	This study aims to empirically examine the influence of COVID-19 on changes in the performance of MSME (micro, small and medium enterprises). The research also examines business resilience strategies in response to PPKM's orders amid the COVID-19 pandemic crisis in Indonesia. Quantitative and qualitative approaches were applied in this study. Primary data was collected through questionnaires, and interviews involving 477 respondents from MSME owners and six selected respondents in Indonesia employed in this study. Descriptive analysis and regression using structural equation modeling (SEM) were applied. The study showed that the dimensions of COVID-19, namely PPKM and health protocols, negatively affect MSME's performance. The study also found that promoting and selling products on social media, product diversification, and minimalizing cost production are among the most popular business resilience strategies to survive MSME's operation during the COVID-19 pandemic. The results suggest that the establishment of COVID-19's impact on MSME's performance should be aware and concerned. The study also indicates that MSMEs should be able to maintain their strategies in surviving their business due to the COVID-19 crisis.
Keywords	Impact; COVID-19; resilience; PPKM; MSME; SEM

INTRODUCTION

Currently, the global economy has been severely affected by the outbreak of the COVID-19 pandemic. COVID-19 is a virus that infects organs, especially the lungs, which causes shortness of breath (Luis & Moncayo, 2020). According to WHO, this virus can be transmitted between humans, and, so far, more than 521 million people have been confirmed to have had COVID-19, with over 6.2 million people dying of the virus (Dennison Himmelfarb & Baptiste, 2020). One of the best approaches to control the spread of viral diseases such as COVID-19 is the Enforcement of Community Activity Restrictions (Wilder-Smith & Freedman, 2020; Chinazzi et al., 2020). Although the policy of implementing Community Activity Restrictions (PPKM) can minimize the deployment of COVID-19, this approach has had a psychological impact on the community with increased cases of depression and stress (Ghani, 2020). It has also affected the economic sector, with the temporary closing of business operations and disrupting the distribution of goods (Karabag 2020).

Likewise, through the Ministry of Home Affairs Rule Number 15 of 2021 concerning PPKM, Indonesia has had an impact on the functional decline of several critical economic sectors, including food and beverage, transportation, retail, and tourism. Without exception, MSMEs are the sectors most vulnerable to the pandemic crisis. Most MSME sectors cannot fully implement work from home (WFH). As a result, they have significantly decreased the performance of their operations (Milzam, Mahardika, and

Amalia, 2020). A study revealed that MSME's activities in Egypt had been severely hit by the impact of this pandemic (Egypt Management and Consulting Services, 2020).

Meanwhile, the degree of the impact varies depending on the size of the business and its geographical location (Egypt Management and Consulting Services, 2020). In line with these results, Zeidy's (2020) study indicated that most African MSMEs are also significantly affected by COVID-19.

In Indonesia, a study on the impact of COVID-19 on MSME operations conducted by Milzam et al.(2020). They found that COVID 19 have significantly influence on a decrease in total sales revenue of MSMEs in Pekalongan. Amri (2020) indicated that there were drastically decreasing in production and sales of MSMEs due to the restriction in order to curb spreading of COVID 19. Another study conducted by Shafi et al. (2020) revealed that COVID-19 outbreak and lockdowns severely affected many MSMEs, particularly a decline in financial performance, supply chain disruptions, a decrease in demand, and a reduction in sales and profit.

Although many studies examined the influence of COVID 19 on MSMEs performance, however, most studies being descriptive in nature as opposed to empirically based. Therefore, this study attempts to empirically examine the influence of COVID-19 on the performance of MSME. The duration of the spread of the COVID-19 pandemic can be uncertain even though the vaccine has been found. MSMEs must carry out several strategies at least to survive during this pandemic.

However, there is limited information about the challenges and processes by which MSME responds during the pandemic crisis. It should be noted that MSME should be the main focus in implementing crisis management strategies since this sector is the foundation of the Indonesian economy. The Ministry of Cooperative and MSME recorded that around 64 million (99 percent) MSMEs were established in Indonesia (Kemenkop & UMKM, 2019). It is important to note that the contribution of MSMEs to Indonesia's GDP is about 60 percent, with the absorption of the workforce being around 97 percent (Jayani 2021).

A study by Fabeil et al. (2020) indicated that operation of business from home, digital marketing, the multi-channel sales strategy and the penetration of the new market segment are among resilience strategies used to keep MSMEs operation in the post COVID19. Supporting this, Saputra et al. (2022) concluded that MSMEs resilience was influenced by business flexibility and collaboration capabilities of MSMEs. Interestingly, their findings revealed that collaboration capability has effect on business resilience (Saputra et al., 2022).

Additionally, Liguori & Pittz (2020) revealed that maintaining current customer relationships and communicating effectively with existing customers are key elements to build trust. Further, they also found that that maintaining a positive culture within the entrepreneurship community and industry connections are vital and can be sources of opportunity recognition, new ideas, critical financing, and reminders of inspiration and resilience.

Previous studies are found to have diverse results. As a results, studies on business continuity and recovery strategies are essential to maintain business, especially for MSMEs. Thus, this study also analyzes business resilience and recovery strategies in response to PPKM orders in the era of COVID 19.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

COVID 19 and its implications

COVID-19 is an infectious disease caused by a virus that emerged at the end of 2019 (Waiho et al. 2020). COVID 19 has spread to almost all countries and significantly impacted people's lives globally (Parnell et al. 2022). Many countries implement PPKM to minimize the spread, a movement restricting individuals from staying at home unless they have an urgent need. The implementation of this

PPKM will have an impact on changes in the new normal of social and economic order. Ratten (2020) revealed that the new standard order should be implemented, including social distancing, hand washing, and personal hygiene. Several sectors of the global economy have been most affected by the restrictions, particularly the tourism and hospitality industries, which rely on close contact between individuals as part of their business model.

Meanwhile, due to the increasing number of unemployed individuals, economic incentives, including providing direct cash transfers and a policy of delaying loan payments, have been put in place. This policy has been implemented in several countries, with the virus spreading rapidly globally (Ratten 2020). Without exception, MSMEs are the most vulnerable with low resilience to this economic crisis.

Potential of MSME's resilience strategies in facing the COVID 19 pandemic crisis

The impact of the crisis on MSME should be paid more attention to business actors as it influences current and future business performance. According to Cook (2015), around 75 percent of businesses without a sustainability plan would collapse within three years of the crisis. Therefore, there is a greater emphasis on management and planning during disasters and emergencies (Quarantelli, Lagadec, and Boin, 2007). One of the strategies carried out by the government at this time was to provide a stimulus assistance package of Rp. 2.4 million to MSME vendors (Arnani 2020). However, this strategy is temporary and short-term (Pakpahan 2020) and should not be managed as a proper solution in the long term. Therefore, MSME vendors must plan to continue doing business by using innovative approaches along the crisis management cycle, specifically responding, continuing, recovering, and repairing (Cook 2015). Research on business continuity strategies in large companies has been widely carried out

(Kepenach 2007). However, studies on methods for MSME, especially in developing countries, are limited. Liguori and Pittz (2020) stated that there are several ways that MSME can deal with this pandemic. First, continuously monitor market changes, primarily through social media accounts. Second, communicate effectively with existing customers to build trust. Third, consider the needs of employees. Lastly, stay connected with the ecosystem of MSME vendors, such as suppliers.

Moreover, Fabeil et al. (2020) analyzed strategies from two periods of the pandemic: the business continuity strategy that occurred during the complete lockdown and the business recovery plan strategy after the lockdown. In terms of business continuity strategies within the crisis, Fabeil et al. (2020) identified several methods to ensure sustainable operation of MSME vendors, namely: (i) shortening the supply chain; (ii) producing new products to realize current needs; (iii) using online marketing; (iv) implementing a cash payment system on the spot; and (v) accepting payments via bank transfer or e-wallet. In terms of the business recovery plan strategy after the lockdown. According to Fabeil et al. (2020), entrepreneurs perceive the sluggish demand for their products as a response to changes in consumer purchase behavior.

Hypothesis development

A study by Milzam et al. (2020) revealed that government policy on the pandemic, such as PSBB and social distancing, was found to have decreased the MSME sales revenue in Pekalongan. Shafi et al. (2020) support this finding and asserted that Pakistan's COVID-19 outbreak and lockdowns severely affected many MSMEs, indicating a decline in financial performance, supply chain disruptions, a decrease in demand, and a reduction in sales and profit. Egypt Management & Consulting Services (2020) also reported that the COVID-19 pandemic impacted most small and micro-enterprises in Egypt.

It led to a quarantine order, and strict health protocols were applied to curfew it. Consequently, the pandemic has caused them to close operations, whether complete or temporary. They also faced high costs, low revenues, and a shortage of workers (Egypt Management & Consulting Services, 2020). Results of the impact of COVID-19 on small firms were also revealed by Aga and Maemir (2021). They asserted a significant negative impact on sales and employment for small firms in Sub-Saharan Africa, indicating lost revenue, liquidity, cash flow shortages, and a substantial decline in their employees. In this study, PPKM due to COVID-19 should be related to the performance of MSME in Indonesia. Hence:

H1. PPKM, due to COVID-19, should influence the performance of MSME in Indonesia.

Besides PPKM, health protocols are also likely to be considered an essential factor in curbing the transmission of the COVID-19 pandemic. Applying health protocols (and other preventive measures for COVID-19) in society leads to a drastic change in people's economic activity behavior. For example, they are expected to adhere to strict health protocols such as wearing masks, washing hands, showing a vaccine card, or even presenting results from an antigen/PCR test before entering the premises, which can cause patrons to reconsider buying their products or services.

Moreover, they are more likely to prioritize their savings and emergency funds to survive the pandemic (UNDP Indonesia & LPEM UI 2020). Consequently, a decrease in demand for MSME's products occurred, implying a decline in the sales revenue and profit of MSME (UNDP Indonesia & LPEM UI, 2020). Additionally, some researchers have shown support for health protocols as a variable that may influence the performance of MSME (Yesmin et al., 2021; Shafi et al., 2020). These health protocols to control COVID-19 outbreaks can be essential to MSME's performance. Thus, the second hypothesis is:

H2. Health protocol due to COVID19 should influence the performance of MSMEs in Indonesia.

METHODS

Construct measurement

The purpose of this study is to examine how the COVID-19 crisis affects MSME operations empirically. The study also analyzes business continuity and recovery strategies in response to PPKM orders amid the COVID-19 pandemic crisis in Indonesia. A quantitative approach by distributing questionnaires was applied to achieve the first objective, while a qualitative approach with interviews was used to achieve the second objective. In terms of quantitative data, the underlying construct of a 14-item scale linked to the dimension of COVID-19 and MSME's performance was tested. The measurement of COVID-19 comprised two underlying factors: restriction on PPKM and health protocols. The indicators were adapted as needed for the study of existing literature on COVID-19 and MSME's performance by Fabeil et al. (2020). A reliability test was employed to test the consistency of each indicator in the questionnaire.

Data collection

The data was gathered by distributing the questionnaire to MSME's respondents in three provinces of Java mainland: East Java, Yogyakarta, and Central Java. A reason for selecting these provinces as the sample is a large number of MSMEs in those provinces, which have significantly contributed significantly to the national economy. The survey was conducted from January to April 2022. For sampling size, 530 were obtained, and 477 were usable for further analysis. In qualitative data, the respondents involved were MSME owners and government employees. Six respondents were interviewed. Moreover, judgment sampling and semi-structured interviews were used in this study to conduct interviews. All interviews were digitally recorded.

Table 1.
Reliability and validity

Constructs	CR	AVE	MSV
Health Protocol	0.780	0.495	0.315
Social Restrictions	0.804	0.581	0.212
MSMEs' Performance	0.908	0.623	0.315
Statistics		*Suggested*	
Composite Reliability (CR)		>0.6	
Average Variance Extracted (AVE)		>0.5	
Convergent Validity		AVE>0.5	
Discriminant Validity		MSV<AVE	

Analysis technique

Testing validity, reliability, Exploratory Factor Analysis (EFA), and Confirmatory Factor Analysis (CFA) will be conducted before proceeding to SEM for hypotheses testing. For validity, the Average Variance Extracted (AVE) should be 0.5 or higher to indicate an adequate level of convergence (Hair et al., 2010). Cronbach's Alpha, the most common coefficient used for internal consistency analysis to establish reliability, should be 0.7 (Hair et al., 2010). EFA is used to preserve the 'nature and character of the initial items and reduce their number simultaneously to simplify multivariate analysis. According to Hair et al. (2010), Bartlett's Test of Sphericity should be significant (p<0.05) in the factor analysis to be considered appropriate.

After conducting the validity, reliability, and EFA tests, a confirmatory factor analysis (CFA) will be employed to test the construct validity (Byrne, 2010). Concerning which fit index should be displayed, Hair et al. (2010) recommended using at least three appropriate indices by including one index from each category of model fit. This study employs root mean square error of approximation (RMSEA<.10) as one absolute index, comparative fit index (CFI>0.90) as one incremental fit index, and chi-square over degrees of freedom (Chi-square/df<5) as one parsimonious fit index. Finally, a structural equation modeling (SEM) with AMOS software is employed to find which constructs are connected. A structural model concerns exogenous and endogenous relationships, whereas a measurement model points out the association among constructs (Hair et al. 2010).

RESULTS AND DISCUSSION

Demographic information

Demographic information describes gender, status, age, and educational background, including MSME business profiles. Appendix A presents the profile of respondents & businesses in detail from the results of distributing questionnaires.

As presented in the Appendix A, the number of male respondents was 151, and female respondents were 326, indicating that the percentage of female respondents (69.3%) was more significant than male respondents (31.7%). Regarding marital status, most respondents were married (448 or 93.3%), while only 12 were single.

Regarding the age of the respondents, the highest frequency was the age range of 40-49 years with 240 of 447 respondents (50.3%); the second highest was the age range of 30-39 years with 153 respondents (32.1%). The age range of 50 years and over had 69 respondents (14.4%), while15 respondents
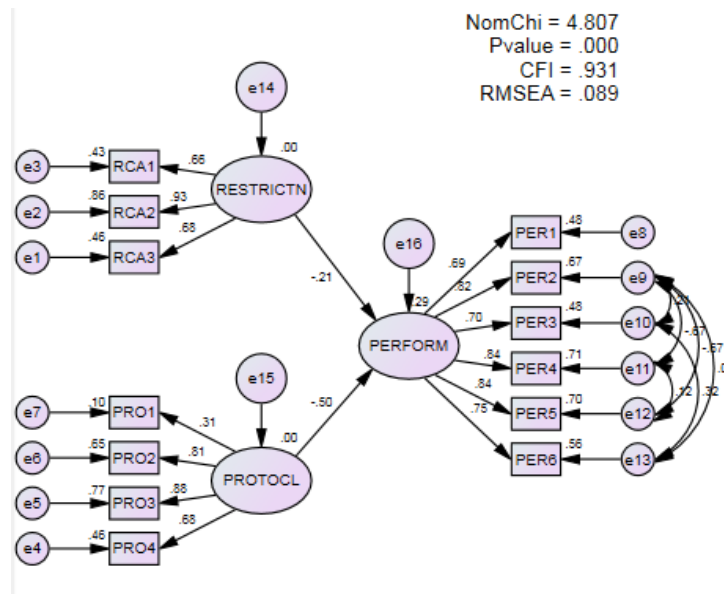
Figure 1.
Revised structural model

were 20-29. The results indicate that most respondents are mature in business, namely in 40-49 years. Most respondents had a secondary education level, with 342 respondents (or more than 71%), and about 25 (5.2%) held a bachelor's degree.

Based on the business profile, most respondents were individual businesses (93.3%). In terms of sales turnover in 2019, 382 respondents (80.1%) had a turnover of less than Rp. 100 million and only 56 respondents (11.7%) had a turnover between Rp. 100 million to Rp. 500 million. When COVID-19 surged, 426 (89.3%) respondents mentioned their turnover was less than Rp. 100 million, indicating that there were 44 respondents whose turnover fell below Rp. 100 million. Moreover, based on the number of staff before COVID, there were 311 respondents (65.2%) who had between 1 and 3 employees, while 159 respondents (33.4%) had 4–6 employees, and seven respondents (1.4%) had more than six employees.

During COVID, 444 respondents (93%) had 1–3 employees, or an increase of 31%; only 30 respondents had 4–6 employees. When asked about the current status of the business, 271 respondents revealed that their business was still operating as usual, and 114 respondents stated there was a reduction in capacity. Only 64 respondents mentioned that they use it by working from home.

Appendix A also describes some of the business constraints caused by COVID-19. Most respondents (92%) answered that business finances related to employees and operations were insufficient. Raw materials were unavailable, and the decline in their customers/clients is among the obstacles faced by most respondents. Moreover, 85% of respondents mentioned employee absence due to illness as a result of the impact of COVID-19.

When asked if there were problems and what kind of assistance was needed, the majority of respondents, 416 (87.2%), wanted business capital assistance, followed by a relaxation of installments and tax delays. Regarding the current business/company profile, most respondents (52%) stated that their business is still in the same sector, while 39% of respondents mentioned they diversified their business.

Most respondents (210 or 44%) also revealed that they had been using online sales since before COVID-19. However, 194

Table 2.
Evaluation of the initial model with a revised model

Name of category	The goodness of fit statistics	Initial model	Modified model	The threshold value for fit indices
Parsimonious Fit	Normed Chi-Square	7.028	4.807	< 5 acceptable (Schumacker and Lomax 2005)
Incremental Fit	CFI	0.880	0.931	>0.95 excellent, >0.90 traditional, >0.80 sometimes permissible (Hu and Bentler 1999)
Absolute Fit	RMSEA	0.113	0.089	<0.05 ideal, < 0.08 good, <0.10 fair good (Hu and Bentler 1999)

respondents (40.7%) started using online sales during COVID-19. When asked whether online sales affected sales, the majority of respondents (426 or 89.3%) responded yes, it had an effect, while only 51 or 9.7% of respondents mentioned it had no effect.

Reliability and validity

Table 1 shows that all constructs with exception of one AVE have been in the threshold value in which CR is more significant than 0.7 and MSV is below AVE. However, one AVE is below the recommended level of .50. As explained by Fornell and Larcker (1981), AVE may be a more conservative estimate of the validity of the measurement model. As long as all composite reliability of three constructs is well above the recommended level, the internal reliability is acceptable (Lam 2012).

Structural model

In this study, the model is assessed on the proposed research framework of COVID-19 variables and their relationship with MSME's performance. Initial results as shown in of the structure model showed that the goodness-of-fit for normed chi-square is 7.028, CFI is 0.880, and RMSEA is 0.113. This result

indicates goodness-of-fit was at unacceptable levels, as Hair et al. (2010) recommended. Consequently, there is a need to check modification indices (MI). After modifications were carried out, the fit index of the revised model improved significantly, as depicted below figure.

Based on Figure 1, the CFI indicates a better fit for the revised model, which is equal to 0.931, while a measure of RMSEA is 0.089, below the threshold value of ≤ 0.1. Moreover, the normed chi-square value equals 4.807, which is considered an acceptable model fit (Schumacker & Lomax, 2005). In brief, Table 2 below evaluates the initial structural and modified models.

Discussion

The study aims to investigate the effect of COVID19 on MSME's performance. Concerning this objective, two hypotheses were developed. Upon the results, both assumptions are found to be statistically significant. Table 3 exhibits the statistical path result based on maximum likelihood estimation that supports the revised model's adequacy.

As presented in Table 3, PPKM was found to significantly and negatively affect MSME performance. Consequently, the results

Table 3.
Path statistical result

Hypothesized Path	Estimate	S.E	P-Value	Decision
PPKM →MSMEs' performance	-0.213	0.051	**	The social restriction is significant and positively related **(Supported)**
Health Protocol →MSMEs' performance	-0.498	0.071	**	Health protocols are significantly positively related **(Supported)**

Note: * Significant at p<0.05
**Significant at p<0.001

regarding H1 were supported. This indicated that social distancing, enforcement of restrictions on community activities, and WFH decreased income/profit, decreased consumer demand, reduced staff, and increased cost production. This is in line with the studies of Milzam et al. (2020), Shafi et al. (2020), and Egypt Management & Consulting Services (2020), all of whom concluded that COVID-19 led to the decline of MSME's performance.

Like PPKM results, health protocols were revealed to impact MSME's performance negatively. This implies that wearing masks, showing vaccine cards, PCR, or antigen testing is presumed to impede the implementation of MSME. The finding is in line with previous studies such as those of UNDP Indonesia, LPEM UI (2020), and Shafi et al. (2020).

MSME resilience strategy in facing the COVID19 pandemic

This section used qualitative data analysis with interview techniques to achieve the second objective related to MSMEs' business resilience strategy in response to social restrictions amid the COVID19 pandemic. Six respondents (micro-entrepreneurs and policymakers) agreed to be the interviewees. Each interviewee's quotation as shown in Table 4 is numbered (R1-R7) for ease of reference to the respondents' profile.

As Sekaran and Bougie (2010), the qualitative data analysis of this study was

carried out based on data reduction, data display, and the drawing of a conclusion. These suggest forming the themes that were explored by the research respondents interviewed. These themes include promoting and selling products on social media, undergoing diversification, and minimalizing production costs.

Interview results revealed that the first theme that emerged was promoting and selling their products on social media.
The viewpoint of the respondent one, five and six with regard to social media is that

"… our strategy is learning to promote our product through social media like instragram, facebook etc…" (R1)

"… our promoting focus on online marketing via media social etc.. even we have strategy to give discount price if the consumer purchase cloth mask was more than 10pcs…" (R5)

"… survive with small sized due to low market demand and online marketing can assist our business in terms of marketing…" (R6)

A half interviewed respondents believe promoting and selling their products on social media is the most promising strategy for maintaining their sales amid the COVID-19 crisis. The response indicated that most micro-entrepreneurs seem to be aware of the importance of digital marketing to enhance their product sales. This result is in line with what was presented in descriptive statistics in

Table 4.
Profile of the respondents

No.	Qualification	Designation	Working Experience
R1	Secondary School	Owner, Babe Restaurant	Ten years involved in the restaurant business
R2	Master	Ass. Manager, Logistic Business	Five years involved in logistic Business
R3	Bachelor	Manager, Convection & sandal Business	Seven years involved in related Business
R4	Bachelor	Owner, Muslim Fashion	Ten years involved in related Business
R5	Master	Head, Cooperative & MSMEs Division,Ponorogo Local Government	Three years in related government
R6	Secondary School	Owner, Food & Beverages	14 years involved in related business

an earlier section, which indicated that most MSMEs had been using online promotion during COVID-19.

When asked whether online advertising affected sales, most respondents responded yes, but only a few mentioned it had no effect. This supports the findings of UNDP Indonesia and LPEM UI (2020), who revealed that most of the micro-enterprises noted that they promoted their products on social media. Likewise, Fabeil et al. (2020) found that operation of business from home, digital marketing and the multi-channel sales strategy are the most strategies to maintain the business. In addition, soft selling marketing with online promotional media both on Whatsapp, Telegram, Facebook, Tik-Tok and assisted by several online applications has an influence on the development of product orders owned by business actors (Venesia 2020).

MSME has addressed undergoing diversification when it is used to maintain their business during the COVID-19 pandemic, which is the second theme. According to respondent three, the product diversification was one of the necessary strategies for his business survival. He stated that

"… I made product diversification from convection to sandals that its raw material is easily obtained…" "…Despite I was having no experience providing it before, the product was highly marketable during the pandemic…"

In a view similar to the respondent three, respondent four mentioned that:

"…I have diversified our production into creating fabric masks as this product was highly sought during the pandemic…"

Additionally, presented earlier, descriptive statistics also revealed that about 39% of

respondents mentioned they diversified their products as a business resilience strategy to survive the pandemic crisis. The pandemic has required many MSMEs to innovate and make diversification in their business product to stay. In line with this findings, Pangestu and Utomo (2024) explained that adjusting prices and targeting new market shares with innovations in products are critical to maintain microbusiness. Supporting this, Fabeil et al. (2020) and Saputra et al. (2022) revealed that MSMEs could improve business resilience through business flexibility which is the ability of MSMEs to find, plan, and execute new businesses that provide new growth and income as a substitute for their mainstream Business (Saputra, Satispi, and Prihandoko, 2022).

Another strategy in maintaining a micro business is reducing production costs which the third theme is observed in this study. Some respondents mentioned that decreasing sales could be addressed by minimalizing cost production. This statement as mentioned by respondent one. He stated:

> *"… Reducing cost with maximum the role of grabfood while delivering his food and baverage…" (R1).*

Supporting this statement, respondent six mentioned that:

> *"…We reduced the size and ingredients in our food products in order to minimize cost..." (R6).*

Meanwhile, respondent four stated that:

> *"…I reduced staff numbers to work in my premises since declining orders for uniforms, kebaya for the wedding ceremony, and family uniforms for the bride and groom…" (R4).*

This result is in line with Saputra et al. (2022) finding. They concluded that business flexibility and collaboration capabilities strategies may be reducing cost production in order to survive MSMEs business. Zeidy

(2020) indicated that lower cost with using digitalization and new technology is one of key factors in resilience MSMEs operation in COVID19.

CONCLUSION

This study has confirmed that PPKM and health protocols have a negative and significant effect on MSME performance. These results indicate theoretically and practically that if elements of PPKM, such as social distancing, enforcement of community activity restrictions, WFH, and aspects of health protocols increase, MSME performance will decrease. This means that social distancing and health protocols are caused by decreased revenue/profit, decreased consumer demand, staff reduction, and increased production costs. Finally, this study concludes that promotion and sales on social media are very influential for MSMEs. Product diversification and minimizing production costs are important business resilience strategies to sustain MSME development amid the COVID-19 pandemic. This study suggests that the impact of COVID-19 on the performance of MSMEs should be a concern for the government and MSMEs. The role of the government is also very much needed in many programs to synergize with MSMEs towards the business continuity of MSME players. Another important thing is that MSMEs and the government must also provide new patterns in online business so that literacy about online media, purchasing by application, and digital promotion can be understood and carried out. Theoretically, this study contributes to complement in the existing literature on organizational resilience in order to face pandemic crisis that have happened.

Limitations and future research suggestions

Two limitations and future researches highlighted in this study. Firstly, this study

conducted at the end of COVID 19 pandemic. This study suggests related future research need to be conducted particularly resilience strategy in the post COVID19 like this time. Secondly, this study provides resilience strategy results but lack of comprehensive discussion since the study conducted at the end of COVID19, thus, this suggests future research should focus on how strategy of MSMEs in facing business resilience at the post of COVID 19 like at this time.

REFERENCES

Aga, Gamechcu, and Hibret Maemir. 2021. *COVID-19 and African Firms Impact and Coping Strategies.*

Amri, Andi. 2020. 'Dampak Covid 19 Terhadap UMKM Di Indonesia.' *Jurnal Brand* 2(1): 123–30.

Arnani, Mela. 2020. 'Bantuan Saat Pandemi Corona Yang Bisa Didapatkan UMKM.' *Www.Kompas.Com.*

Ashoer, Muhammad, Kasnaeny Karim, Muhammad Haerdiansyah Syahnur, and Rashid Ating. 2023. 'Reinvestigating Millennial Shopping Behavior on the Sharing Economy Platform : The Moderating Role of COVID-19 Awareness Level.' *Diponegoro International Journal of Business* 6(2): 64–76.

Chinazzi, Matteo et al. 2020. 'The Effect of Travel Restrictions on the Spread of the 2019 Novel Coronavirus (COVID-19) Outbreak.' *Science* 368(6489): 395–400.

Cook, Jack. 2015. 'A Six-Stage Business Continuity and Disaster Recovery Planning Cycle.' *SAM Advanced Management Journal* 80(3).

Datupalinge, Bangkit Ayatullah, Arda Geby Ayu Salsa, and Ripda Alifa. 2022. 'Optimalisasi Umkm Menggunakan Pendekatan Triple-Helix Terhadap Upaya Pemulihan Ekonomi Nasional Pasca Covid-19.' *Jurnal Acitya Ardana* 2(1): 52–61.

Dennison Himmelfarb, Cheryl R., and Diana Baptiste. 2020. 'Coronavirus Disease (COVID-19).' *Journal of Cardiovascular Nursing* 35(4): 318–21.

Egypt Management & Consulting Services. 2020. 'Covid19 Impact on Performance of Micro and Small Businesses in Egypt.' (May).

Fabeil, Noor Fzlinda, Khairul Hanim Pazim, and Juliana Langgat. 2020. 'The Impact of Covid-19 Pandemic Crisis on Micro-Enterprises: Entrepreneurs' Perspective on Business Continuity and Recovery Strategy.' *Journal of Economics and Business* 3(2).

Fornell, Claes, and David F Larcker. 1981. 'Evaluating Structural Equation Models with Unobservable Variables.' *Journal of Marketing Research* XVIII(February): 39–50.

Hair, J.F., W.C. Black, B.J. Babin, and R.E. Anderson. 2010. *Multivariate Data Analysis.* 7th ed. Pearson Prentice Hall.

Hu, L.T., and P.M. Bentler. 1999. '103. Cutoff Criteria for Fit Indexes in Covariance Structure Analysis: Conventional Criteria versus New Alternatives.' *Structural Equation Modeling* 6(July 2012): 1–55.

Jayani, Dwi Hadya. 2021. 'UMKM Indonesia Bertambah 1,98% Pada 2019.' *Katadata.*

Karabag, Solmaz Filiz. 2020. 'An Unprecedented Global Crisis! The Global, Regional, National, Political, Economic and Commercial Impact of the Coronavirus Pandemic.' *Journal of Applied Economics and Business Research* 10(1): 1–6.

Kemenkop&UMKM. 2019. 'Perkembangan Data UMKM & Usaha Besar Tahun 2018-2019.' *Kementerian Koperasi & UMKM Republik Indonesia* (1): 2018–19.

Kepenach, R.J. 2007. 'Business Continuity Plan Design.' *IEEE Conference Publication.*

Lam, Long W. 2012. 'Impact of Competitiveness on Salespeople's Commitment and Performance.' *Journal of Business Research* 65(9): 1328–34.

Liguori, Eric W., and Thomas G. Pittz. 2020. 'Strategies for Small Business: Surviving and Thriving in the Era of COVID-19.' *Journal of the International Council for Small Business* 1(2): 106–10.

Luis, Francisco, and Gil Moncayo. 2020. *Clinical Management of COVID19.*

Milzam, M., A. Mahardika, and R. Amalia. 2020. 'Corona Virus Pandemic Impact on Sales Revenue of Micro Small and Medium Enterprises (MSMEs).' *Journal of Vocational Studies on Applied Research* 2(April): 7–10.

Pakpahan, A. K. 2020. 'COVID-19 Dan Implikasi Bagi Usaha Mikro, Kecil, Dan Menengah.' *Jurnal Ilmiah Hubungan Internasional* 20(April).

Pangestu, Fajar Puja, and Sugeng Hadi Utomo. 2024. 'Strategi Pengembangan UMKM Di Masa Pemulihan Pasca Pandemi Covid-19 (Studi Kasus CV. Kreasi Pangan Kita).' *Jurnal Ilmiah Universitas Batanghari Jambi* 24(1): 754.

Parnell, Daniel, Paul Widdop, Alex Bond, and Rob Wilson. 2022. 'COVID-19, Networks and Sport.' *Managing Sport and Leisure* 27(1-2): 72–78.

Quarantelli, E. L., Patrick Lagadec, and Arjen Boin. 2007. 'A Heuristic Approach to Future Disasters and Crises: New, Old, and In-Between Types.' *Handbooks of Sociology and Social Research*: 16–41.

Ratten, Vanessa. 2020. 'Coronavirus (covid-19) and Entrepreneurship: Changing Life and Work Landscape.' *Journal of Small Business and Entrepreneurship* 0(0): 1–14.

Saputra, N, E Satispi, and D (Online questionnaire ber basis google..) Prihandoko. 2022. 'Strategi UMKM Bertahan Melewati

COVID19: Menjadi Fleksibel Dan Kolaboratif.' *JURNAL PERBENDAHARAAN, KEUANGAN NEGARA DAN KEBIJAKAN PUBLIK STRAT* 7(1): 33–47.

Schumacker, R.E., and R.G. Lomax. 2005. 'A Beginners Guide to Structural Equation Modeling.' *Evaluation and Program Planning* 28.

Sekaran, U., and R. Bougie. 2010. 'Research Methods for Business: A Skill Building Approach.' *Long Range Planning* 26(2): 136.

Shafi, Mohsin, Junrong Liu, and Wenju Ren. 2020. 'Impact of COVID-19 Pandemic on Micro, Small, and Medium-Sized Enterprises Operating in Pakistan.' *Research in Globalization* 2(January).

Tambunan, Tulus. 2019. 'Recent Evidence of the Development of Micro, Small and Medium Enterprises in Indonesia.' *Journal of Global Entrepreneurship Research* 9(1).

UNDP Indonesia & LPEM UI. 2020. 'Impact of Pandemic on MSMEs in Indonesia.' : 73.

Venesia. 2020. 'Strategi Pemulihan Bisnis UMKM Masa Adaptasi Kebiasaan Baru.' *Seminar Nasional Seri Ke 4 Program Studi Magister Manajemen Fakultas Ekonomi Dan Bisnis Universitas Tanjungpura Pontianak*: 329–40.

Waiho, Khor et al. 2020. 'Potential Impacts of COVID-19 on the Aquaculture Sector of Malaysia and Its Coping Strategies.' *Aquaculture Reports* 18: 100450.

Wilder-Smith, A., and D. O. Freedman. 2020. 'Isolation, Quarantine, Social Distancing and Community Containment: Pivotal Role for Old-Style Public Health Measures in the Novel Coronavirus (2019-nCoV) Outbreak.' *Journal of Travel Medicine* 27(2): 1–4.

Yesmin, Aliya et al. 2021. 'Micro-Business Continuity and Resilience Strategies for COVID-19 Crisis: Entrepreneurs' Insight from Bangladesh.' *International Journal of Academic Research in Economics and Management Sciences* 10(2): 33–48.

Zeidy, I.A. 2020. *Economic Impact of COVID19 on MSMEs in Africa and Policy Options for Mitigation.*

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Appendix

Appendix A.
Profile of the respondent and business

Demographic	Frequency	Percentage
Gender		
Male	151	31.7
Female	326	68.3
Marital Status		
Single	12	2.5
Married	448	93.9
Others	17	3.6
Age		
20-29	15	3.1
30-39	153	32.1
40-49	240	50.3
≥50	69	14.4
Education		
Elementary School	83	17.4
Secondary School		
Diploma	342	71.7
Bachelor		
Postgraduate	23	4.8
	25	5.2
	4	0.8
Legal Form		
Co-operative	2	0.4
Community-based	3	0.6
Business		
Partnership	14	3.0
UD	12	2.5
Sole Ownership	445	93.3
Others		
	13	2.7
Business Sector		
Consumer		
Industrial	338	70.9
Plantation & Agriculture	12	2.5
Property	5	1.0
Trade/Service		
Others	1	0.2
	52	10.9
	69	14.5

Sales Turnover (2019)		
<Rp100 Million		
Rp100 Million - Rp500 Million	382	80.1
	56	11.7
Rp1 Billion – Rp1.5 Billion		
	1	0.2
Rp1.5 Billion – Rp2 Billion		
	26	5.5
Others		
	12	2.5
Sales Turnover (COVID19)		
<Rp100 Million	426	89.3
Rp1 Billion – Rp1.5 billion	3	0.6
Rp1.5 billion – Rp2 Billion		
>Rp2 Billion	31	6.5
Others		
	1	0.2
	16	3.4
Number of Staff (2019)		
1-3		
4-6	311	65.2
>6	159	33.4
	7	1.4
Number of Staff (COVID19)		
1-3		
4-6	444	93
>6	30	6.3
	3	0.6
Current Business Status		
• Still operating as per usual		
• Working with WFH (partly staff)	271	56.8
• Working with WFH (all staff)	14	2.9
• Reduction in capacity		
• Stop in operating		
	64	13.4
	114	23.9
	14	2.9

Business obstacles affected by COVID19		
• Financial insufficient related to worker and operational		
Yes		
No		
• Staff absence due to sick / to adherence to government advice	438	92
Yes	38	8
No		
• Unavailable raw materials / be a high price		
Yes		
No		
• Supplier unable to provide raw material as needed	476	85.1
	71	14.9
Yes		
No		
• Customers/clients affected by COVID19 which resulted in lower demand compared to normal conditions	449	94.1
	27	5.7
Yes		
No		
	423	88.7
	54	11.3
	447	93.7
	30	6.3

What type of assistance is needed?		
• Relaxation of installment	34	7.1
• Deferment of tax payment		
• Assistance for business capital	12	2.5
• Easy procedure for loan administration		
• Reduction of electricity bill	416	87.2
	5	1.0
	10	2.0
Sales via online		
• Yes, since before COVID19	210	44.0
• Yes, just starting at the time of COVID19		
• Not using	194	40.7
	73	15.3
Impact of online sales		
Yes		
No	426	89.3
	51	9.7
Total	477	100