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ORIGINAL

The impact of product innovation and service quality on survival recovery of MSMES: the mediating role of financial performance

El impacto de la innovación de productos y la calidad de los servicios en la recuperación de la supervivencia de las MIPYMES: el papel mediador de los resultados financieros

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ABSTRACT

Introduction: the innovation business model explores the development of micro, small, and medium enterprises (MSMEs) in Indonesia between two time periods. In describing the condition of MSMEs, those who regulate MSMEs and policymakers in general are expected to help small and medium-sized enterprises improve service quality and product innovation for performance during the pandemic.
Method: this study employs a quantitative and purposive sampling approach based on a questionnaire disseminated to MSMEs in Indonesia as the research object. Data analysis was conducted using Stata version 17 for multiple linear regression analysis and the classic assumption test with 218 respondents. There are two time periods, namely before 2019–2020 and during the COVID-19 pandemic in 2021–2022. Before and during the pandemic, the innovation business model of service quality and product innovation had a positive influence on MSMEs' performance in Indonesia.
Results: this became clear when we compared the quality of service, product innovation, and customer loyalty separately, contrasting the regression results of the circumstances before and during the pandemic and their impact on Indonesian MSMEs. A service quality approach (SERVQUAL) was adopted to measure service quality, which discusses five quality aspects: tangibility, reliability, responsiveness, assurance, and empathy.
Conclusions: this approach bears similarities to product innovation and performance variables, whose analyses parallel those of the quality-of-service variable.

Keywords: Innovation Business Model; Service Quality; Product Innovation; MSME Performance.

RESUMEN

Introducción: el modelo empresarial de innovación explora el desarrollo de las micro, pequeñas y medianas empresas (MIPYME) en Indonesia entre dos periodos de tiempo. Al describir la situación de las mipymes, se espera que quienes regulan las mipymes y los responsables políticos en general ayuden a las pequeñas y medianas empresas a mejorar la calidad de sus servicios y la innovación de sus productos para que funcionen durante la pandemia.
Método: este estudio emplea un enfoque de muestreo cuantitativo e intencional basado en un cuestionario difundido entre las MIPYME de Indonesia como objeto de investigación. El análisis de los datos se realizó con la versión 17 de Stata para el análisis de regresión lineal múltiple y la prueba de suposición clásica con 218 encuestados. Hay dos períodos de tiempo, a saber, antes de 2019-2020 y durante la pandemia de COVID-19

en 2021-2022. Antes y durante la pandemia, el modelo empresarial de innovación de la calidad del servicio y la innovación del producto tuvieron una influencia positiva en el rendimiento de las MIPYME en Indonesia.
Resultados: esto quedó claro cuando comparamos la calidad del servicio, la innovación del producto y la lealtad del cliente por separado, contrastando los resultados de regresión de las circunstancias antes y durante la pandemia y su impacto en las MIPYME indonesias. Para medir la calidad del servicio se adoptó un enfoque basado en la calidad del servicio (SERVQUAL), que analiza cinco aspectos de la calidad: tangibilidad, fiabilidad, capacidad de respuesta, garantía y empatía.
Conclusiones: este enfoque guarda similitudes con las variables de innovación y rendimiento del producto, cuyos análisis son paralelos a los de la variable de calidad del servicio.

Palabras clave: Modelo Empresarial de Innovación; Calidad del Servicio; Innovación de Productos; Rendimiento de las MIPYMES.

INTRODUCTION

The COVID-19 pandemic began at the end of 2019 in Wuhan, China, before spreading to various other countries, including Indonesia, in March 2020. The rapid spread of the virus caused health emergencies worldwide, which are expected to have significant long-term implications. These impacts include not only social aspects but also political and economic impacts creating a unique environment with a high condition of uncertainty.[1] The potential to contract the virus becomes high when people undertake activities outside their homes. According to more than 180 surveys among Small Medium Entreprises (SMEs) in 32 countries monitored by the OECD since February 2020, since the start of the pandemic, 70-80 % of SMEs have experienced a serious drop in revenue/sales.[2] According to a survey of business findings in Indonesia conducted by the International Labour Organization (ILO), experiencing declining orders and shrinking business operations, 4 out of 5 enterprises (80 percent) found their revenues sharply reduced. About 34 percent of enterprises surveyed experienced a decline of 25 percent, 18 percent between 25-50 percent, and 28 percent reduced by more than half.[3] Enterprises are expected to experience a larger drop in revenue in 2020 as they see little chance of business recovery. Therefore, governments have enacted policies following WHO standards to implement lockdown procedures that raise the question about the lack of income, especially for MSMEs in Indonesia, which have experienced growth in recent years and for which the majority of transactions are physical. However, the country's measures are still negatively impacting businesses, especially for MSMEs, most of which are still running their businesses offline.[4]

At the same time, people with a fixed income must earn money to pay for their basic needs. According Huddleston & Minahan (2011), Individuals use shopping to search for, buy, and consume products and services. Many businesses are experiencing downturns, causing economic problems that force MSMEs to implement strategies that consider the needs of their customers and the survival of their businesses. With many challenges faced by MSMEs in addition to capital and access to financing, weak human resource capacity, and limited marketing reach of MSME products.[5] One such strategy is creating innovations in the business model by transforming services that previously required face-to-face interaction into online systems. Paying attention to the need for public service is the most important aspect of achieving the satisfaction of service users.[6]

Based on a previous research, study [7] MSMEs in the Philippines conducted a study related to MSME finance which urgently needs to measure performance through financial ratios and factors behind challenges that are likely to hinder business and measure the potential for financial performance in striving for MSME progress, the results obtained from financial ratios using the following ratios: Debt Ratio, Asset Turnover, and Gross Profit Margin are significant for financial performance indicates that financial performance affects business stability, knowing the factors through financial ratio analysis for business owners so that they can group into two ratio groups, including good groups and bad groups where good ratios need to be maintained and bad ratios need to be addressed, MSMEs must also always be independent to operate with optimally available resources and have sufficient capital to fund the business efficiently. From financial performance, we can see the opportunities for MSMEs to face competitors and the possibility of competing competitively and the results obtained are also to plan product innovation to lead to competitive advantage,[8] which will be compressed on the financial performance of MSMEs. The most popular strategic planning method or instrument during the COVID-19 lockdown period is financial analysis. Financial management, especially in times of crisis, can be said to be important for a company's ability to plan and track its past. However, it should be noted that financial management by itself does not guarantee the success of MSMEs; instead, several factors, such as human resources, contribute to the success of MSMEs.[9]

In another study on the perspective of product innovation from a firm performance standpoint,[10] Product innovativeness is a multifaceted concept that takes into account the originality of the product as well as the uniqueness of the technology, market, and consumer demand. Four criteria are used to assess how innovative a product is: 1) Technology: The novelty of the technology used to create the product; 2) Market: The novelty of the

market for the product; 3) Customer: The novelty of the customer's desires that the product can fulfill; 4) Degree of Novelty: The degree of novelty of the product in terms of its attributes and properties. Various indicators, such as the amount invested in R&D, the amount of market research, and the amount of customer feedback, can be used to measure each of these dimensions.

Other research related to improved service quality in measuring the performance of container business operators in India, through SERVQUAL and testing performance gaps. Several challenges in the process of improving service quality, such as challenges for container companies in dealing with dock infrastructure and regulators, in research [11] companies have implemented best efforts to improve faster service and transparent information for consumers. This helps similar companies to observe best practices in the quality of service applied.

This research aims to facilitate innovation during the service system transition caused by the pandemic by implementing a business model that fosters creative product-oriented service innovations, leading to increased customer appreciation and loyalty among Indonesian SMEs. This study poses several research questions, namely: (i) How did the quality of service and product innovation affect the performance of MSMEs before the COVID-19 pandemic?; (ii) How did the quality of service and product innovation affect the performance of MSMEs during the pandemic? ; (iii) How did MSME performance during the COVID-19 epidemic relate to financial performance?; (iv.a) How does financial performance affect the relationship between MSME survival and recovery and product innovation?; and (iv.b) How does financial performance affect the relationship between MSME survival-recovery and service quality?. This study focuses on examining the impact of product innovation and service quality on MSME performance, both before and during the COVID-19 pandemic, as well as their correlation to financial performance. This study further investigates the role of financial performance in strengthening the relationship between the survival and recovery of MSMEs and their product innovation and service quality. This research aims to shed light on the factors that influence the survival of MSMEs during times of crisis. Based on the results of this study, we provide recommendations to business owners and MSME regulators on the needs of MSMEs in facing the pandemic.

Literature review

Product Innovation and Financial Performance of MSME

Many people agree that the success of most businesses depends on product innovation. New product development is critical to business planning as it can drive company expansion, increasing sales and profits. To develop a new product, senior management, technical, scientific, marketing, financial, and other staff members must contribute.[12] The level and complexity of the technology used, the organizational structure of the company, the nature and quality of the information obtained or known during the new product process, the proficiency of the process activity, the characteristics of the market, the compatibility of the company's resource base with the requirements of the new product project, and the innovativeness of the product itself are just some of the variables that affect successful product innovation.[13] The idea of product innovation is broken down from a business perspective into two distinct elements, namely newness technology and newness marketing. Newness is caused by operations in the domain of new technology and involves a new process or technology related to innovation, such as a new development technology (such as that related to nanotechnology), a new development process, a piece of new manufacturing equipment, or a new manufacturing process.[10]

According to how original they are to the expanding firm and the market, it separates recently introduced products into two groups. The most creative products are those that the firm and market have never seen before. The least innovative products in terms of both axes of innovation are those that retain performance while lowering prices. They offer identical functionality to already-available items at a reduced price.[14] This study seeks to determine the relationships between three variables, namely, the ability to develop environmentally friendly products, company performance, and competitive skills and in association with managerial environmental care that is set as the moderating variable. Product innovation and company performance influence competitive skills, although product innovation has a stronger effect, and managerial environmental care has no effect on competitive skills. These findings have implications for managers and policymakers to include company performance activities through environmental innovation. In connection with innovation in services with two orientations, namely, exploration and exploitation, there is a relationship between innovation and small- and medium-sized enterprise (SME) performance and the effect of company size. These findings indicate that, if the two orientations are applied, there is a synergistic effect on company performance even though it does not have a direct effect. Moreover, if only one of the innovation orientations is applied, it has no effect on performance (McDermott & Prajogo 2012:229). The larger the company size, the better the company's financial condition in exploring unexpected innovations and the easier it is to compete when compared to small companies. The size of the company does not characterize the effect of innovation orientation but determines which innovation orientation is more effective for the company. Because of this discussion, it is hypothesized that:

H1: Product innovation is positively significant to the financial performance of MSMEs during the COVID-19 pandemic.

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Service Quality and Financial Performance of MSME

The quality-of-service sector is important for all global economies, and services will continue to be the dominant force in the future.[15] These goods can be easily replicated but service levels cannot, quality of service has emerged as a major competitive weapon in the battle, especially for banking service providers. Quality has been a recurring challenge for academics and practitioners. Hotels, banks and non-banking financial institutions, insurance, travel, healthcare, education, and local government agencies, for example, are all trying to improve the quality of service, please clients, and thus increase profits.[16] The fact that the consumer determines good or bad qualities does not imply that the customer is always right or that the client can fully express his demands and desires in words. It takes keen insight and useful interaction with the client.[17] Technical and functional quality are two factors that affect the level of service that consumers receive. Technical quality refers to the knowledge of staff; integrative quality refers to coordination between the various components of a service system; functional quality refers to how well the service is delivered to customers; And the quality of results refers to how well the service meets customer expectations.[11]

The elements of service quality have been studied in more detail by experts. For example, it has been said that any evaluation of customer service effectiveness should consider the overall customer experience. As a result, tools to measure service quality must have components that address every important aspect of the customer experience. The SERVQUAL model serves as the foundation for the service quality framework, which consists of five components: Tangibility, Responsiveness, Reliability, Assurance, and Empathy. One of the service businesses in the field of public transportation, one of which is influenced by the implementation of the COVID-19 protocol, was discussed in a study by Thanatorn et al conducted in the Philippines, consumers choose service providers who implement health protocols according to the appeal from the government and we make it clear that it is implied that one of the main business factors that attract the attention of consumers is good service quality and can affect the development of financial performance. Based on this discussion, it is hypothesized that:

H2: The service quality is positively significant to MSME performance during the COVID-19 pandemic.

Financial performance shows how a business uses its resources to achieve its business objectives. Financial statements, which are essential in communicating the position of MSMEs in an accountable and economic manner, are used to evaluate analytically.[18] MSMEs can overcome any obstacles they face when their financial performance is adequate.[19] By showing a clear correlation between two figures taken from the financial accounts, they shed light on how effectively the business functions and how well it is run.[20] MSMEs can run a sustainable business with solid performance thanks to financial performance studies. As a result, understanding how MSMEs function will lead to an understanding of how they overcome setbacks.[21] The financial performance of MSMEs in the Philippines has been studied concerning the impact of financial ratios, such as Debt Ratio, Asset Turnover, and Gross Profit Margin on financial performance, as measured by Return on Assets, where these entities must remain independent and independent, without being overly dependent on debt. MSMEs must have enough funds to manage their respective companies without taking on further debt. Loans that are not essential and should prepare emergency reserves that can be taken to increase capital as needed. This debt should be put to good use when needed, in addition, it should be informed of the danger of default, which can result in very high interest and penalties and drain resources significantly.[7]

This study discusses whether product innovation and service quality have the potential to affect financial performance, especially during the COVID-19 pandemic. The pandemic has caused the financial condition of MSMEs to deteriorate, and government could not assist. Although the governments could assist previously, in the form of 100 % capital loans, this is no longer the case. Hong Kong indicates that some MSMEs will experience the worst situation in the next few months, and some are considering stopping their operations.[22] However, when customers can communicate with sales staff at stores via WhatsApp, purchasing can be made electronically with delivery and payment time being adjusted. This could help MSMEs if the COVID-19 pandemic conditions continue. In addition, financial performance can act as a mediator in the relationship between financial performance and service innovation such as research from Choi and Lee (2013) exploring the relationship between information technology capabilities (IT capability) and organizational innovation on company performance by considering the mediating role of service process innovation and service productivity where service process innovation and productivity Services mediate the relationship between an organization's information technology and innovation capabilities and company performance. Financial performance can also be a mediator for sustainable recovery, Marfels and Reichardt's (2021) research aims to explore the mediating role of financial performance in the relationship between corporate sustainability and corporate value. The results showed that financial performance was identified as a partial mediator in the relationship between corporate sustainability and corporate value. Based on this discussion, it is hypothesized that:

H3: The financial performance is positively significant to MSME performance during the COVID-19 pandemic.

H4a: Financial Performance positively moderates the relationship between Product Innovation and Survival-

Recovery of MSMEs.

H4b: Financial Performance positively moderates the relationship between Service Quality and Survival-Recovery of MSMEs.

METHOD

Scale Development

The questionnaire consisted of four sections: product innovation, service quality, financial performance, and survival-recovery of MSMEs. All questions were adapted from previous research, and modified to suit MSMEs and during covid-19 pandemic conditions. Section 1 assesses product innovation in the business with 6 items, modified from [23] and [24]. Section 2 assesses service quality in the business with 5 items, modified from several studies, including [25] and [26]. Section 3 assesses financial performance in the business with 3 items, modified from [27] and [28]. Section 4 identifies the Survival-Recovery of MSMEs with 5 items, modified from [29]. The measurement scale used for the variable product innovation, service quality, and survival-recovery of MSMEs is a 5-point Likert type ranging from "strongly disagree" to "strongly agree". Invariable financial performance, the measurement scale used is a 5-point Likert type ranging from "much worse" to "much better".

Collecting Data

We collected data from several MSME entrepreneurs affected by the COVID-19 pandemic. The data process was collected at one specific point intime, namely, data collected from January 2023 to April 2023 using a questionnaire. We ensure potential respondents that every answer given will be guaranteed confidentiality. The data search process resulted in 218 data points that could be used for analysis (see table). Based on the data search, the majority of respondents were 20-30 years old (78,9 %). The number of genders is 83 males (34,1 %) and 135 females (61,9 %). The majority of the last education is a bachelor's degree (60,6 %). The average respondent has a monthly income earned during the COVID-19 pandemic of < IDR 1 000 000 (29,4 %), IDR 1 000 000 - IDR 3 000 000 (30,7 %), and IDR 4 000 000 - IDR 5 000 000 (20,6 %). The majority of the number of employees owned is 1-5 employees (66,5 %) and the majority of the length of the establishment of a business is less than 5 years (70,6 %).

Data Analysis

The SEM technique was used for analyzing data using SPSS 26.0 and SmartPLS 3.2.9 software. The measurement model was tested, followed by the structural model following the guidelines put forward by [30] and [31]. According to Hair et al. (2017) model estimation provides an empirical measure of the relationship between indicators and constructs (measurement model), as well as between constructs (structural model). All constructs in the research model are reflective latent variables.[32]

In this study, the Structural Equation Modeling (SEM) method was used to analyze the data, and this process involved the application of statistical analysis software, namely SPSS 26.0 and SmartPLS 3.2.9. The analytical approach began with measurement model testing, which was followed by structural model analysis, referring to the guidelines proposed by Henseler et al. (2016) In this study, the Structural Equation Modeling (SEM) method was used to analyze the data, and this process involved the application of statistical analysis software, namely SPSS 26.0 and SmartPLS 3.2.9. The analytical approach began with measurement model testing, which was followed by structural model analysis, referring to the guidelines proposed by Henseler et al. (2016). Hair et al., (2017) suggest that model estimation provides an empirical dimension to the relationship between indicators and constructs in the context of the measurement model, as well as the relationship between constructs in the overall model structure. This testing process provides a deep understanding of the relationship between variables and constructs being measured and provides an empirical picture of the complexity of the model structure being studied.

All constructs considered in this research framework are identified as reflective latent variables. Reflective latent variables refer to aspects that cannot be measured directly but are reflected through the indicators measured in this study. Therefore, the application of SEM using SPSS 26.0 and SmartPLS 3.2.9 opens up opportunities to conduct an in-depth analysis of the relationship and contribution of each reflective latent variable in this research model. Thus, the entire SEM analysis process in this study not only provides reliability in measuring the observed variables but also provides insight into the overall structure of the model studied. This approach ensures that the research results have a strong and reliable empirical basis, in line with the methodology recognized by Henseler et al. (2016) and Hair et al. (2017)

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RESULTS

Assessment of Measurement Model

Assessing measurement models consists of reliability, convergent validity, and discriminant validity. All items measured with an outer loading of less than 0,7 should be removed. According to (Hair et al., 2017), removing items should be carried out with caution as removing one or more items may increase reliability or discriminant validity but at the same time may decrease the content validity of measurement.

Table 1. Characteristics Respondents

Characteristics	Frequency	Percent
Age		
< 20	12	5,5
20 - 30	172	78,9
30 - 40	12	5,5
> 40	22	10,1
Gender		
Male	83	38,1
Female	135	61,9
Education		
Junior High School	3	1,4
Senior High School	65	29,8
Bachelor Degree	132	60,6
Master Degree	15	6,9
Doctoral Degree	3	1,4
Income per month		
< IDR 1 000 000	64	29,4
IDR 1 000 000 - IDR 3 000 000	67	30,7
IDR 4 000 000 - IDR 5 000 000	45	20,6
IDR 5 000 000 - IDR 10 000 000	23	10,6
> IDR 10 000 000	19	8,7
Number of Employees		
1 - 5	145	66,5
5 - 19	48	22,0
20 - 99	23	10,6
>100	2	0,9
Length of the company's establishment		
Less than 5 years	154	70,6
5-10 years	44	20,2
11-15 years	13	6,0
16-20 years	7	3,2

Therefore, we retain outer loading items less than 0,7, because it reduces reliability values (see table 2). The reliability of the measurement model was assessed using Cronbach's Alpha and composite reliability (CR). According to (Manley et al., 2021) assessing the composite reliability of the construct, Cronbach's alpha, or rho_A value must exceed 0,70. Based on Table 2, the results of Cronbach's Alpha and composite reliability exceed 0,70. The dominant measure of convergent validity is the average variance extracted (AVE).[35] An AVE of 0,5 or higher is therefore regarded as acceptable (Henseler, Hubona and Ray, 2016). Following hair, the measurement of discriminant validity uses the HTMT ratio. In measuring discriminant validity, we use the Fornell-Larcker and HTMT ratios. The Fornell-Larcker criterion says that a factor's AVE should be higher than its squared correlations with all other factors in the model and HTMT is an estimate for the factor correlation (more precisely, an upper boundary).[36] As shown in table 3 on the Fornell-Larcker measure, all items loaded well on their constructs and

poorly on the other constructs. In addition, the HTMT must be less than 1.[33,36,37] These results suggest good discriminant validity. Overall, the findings of the measurement model show the efficiency and integrity of each indicator are satisfactory.

Table 2. Convergent Validity

Item	Outer Loading	Alpha	CR	AVE
Product Innovation (Anning-Dorson et al., 2017; Hong et al., 2023)				
PI1	0,815	0,888	0,915	0,641
PI2	0,794			
PI3	0,817			
PI4	0,808			
PI5	0,783			
PI6	0,785			
Service Quality [26,40]				
SQ1	0,653	0,803	0,864	0,561
SQ2	0,789			
SQ3	0,782			
SQ4	0,731			
SQ5	0,782			
Financial Performance [29,41]				
FP1	0,874	0,853	0,911	0,772
FP2	0,860			
FP3	0,901			
Survival-Recovery of MSMEs [29]				
SR1	0,870	0,821	0,893	0,736
SR2	0,871			
SR3	0,831			

Assessment of Structural Model

Following (Hair et al., 2017), structural model measurements consist of collinearity, path coefficient, R^2, $F^{2,}$ and Q^2. The collinearity measurement used is VIF, which is a symptom of multicollinearity that biases regression outcomes. The findings show that the VIF is less than the recommended level of 3 [37] (Table 4). In testing the path coefficients consisting of direct and indirect effect tests, a bootstrap with 5000 subsamples is recommended.[33,36] Consider accepting or rejecting a hypothesis using beta, p-values, and t-values. Based on table 4, direct effect results show that product innovation (β = 0,343; p-values = 0,000; t-values = 4,528) and service quality (β = 0,323; p-values = 0,000; t-values = 4,828) is positive and significant to financial performance, thus supporting H1 and H2. The results exhibited an R2 of 0,351, which indicates that product innovation and service quality models explained 35,1 % of the variance in financial performance. The results of this study also show a positive and significant effect for financial performance on the survival-recovery of MSMEs, (β = 0,550; p-values = 0,000; t-values = 10,822), supporting H3. Indirect effect results show that financial performance mediates product innovation on survival-recovery of MSMEs (β = 0,188; p-values = 0,000; t-values = 3,851) and service quality on survival-recovery of MSMEs (β = 0,178; p-values = 0,000; t-values = 4,470). Therefore, H4a and H4b were supported. The R2 is 0,302, indicating that financial performance modeled as direct and mediated explains 30,2 % of the variance in survival-recovery of MSMEs.

Table 3. Discriminant Validity

	Financial Performance	Product Innovation	Service Quality	Survival-Recovery of MSMEs
Fornell-Larcker				
Financial Performance	0,879			
Product Innovation	0,531	0,800		
Service Quality	0,523	0,583	0,749	
Survival-Recovery of MSMEs	0,550	0,57	0,569	0,858
HTMT-Ratio				
Financial Performance				
Product Innovation	0,604			
Service Quality	0,624	0,688		
Survival-Recovery of MSMEs	0,651	0,661	0,694	

For the significant effects, it makes sense to quantify how substantial they are, which can be accomplished by assessing their effect size f^2.[36] [42] categorized f^2 into small (0,02–0,15), medium (0,15–0,35), and large (>0,35) effects size. Based on table 4, the effect sizes of the variables of this study range from small to large. The Q^2 effect size assesses the contribution of an exogenous construct to an endogenous latent variable,[32] categorize meaningful (Q^2 values >0,0), medium (0,25 <Q^2 values <0,50) large predictive relevance (Q^2 value >0,5). As shown in table 5, the effect size of Q^2 with a range of meaningful to medium.

Table 4. Direct and Indirect Effects

Hypothesis	Path	ß	STDV	t- values	p-values	VIF	f^2	Conclusion
H1	Product Innovation -> Financial Performance	0,343	0,076	4,528	0,000	1,515	0,120	Supported
H2	Service Quality -> Financial Performance	0,323	0,067	4,828	0,000	1,515	0,106	Supported
H3	Financial Performance -> Survival-Recovery of MSMEs	0,550	0,051	10,822	0,000	1,000	0,433	Supported
H4a	Product Innovation -> Financial Performance -> Survival-Recovery of MSMEs	0,188	0,049	3,851	0,000			Supported
H4b	Service Quality -> Financial Performance -> Survival-Recovery of MSMEs	0,178	0,040	4,470	0,000			Supported

Criterion parameter coefficients of 34,3 % and 32,3 % for variables X1, and X2 to Y, criterion innovation and service quality have a positive criterion financial performance. F2 values of 0,120 for H1, 0,106, and H2 indicate that the effect on MSMEs in Indonesia is moderate for H1 and H2. Test the estimation of the variable coefficients of criterio innovation and service quality on financial performance criterio bootstrapped results with t values of 4,528, and 4,828, and standard deviations of 0,076, and 0,067. The financial performance variable or H3 has a parameter of 55 % on the performance of MSMEs with a standard deviation value of 0,051 and a t value of 10,822 and also has a strong positive influence with an f2 value of 0,433. Financial performance also acts as a mediator of criterion innovation and survival-recovery, a t-value of 3,851 and a standard deviation of 0,049 indicate that financial performance is accepted or supported as a mediator of both variables. Similarly, financial performance is supported as a mediator of service quality and survival recovery variables when the standard deviation is 0,040 and the t-value is 4,470, as indicated by the acquisition results. The p-value of both hypotheses is “0,000 < 0,05”, which shows that the direct influence of criterion innovation and service quality on financial performance is significant, the same applies to financial performance variables on the performance of micro, small and criteria enterprises (MSMEs) in Indonesia is significant or supported. And also applies to financial performance that functions as a mediator for product innovation and survival recovery as well as a mediator for service quality with survival recovery.

Table 5. Predictive value criterion (Q^2)

	SSO	SSE	Q^2 (=1-SSE/SSO)
Financial Performance	654	484,59	0,259
Product Innovation	1308	1308	
Service Quality	1090	1090	
Survival-Recovery of MSMEs	654	512,21	0,217

Predictive value criteria (Q^2) are used to make predictions or decisions, in terms of assessing whether including variables in a predictive model adds value by improving the model’s ability to accurately predict outcomes. The analysis results show that there is a strong relationship between variable X (Product Innovation and Service Quality) and Survival-Recovery of MSMEs with variable Y (Financial Performance) in the context of the study. Product Innovation and Service Quality variables have the same SSO and SSE values, which are 1308 and 1090 respectively. Meanwhile, the Survival-Recovery of MSMEs has an SSO of 654 and an SSE of 512,21. Q^2 calculated from the formula 1 - (SSE/SSO) shows a value of 0,217. On the other hand, the Financial Performance variable has an SSO of 654 and an SSE of 484,59. Q^2 calculated from the formula 1 - (SSE/SSO) shows a value of 0,259. The results of this analysis indicate that variable X, which includes Product Innovation, Service Quality, and Survival-Recovery of MSMEs, has a significant impact on variable Y, which is Financial Performance, with the ability to explain about 25,9 % of the observed variation in Financial Performance.

DISCUSSION

The commenced with a meticulous examination of the measurement model. A sophisticated approach was employed for item retention, prioritizing the preservation of items exhibiting outer loadings surpassing

the critical threshold of 0,7. this rigorous selection process was driven by the awareness that alterations to items could potentially impact the reliability and discriminative ability, underscoring the pivotal importance of content validity in the measurement process. In addition, it is noteworthy that the measurement model demonstrated strong reliability, as indicated by Cronbach's Alpha and Composite Reliability (CR) scores exceeding the recommended threshold of 0,70. The study also adhered to established guidelines, successfully achieving Average Variance Extracted (AVE) values of 0,5 or above. These results serve as confirmation of the convergent validity of this study. Confirmation of discriminant validity was comprehensively conducted using the Fornell-Larcker ratio and HTMT. The findings of this study indicate that there is strong evidence supporting the convergent validity of all measurement items. The findings of this study provide evidence of the discriminant validity of the constructs under study. In particular, the absence of cross-loading on items and squared inter-factor correlations between the construct in question and other constructs support the notion of discriminant validity.[43] These statistical measures provided evidence that the items loaded effectively onto the specified constructs.

Simultaneously, the structural model underwent a thorough evaluation using well-established metrics. Collinearity assessment was conducted by Variance Inflation Factor (VIF) analysis, which yielded results indicating that multicollinearity was not an issue. The results of the path coefficient analysis revealed a statistically significant and positive relationship between product innovation, service quality, and financial performance. These findings provide empirical support for the research hypotheses (H1 and H2). Furthermore, this study explains the relationship between financial performance and resilience of Micro, Small, and Medium Enterprises (MSMEs), thereby providing support for hypothesis H3. The analysis of this study is enriched by the inclusion of the effect size measure (f^2), which reveals that the performance of Indonesian MSMEs is moderately affected by product innovation [44] and service quality. The findings of this study explain that the model can account for approximately 35,1 % of the observed variability in financial performance, signaling a significant level of predictive ability. As such, this robust analytical framework not only strengthens the empirical basis of this study but also enhances our understanding of the complex dynamics underlying MSME performance in the Indonesian context, especially during the challenging conditions brought about by the COVID-19 pandemic.

CONCLUSION AND FUTURE RESEARCH

This study highlights the importance of product innovation and service quality in improving financial performance, thereby enhancing the resilience of MSMEs during unfavorable conditions, such as the COVID-19 pandemic. The structural model strengthens the proposed relationships, demonstrating the moderating effects of product innovation and service quality on MSME performance and their significant contribution in explaining the variability of financial performance. These findings provide significant insights into the resilience and performance dynamics of MSMEs in Indonesia, emphasising the critical role of innovation and quality improvement as a survival strategy during the crisis. Future research should further investigate contextual elements, including the impact of regulations, market conditions, and digital transformation, to generate more comprehensive knowledge on MSME resilience. Longitudinal studies could also investigate the long-term impact of product innovation and service quality on financial performance and recovery after the crisis. In addition, examining cross-regional comparisons can shed light on the varying responses of MSMEs to similar economic disruptions, thus offering a worldwide perspective on resilience measures.

Implication

The findings of this study have significant implications for various stakeholders. Amidst the COVID-19 pandemic, micro, small, and medium enterprises (MSMEs) in Indonesia are faced with various challenges. To effectively face these challenges, MSMEs must prioritize innovation in service quality and product development. By doing so, they can improve their financial performance and ensure long-term sustainability in the current economic landscape. Furthermore, it is imperative to recognize the significant influence of financial performance as a mediator in facilitating the survival and recovery process. This recognition underscores the importance of adopting a comprehensive and holistic approach to improving business sustainability.

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CONFLICT OF INTEREST

None.

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APPENDIX

Variable	Item
Product Innovation	PI1: During pandemic, compared with competitors, the speed of your firm's new product development is faster
	PI2: During the pandemic, compared with competitors, the output value of your firm's new products accounts for a larger proportion of sales revenue
	PI3: During the pandemic, compared with competitors, your firm often introduces the latest processes and technologies to develop new products
	PI4: In comparison with our competitors, our company has a high success rate in new product launches during pandemic
	PI5: Our company is faster in bringing new service offerings into the market than any other during the pandemic
	PI6: Our company has introduced more innovative products during the pandemic than any other company
Service Quality	SQ1: Compared to before the pandemic, our physical facilities look more attractive.
	SQ2: During the pandemic, when our customers have problems, we show genuine interest in solving
	SQ3: During the pandemic, our employees are always willing to help customers.
	SQ4: Compared to before the pandemic, our business has convenient operating hours for all its customers.
	SQ5: Our overall services are safe and secure during pandemic
Financial Performance	FP1: In your view, what is the current condition of your business profit/net profit (after tax payments compared to total assets (ROA)) compared to the initial period of the COVID-19 pandemic?
	FP2: In your view, how is your business profit/net profit (after tax payments compared to total Equity (ROE)) currently compared to the initial period of the COVID-19 pandemic?
	FP3: In your view, what is the current condition of your business profit/net profit (compared to total sales (ROS)) compared to the initial period of the COVID-19 pandemic?
	SR1: I can maintain my business during the COVID-19 pandemic.
Survival-Recovery of MSMEs	SR2: I was able to recover my business after being impacted (directly and indirectly) by the COVID-19 pandemic.
	SR3: My business has grown gradually after being affected (directly and indirectly) by the COVID-19 pandemic

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