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## The antecedent and consequences of resistance to social media adoption in SMEs

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### ABSTRACT

This study aims to analyze the resistance to social media adoption in SMEs that have limited resources and experienced a decline in sales due to the COVID-19 Pandemic. Social Media adoption resistance is observed from inadequate resources, usage barriers, and weak government support. These SMEs are also faced with the condition that they are forced to adopt S.M. to save their marketing performance which cannot be done conventionally but must utilize digital technology. The research method used is a survey using a questionnaire. The respondents observed were 230 SMEs in the Special Region of Yogyakarta. The data analysis technique uses a structural model approach with SEM-PLS. This research finds that resistance to social media adoption is influenced by a lack of resources and weak government support for SMEs. As a result, the marketing performance of SMEs is declining, and the business innovation model is not working. SMEs remain in a slump if they do not apply digital technology and utilize social media. This original study discusses SMEs still resistant to adopting S.M. The respondents of this research are also SMEs forced to adopt S.M. Respondents are faced with increasingly stringent social and physical restrictions. Respondents are also SMEs affected by the Pandemic and tend to be close to bankruptcy.



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## Introduction

Industry 4.0 is an internationally known concept as the Industrial Internet of Things. Industry 4.0 is predicted to pose managerial and organizational challenges, especially for small and medium enterprises (Müller, 2019). Cyber-physical systems in Industry 4.0 offer mechanisms for human-to-human, human-to-object, and object-to-object interactions, whereas their integration in industrial manufacturing can be termed cyber-physical production systems (Schlechtendahl et al., 2014). Industry 4.0 raises concerns from the social side, such as job loss, lack of training and competence, employee resistance, and hampered organizational structures (Birkel et al., 2019; Müller, 2019; Sugandini et al., 2019). In SMEs, these concerns are compounded by the lack of resources and access to qualified personnel, such as I.T. experts (Müller 2019). Denicolai et al. (2021) state that the traditional SME model does have characteristics similar to one another's geographical range or dominance of the domestic market. A low level of digital progress and low awareness of sustainability exist in SMEs. During the COVID-19 Pandemic, researchers are often questioned about the readiness of SMEs to face complex challenges, digitalization, and competitive sustainability. Industry 4.0 is one of the most accessible options suitable and available for SMEs to do innovation and growth (Denicolai et al., 2021). Digital technology makes it easier for SMEs to access the global environment. SMEs facing digital technology is an interesting phenomenon to be a research direction during the COVID-19 Pandemic. SMEs with limited resources and awareness of technological and social change (Ghobakhloo and Ching, 2019; Sugandini et al., 2020) are interesting topics to study regarding their readiness and resistance to innovation.

Many previous researchers have done innovation resistance. However, during the Pandemic, research on innovation resistance, especially in SMEs, is still rarely carried out (Sugandini et al., 2019; Sugandini et al., 2020). Chen & Kuo (2017) researched innovation resistance when conditions were normal, and there was no pandemic, and SMEs' satisfactory needs. Their research shows that usage and value barriers influence innovation adoption resistance. (1) Usage Barriers related to users' misunderstanding using social media devices. Lin et al. (2012) mentioned that a high level of resistance exists when users are asked to learn how to use social media from scratch. Chen (2019) believes that habits are formed because of previous experiences and will affect an individual's willingness to share information in the future. (2) Value barrier, indicating that the value created by innovative products must be higher than the value created by existing products. The digital revolution supports SMEs in pursuing technological innovations with artificial intelligence. As value chains become global and digital, readiness to implement digital processes will be critical for small companies to join global digital value chains. Digital technology connects SMEs in integrated business networks (Rehm and Goel, 2017) and targets international customers (Torn and Vaneker, 2019).

Candiya Bongomin et al. (2018) show that government support also influences adoption success for innovation adoption. Government support is realized through improving business skills, capital adequacy, financial access, market access, entrepreneurship education, and the survival of SMEs. Orzes et al. (2019) have conducted a literature review on barriers to innovation adoption and found several factors that influence innovation resistance. The observed usage barrier is related to the lack of financial resources, competencies, and technology. The ability of SMEs to overcome these barriers to innovation adoption can increase the effectiveness of social media marketing. According to Chawla and Chodak (2021), social media marketing is a topic of great interest to researchers and marketers. The effectiveness of social media also has a relatively good impact on the marketing performance of SMEs. More and more SMEs are looking to use social media to build organizational-level strategies. The adoption of Social media by SMEs has a considerable impact on improving the marketing performance of SMEs (Chatterjee and Kumar Kar, 2020).

This study examines the resistance to innovation adoption in SMEs in the Special Region of Yogyakarta. The contribution of this research is to the innovation resistance model in SMEs affected by COVID-19. The innovation resistance model in this study is influenced by lack of resources, usage barriers, and government support. This study also analyzes the effect of social media innovation resistance on the lack of business model innovation and the decline in marketing performance. This research model was carried out because there are still few studies investigating how social media affects the company's business model innovation (BMI). Zhang and Zhu (2021) stated that the rapid development of social media significantly affects organizational innovation activities. Other contributions that can be made from the results of this study are as follows: (1) This research was conducted at a time when the COVID-19 Pandemic was ongoing. Most SMEs in the Special Region of Yogyakarta were in a bankrupt position. The study results are expected to better understand the adoption of innovations in abnormal conditions; of course, this innovation model is different during normal conditions. (2) This research was conducted on SMEs in the Special Region of Yogyakarta, which has several unique features: (a) SMEs in Yogyakarta are home industries that carry out their production processes, are self-managed, and sell themselves. (b) Most SMEs in Jogja do not have employees and craftsmen outside their immediate family. (c). These SMEs do not have the adequate production capacity and operate according to what they can produce. (d). No managerial skills. (e) Does not have a production house, and usually, a production house is integrated with a residential house. The uniqueness of SMEs in the Special Region of Yogyakarta provides a new theory that has never been studied before, related to the emergence of resistance to innovation adoption.

## Literature review

### Social Media Innovation

Social media (S.M.) or web-based platforms show potential in connecting with customers, providing better customer service, and expanding the market by reducing marketing costs (Torres de Oliveira et al., 2020; Kwon et al., 2021). Social media platforms provide new instruments for companies to achieve their business goals, such as knowledge-seeking, communication, and collaboration within and across organizations (Wang et al., 2016). However, many small businesses still do not use S.M. due to perceived barriers, such as lack of resources to manage S.M. accounts and lack of knowledge on using S.M. data (Corral de Zubielqui and Jones, 2020; Effendi et al., 2020). According to the innovation diffusion model (Gruber, 2020), an organization's decision to adopt or reject an innovation is based on its perception of innovation. This perception is determined by knowledge of the innovation, which various internal or external factors may drive. Some of the findings of the impact of S.M. are still being debated. Barlatier and Jossierand (2018); Benitez et al. (2017) show that S.M.'s effects on innovation are still at an early stage, and the results are inconclusive (Corral de Zubielqui and Jones, 2020).

On the other hand (Braojos et al., 2019; Benitez et al., 2017; Corral de Zubielqui and Jones, 2020) demonstrate the positive impact of social media on corporate innovation activities. Marion et al. (2014) found that social media (in weblogs and Twitter) had no impact on collaboration and ideas generated by new product development teams. Thus, issues related to the effects of social media on innovation need to be investigated further.

### **Lack of resources and resistance to social media adoption**

Industry 4.0 has driven technological advancements in the Internet of Things, wireless technology, and other aspects of life. The technology-organization-environment (TOE) framework and the integrated technology acceptance model (TAM-TOE model) were used to analyze the readiness of SMEs to adopt technology (Chatterjee and Kumar Kar, 2020). The TAM-TOE model highlights that organizational resources affect innovation adoption. Organizational readiness is defined as the accessibility of corporate resources for adoption (Iacovou et al., 1995). Cruz-Jesus et al. (2019) state that organizations need more technical and financial resources to adopt new technologies. Organizational competence is associated with employee skills, knowledge, abilities, and other relevant traits that are important for effective performance in a job position (Velu et al., 2017). Adopting innovation requires employees who can use technology and understand its use (Tortorella et al., 2019). The availability of organizational resources significantly and positively influences the corporate adoption of innovative technologies. Organizational readiness was found to be a significant predictor of SME ICT adoption. Technological competence is used to understand, use and utilize technology internally. Technical competence is a supporting method in preparing technology infrastructure, including adopting basic knowledge related to available technology. A high level of technological competence positively influences the willingness to embrace innovation (Cruz-Jesus et al., 2019). Conversely, if the resources owned by the SME organization are low, the resistance to innovation adoption will be high. H1: Lack of resources affects social media adoption resistance

### **Usage barrier and resistance to social media adoption**

Chen and Kuo (2017) stated that usage barriers should be the main prerequisite to be removed in increasing acceptance of the use of innovations. Innovation resistance occurs from changing consumer habits due to using the product for a long time. Innovations that take more time for consumers to change their routines will also take longer to achieve consumer acceptance. Users who have never used virtual social media need to learn the innovative medium from scratch, resulting in resistance. Lin et al. (2012), Sugandini et al. (2020), and Effendi et al. (2020) mention that a high resistance level exists when users are asked to learn how to use social media from scratch. If SMEs feel that technology adoption is compatible with work application systems, SMEs usually consider adopting the technology. Beier and Wagner (2016) show that, besides lacking financial and human resources, SMEs are also faced with the ineffective use of social media. Barriers to using social media, perceived usefulness, and perceived risk are related to resistance to adoption and use of social media (Sugandini et al., 2020). H2: Usage barrier affects social media adoption resistance.

### **Government support and resistance to social media adoption**

Government support can significantly affect the business ecosystem (Greco et al., 2017) and contribute to entrepreneurship in the private sector and encourage innovation (Roh et al., 2021). Roh et al. (2021) suggest the positive impact of government sponsorship on technology development by presenting examples of innovative business growth through investment-supporting policies. Government support can create a positive environment for technology development by making active investments in physical and human infrastructure (Jugend et al., 2018). Traditionally, the direct and indirect impact of government support on corporate innovation has mainly focused on the promotion of R&D (Jugend et al., 2018). Meanwhile, government support also affects the company's open innovation activities. Jugend et al. (2018) found that both financial and non-financial support from the government involves the openness of innovative activities of the supported companies. The government's role in SMEs, especially those vulnerable to various costs incurred in encouraging innovation. Government agencies, acting as a kind of innovation hub, can also help connect, communicate and collaborate between SMEs and independent technology developers or other actors (Roh et al., 2021). This argumentation is supported by Tse et al. (2021), who agree that governments in developing countries have directed their efforts to support business, create incubators for such companies, and conduct market research. Government support can upgrade existing infrastructure, foster private and public partnerships, establish business financing policy support, provide international local market access, fight corruption, and create a conducive business climate for SMEs' survival, growth, and development. Government support for SMEs is essential for growth and directly impacts SMEs' performance, viability, and expansion. Thongsri et al. (2019) show government support's indirect effect on company performance through innovation behavior. Therefore, Government policies must be established to support the development of corporate resources for sustainability. Many SMEs during the COVID-19 Pandemic

were resistant to social media adoption because they felt that government support to facilitate adoption did not exist (Sugandini et al., 2020). H3: Government support has an effect on resistance to social media adoption.

### **Social Media Adoption and Business Model Innovation (BMI)**

BMI is an innovation in the core elements of organizations related to value creation, value proposition, and value capture in the business model (Futterer et al., 2018; Snihur and Wiklund, 2019). Digitization is converting continuous analog information into a discrete, digital and machine-readable format. From an institutional perspective, digitization manifests itself in digital organizations, infrastructure, and activities to drive productivity and growth or generate competitive advantage (Hinings et al., 2018; Alshawaaf and Lee, 2021). Digitization allows synergies between the company and its suppliers to develop internal capabilities and new products. The process of value creation through digitization can occur by creating new offerings, understanding customer needs, and collaborative value creation (Parida et al., 2019). Social media is a technological advancement capable of changing ideas in business models and offering opportunities for innovation (Kwon et al., 2021). Companies with good S.M. can increase the potential of expertise and knowledge and identify the best ways to create value to accelerate BMI (Alshawaaf and Lee, 2021). S.M. that an organization does not adopt will reduce BMI, and adoption resistance has weakened BMI. So, the first hypothesis is proposed as follows: H5: Social Media adoption resistance affects decreasing BMI.

Researchers suggest that if companies cannot manage social media properly and develop the best ways to utilize it, it will decrease innovation performance (Benitez et al., 2017; Muninger et al., 2019). Due to the resistance to S.M. adoption, SMEs cannot integrate information and resources from social media to make better strategic decisions. This capability is essential in the social media environment as it allows SMEs to gain access to new markets and innovative technical solutions (Kwon et al., 2021).

### **Social Media Adoption and Marketing Performance**

Lin et al. (2021) argue that the use and utilization of social media can improve a company's marketing performance. Organizations use social media to share information and content, engage, create social relationships with customers, and manage online communities. S.M. can be used in various business processes such as CRM, new product management, brand management, innovation management, and supply chain management. Marketers are challenged to develop lasting relationships with customers (Foltean et al., 2019). Social media can also involve and create social connections with customers to improve marketing performance (Braojos et al., 2019). Lin et al. (2021) also use social media to resolve customer complaints, integrate social media with e-commerce platforms, inform about logistics status, inquire about customer satisfaction, and improve marketing performance. Thus, social media can increase the effectiveness of the company's marketing activities and improve marketing performance. Braojos et al. (2019) showed that online customer engagement impacts a company's ability to share, create, discuss, and modify content, facilitating information sharing, interaction, and customer relationships. Tajvidi and Karami (2021) provide a new perspective on the effect of social media use in SMEs by analyzing the effect of social media on performance. The research shows a positive and significant relationship between the use of social media and marketing performance through branding and innovation. Organizations resistant to adopting social media will affect a decline in marketing performance they get. H4: S.M. adoption resistance affects the decline in marketing performance.

### **Research Model**

The proposed theoretical framework explains the adoption resistance of social media innovations in SMEs. The underlying theory is Davis's (1989) TAM. The TAM framework is sufficient to explain the main factors that determine the adoption of Industry 4.0 technology in SMEs. The TAM model in this study presents the obstacles to using S.M. These factors are the scarcity of resources and barriers to using S.M. as an internal factor. Government support in adopting S.M. is an external factor that influences resistance to S.M. adoption. This theoretical framework is built from several previous research results from Davis (1989), Chen and Kuo (2017), and Alshawaaf & Lee (2021).

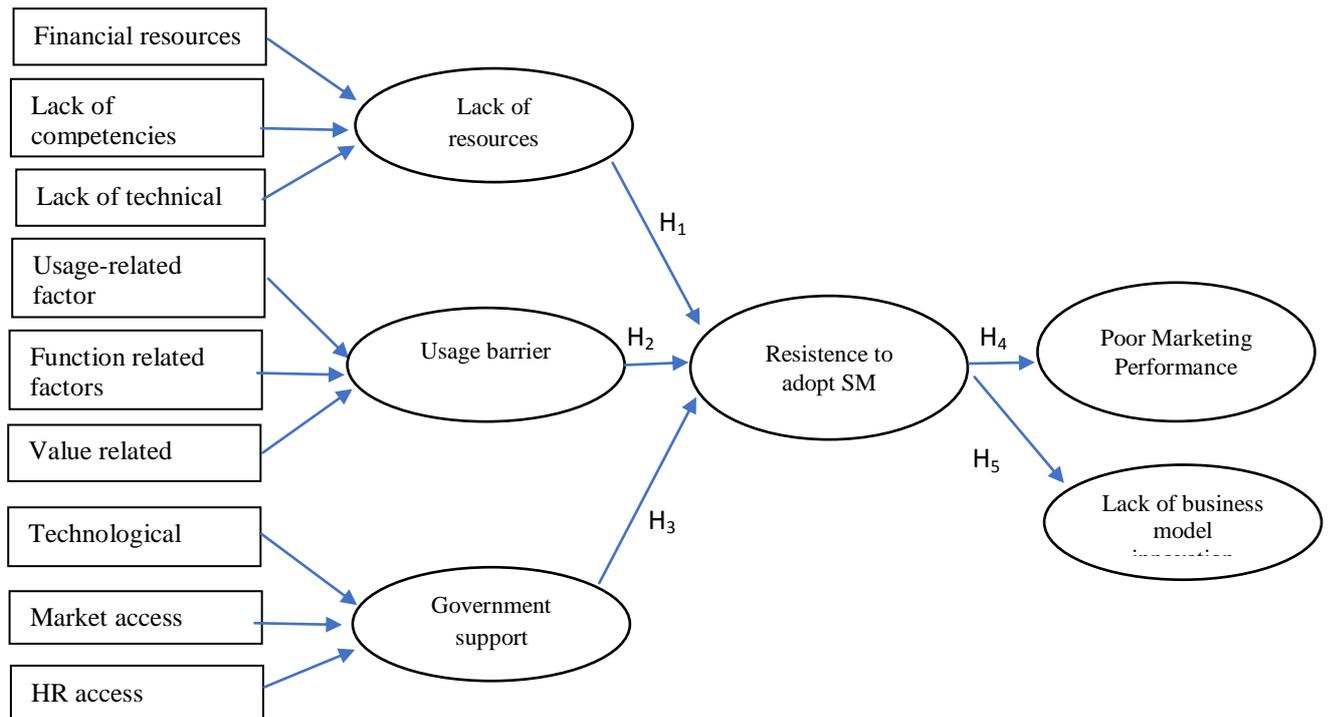


Figure 1 <Social Media Adoption Resistance Model>

## Method

This study uses mixed methods, namely qualitative and quantitative, with a survey approach. The qualitative analysis explores the phenomenon of resistance in SMEs and justifies the measure used to assess the research variables. The qualitative research method is used to find a phenomenon by conducting interviews, analyzing data, ensuring the quality of the analysis, and synthesizing literature (Holt and Goulding 2014). Quantitative research aims to answer whether a phenomenon is related to one another using quantitative data. An exploratory study was conducted on 30 respondents of SME managers. The exploratory study results justify the accuracy of the questionnaire items to be used. After completing an exploratory study, we proceeded to test the research model proposed in this study. We used 230 SMEs affected by COVID-19 as respondents to test the model. The sampling technique is convenience sampling because, during the covid-19 Pandemic, we can only reach SMEs that are easy to find. The SMEs that we make as respondents are SMEs that are resistant to adopting social media, and at this time, they are in a state of bankruptcy because they have lost many customers. We conducted semi-structured interviews with several SME players to identify their barriers to social media adoption.

When conducting content analysis, we conduct exploratory research to justify each question item used. The aim is to obtain a new description of the phenomena experienced by SMEs during the COVID-19 Pandemic. In addition, direct interviews with respondents were conducted to gain new knowledge regarding the resistance of SMEs to adopting social media. This study uses 21 questions that are broken down from 5 observed variables. The question items we used were adopted from several previous researchers from Lin et al. (2012), Clauss (2017), Alshawaaf and Lee (2021), Chen and Kuo (2017), and Müller (2019). The data analysis technique uses a structural model, and the data analysis tool used is Partial Least Square.

## Results and Discussion

### Characteristics of respondents

Respondents in this study are SME managers, most of whom have assets and gross turnover of fewer than 300 million rupiahs per year. So, it can be classified as a small micro-SME. Data on the characteristics of respondents can be seen in table 1.

Table 1 <Characteristics of Respondents>

Characteristics of respondents	Persentase (%)
Gender	
Male	90
Female	10
Length of operation time	
< five years	30
≥ Five years	70
Number of employees	
< 5 people	57
5 – 10 people	33
>10 people	10

### Qualitative analysis

The results of an exploratory study on resistance to adopting social media are related to a lack of resources. Most of them stated as follows: "Our SME is not big. We do not have special human resources to handle social media. We are afraid of problems when using social media. We are not technology savvy people, and our SMEs do not have the adequate infrastructure." Respondents' answers regarding government support: The government does not assist our SMEs regarding access to markets. The government leaves us to find our customers and sell our products. We have never been given a team of Information Technology assistant experts who assist on an ongoing basis. Several SMEs' resistance to social media adoption in SMEs shows a relatively similar answer. We refuse to adopt social media because we are afraid that we will not understand the impact of making transactions. If we are asked to have one, it is better not to use social media before knowing S.M. The results of an interesting exploratory study for further study are related to the resistance of SMEs to adopting social media because SMEs are afraid that if they enter digital platforms and do marketing through social media. The possible impact is that there is a lot of demand, so SMEs cannot serve and fulfill them. SMEs are afraid because these SMEs have limited production capacity, limited production facilities, and limited artisans. This limitation is the most substantial factor that these SMEs refuse to adopt social media because they feel they are not ready. An exploratory study shows that the resistance to social media adoption in SMEs during the Covid-19 Pandemic is influenced by lack of resources, usage barriers, and lack of government support.

### Quantitative Analysis

There are several general approaches to infer causality to validate the hypothesis. Survey data was collected from a Likert scale. This data makes regression analysis inappropriate because a continuous scale is required, and co-variance is not considered (Hair et al., 2020). The Structural Equation Modeling (SEM) method is used with several measurable variables to predict latent variables and causal relationships. SEM does not have the same problems as simple multiple correlations, with the ability to consider various dependents, multiple independent, multicollinearity, and missing data. Smart Partial Least Squares Analysis (PLS) is used to analyze this research data. SEM-PLS was used to determine causal relationships, weights, and statistical significance. There are five latent variables and 21 measurable variables, as defined in Table 2. Causal analysis between latent variables was used to validate the hypothesis test.

Table 2 also shows that the convergent validity has been met. The validity can be seen from the loading factor value, which is  $> 0.5$ , although some authors use a value  $> 0.7$  to show good convergent validity (Hair et al., 2020). Based reliability testing shows that all items used in this study are reliable. The reliability testing is known from the value of Cronbach's Alpha, composite reliability, and AVE. Table 3 shows that the research instrument reliability test has good reliability. Reliability can be seen from the value of the loading factor. Each reliability criterion has a loading factor  $> 0.7$  and Average Variance Extracted (AVE)  $> 0.5$  (Hair et al. 2020).

Table 2 <Measurement of Each Research Variable>

Variable	Question items	Factor loading	Author
Lack of resources	Lack of financial resources (X11)	0.851	Chen and Kuo (2017); Rana et al. (2019)
	Lack of competence (X12)	0.881	
	Lack of technical and practical skills (X13)	0.638	
Usage barrier	Usage-related (X <sub>21</sub> )	0.716	Chen and Kuo (2017); Rana et al. (2019)
	Function related factors (X <sub>22</sub> )	0.826	
	Value related (X <sub>23</sub> )	0.797	
Government support	Technological access (X <sub>31</sub> )	0.785	Thongsri et al. (2019)
	Market access (X <sub>32</sub> )	0.785	
	H.R. access (X <sub>33</sub> )	0.884	
Social Media adoption resistance	Using MS make me attached (Z <sub>11</sub> )	0.862	Chen and Kuo (2017)
	Using MS made me ridiculed (Z <sub>12</sub> )	0.695	
	Using MS makes a wrong impression on other people (Z <sub>13</sub> )	0.840	
	Being afraid of using social media to share knowledge is correct (Z <sub>14</sub> )	0.765	
Marketing performance	Decrease in sales volume (Y11)	0.864	Masood and Sonntag (2020)
	The decline in market share (Y12)	0.854	
	Reduction in customer satisfaction (Y13)	0.884	
	Reduction of customer referrals (Y14)	0.918	
Lack of business model	SMEs regularly change how we provide value to our customers (Y <sub>21</sub> )	0.806	Alshawaaf and Lee (2021); Clauss (2017)
	Periodically look for new sales strategies to generate revenues. (Y <sub>22</sub> )	0.830	
	SMEs experiment with new business models in our markets. (Y <sub>23</sub> )	0.846	
	SMEs regularly use further distribution and sales channels. (Y <sub>24</sub> )	0.855	

Table 3 <Reliability Test Results>

	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Resistance to adopt SM	0.802	0.871	0.629
Lack of Resources	0.717	0.837	0.636
Usage barrier	0.780	0.824	0.610
Government support	0.754	0.859	0.671
Marketing Performance	0.903	0.932	0.775
Lack of business model innovation	0.855	0.902	0.697

### Measurement Model Testing

The values of R<sup>2</sup>, Predictive Relevance (Q<sup>2</sup>), and Goodness of Fit were used to determine the Fittest of the social media adoption resistance model proposed in this study. The calculation results for each of these values are as follows: R<sup>12</sup> = 0.597; R<sup>22</sup> = 0.629; R<sup>32</sup> = 0.611; Q<sup>2</sup> = 0.756; Goodness of Fit = 0.640. The calculation results show that these values have a number close to 1 so that the test results of the S.M. adoption resistance model have good predictive relevance and can be accepted.

### Hypothesis test

Hypothesis testing is done by observing the p-value of each path in the model. The results of hypothesis testing can be seen in table 4.

Table 4 <Mean Value, STDEV, T-Values, P-Values>

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ((O/STDEV))	P Values	Hypothesis
Lack of resources → SM Resistance	0.163	0.164	0.060	2.693	0.007	Supported
Usage barrier → SM Resistance	0.111	0.114	0.076	1.464	0.144	Not Supported
Government support → SM Resistance	0.577	0.575	0.066	8.704	0.000	Supported
SM Resistance → Poor Marketing Performance	0.793	0.794	0.025	32.165	0.000	Supported
SM Resistance → Lack of business model innovation	0.773	0.774	0.027	28.533	0.000	Supported

The path analysis presented in Table 4 shows that H2 is not supported because the p-value is > 0.05. The other hypotheses are all supported. because it has a p-value < 0.05 and a t-statistic value > 1.96.

### Discussion

This study shows that resistance to S.M. adoption is influenced by a lack of resources and government support. Of the observed SMEs, most of them had relatively bad financial conditions. Since the COVID-19 Pandemic, almost all SMEs have experienced a decline in sales and even no sales. This decline in sales causes the financial disease of SMEs to approach bankruptcy. Many SMEs are finally silent and do not carry out their operations due to economic difficulties that cause a reluctance to use social media. Because these SMEs have a problem providing internet and other facilities. In addition, SMEs managers do not have competence in digital technology. So, it makes it difficult for SMEs to adopt S.M., especially since these SMEs do not have unique human resources to handle marketing. It is difficult for SMEs to adopt S.M. Technical and practical skills that are not well-honed will cause them to be afraid to use online-based technology. This lack of resources can affect S.M.'s resistance to adoption, so the first proposed hypothesis is supported. These results support the research findings conducted by Olanrewaju et al. (2020) and Chatterjee et al. (2021), which show that the unpreparedness of SMEs in terms of resources affects innovation adoption. Cruz-Jesus et al. (2019) also stated that organizations need more technical and financial resources to adopt new technologies. Veliu et al. (2017) show that the lack of resources owned by SME organizations causes increased resistance to innovation.

The second hypothesis, which states that the usage barrier affects S.M. adoption resistance, is not supported. This barrier shows that SME managers do not think there are obstacles to adopting social media. The SMEs that were the research respondents did not use social media in their daily operations, both during the Covid-19 period and before the Covid-19 Pandemic. So, the indicators to measure the usage barrier cannot adequately justify the resistance to social media adoption. Usage barrier includes usage-related factors, function, and value-related resistance factors. These SME managers already know that social media technology can help them market their products. Still, they are not confident in using S.M. because they have never used S.M. and don't even know how to use SM. and social media. Unfortunately, these factors do not significantly affect the resistance to S.M. adoption. So, the results of this study do not support the findings of Chen and Kuo (2017), Rana et al. (2019), Beier and Wagner (2016), and Sugandini et al. (2020).

Lack of government support for SMEs causes resistance to the use of S.M. This study indicates that the government does not provide support to SMEs affected by Covid-19. The government does not provide support for easy access to technology. SMEs are left to think for themselves to solve technical problems that must be used to help alleviate issues in times of crisis. In addition, the government is also less supportive of providing access to the market for these SMEs, causing SMEs to be more vulnerable to the adoption of innovations offered by various digital marketing platforms. Based on the data that has been collected from SMEs, it shows that the government is less consistent in providing I.T. expert assistance to SMEs. So that SMEs do not understand the benefits of social media to boost sales of the products they produce. As a result, the lack of government support affects the resilience of SMEs in S.M. adoption. From the results of this study, it can be concluded that the third hypothesis is supported. The results of this study support Tse et al. (2021), Thongsri et al. (2019), and Sugandini et al. (2020), which state that government support for SMEs is an essential factor for growth. It directly impacts the performance, survival, and expansion of SMEs.

The fourth and fifth hypotheses show that resistance to S.M. adoption impacts the decline in marketing performance and the lack of a business model. The decreasing sales volume indicates the declining marketing performance: decreased market share, reduced customer satisfaction, and reduced customer referrals. S.M. adoption for SMEs is believed to be a solution when the situation is unfavorable. The covid Pandemic has caused

lockdown, social restrictions, and work from home has forced marketers to no more extended market their products door to door. These SMEs must adapt to digital technology platforms to help market their products. Unfortunately, SMEs are still resistant to adopting S.M., which has a destructive impact on their marketing performance. The results of this study are in line with the findings of the research of Lin et al. (2021), Foltean et al. (2019), and Tajvidi & Karami (2021). They explained that the use of social media in SMEs has a positive and significant relationship with marketing performance.

It turns out that S.M.'s adoption resistance can also affect not forming new business models that can overcome challenges during this covid Pandemic. The new business models offered by S.M. technology include the ability of SMEs to change the way they add value to their customers rapidly. SMEs can develop new sales strategies to create profits and conduct experiments in new markets efficiently. SMEs can use their sales channels freely online. The resistance of SMEs to adopting this innovation can not develop the new business models. This research supports the findings of Futterer et al. (2018) and Snihur & Wiklund (2019), stating that if SMEs are not willing to use S.M., cause business model will not be formed. On the other hand, if SMEs are eager to adopt S.M., it will facilitate the implementation of new business models that can be used as solutions in difficult times. Hinings et al. (2018), Alshawaaf & Lee (2021), and Kwon et al. (2021) also show that digital technology can create synergies between companies, suppliers, and consumers and can develop internal capabilities in the design of new products.

## Conclusion and contributions

This research is based on the theory of innovation resistance. Literature review from various empirical studies conducted by previous researchers shows that S.M. adoption is mainly studied in consumer settings. For adoption, resistance in SMEs with the criteria of home-based SMEs with tiny production scales is rarely found. The resistance shown by some literature refers to the readiness of SMEs to adopt innovations and does not explain government support to make it easier for SMEs to adopt innovations. This study uses government support variables to explain well the phenomena SMEs faced during the COVID-19 Pandemic that destroyed these SMEs. In this study, government support is a factor that needs to be considered if the government is to boost the existence of SMEs during the Pandemic. The fact of lockdowns and small-scale restrictions in each region causes SMEs to be unable to sell their products which have been done conventionally. This change towards digitalization and online is needed by SMEs but must be accompanied by government policies as a stimulant to move the wheels of SME operations. This study shows that SMEs can reduce their resistance if there is a financial stimulant, training for UKM actors related to competency improvement, and practical technical knowledge about using S.M. In addition, the government also needs to provide support for SMEs in the form of opening market access, providing these SMEs with companions who are experts in digital marketing. This support can reduce the resistance of SME managers to S.M. adoption. The government also needs to provide support in the I.T. sector. These SMEs need to be given stimulants related to free quotas, H.P., or computer equipment to make it easier for SMEs to adopt innovations.

## Limitations and suggestions for further researchers

This study has several limitations: (1) this study only analyzes SMEs that are still resistant to S.M. innovation adoption. This research should use SMEs that have also adopted social media innovations to obtain more complete results. This study does not distinguish whether these SMEs are included in the Laggard category or SMEs that have delayed adoption. According to Roger's theory of diffusion innovation, the type of adopters who are innovation-resistant or non-adopters is divided into laggards (individuals or organizations that have recently adopted the innovation and individuals who delay adoption). It is hoped that they can research by taking respondents from SMEs who have adopted it). S.M. and SMEs are still resistant to S.M. adoption. By accepting these two categories of respondents, it is hoped that it can provide a deeper understanding of the factors that hinder S.M. adoption. In addition, it is also necessary to categorize the SMEs understudy whether they are really resistant or still waiting for adoption

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## References

Alshawaaf, Nasser, and Soo Hee Lee. 2021. "Business Model Innovation through Digitisation in Social Purpose Organisations: A Comparative Analysis of Tate Modern and Pompidou Centre." *Journal of Business*

- Research* 125:597–608. DOI: 10.1016/J.JBUSRES.2020.02.045.
- Barlatier, Pierre Jean, and Emmanuel Josserand. 2018. "Delivering Open Innovation Promises through Social Media." *Journal of Business Strategy* 39(6):21–28. DOI: 10.1108/JBS-12-2017-0175.
- Beier, Michael, and Kerstin Wagner. 2016. "Social Media Adoption: Barriers To The Strategic Use Of Social Media In SMEs." *Research Papers*.
- Benitez, Jose, Javier Llorens, and Jessica Braojos. 2017. "Impact of Information Technology on Opportunity Exploration and Exploitation Firm's Capabilities." <https://doi.org/10.5465/Ambpp.2016.13719abstract> 2016(1):13719. DOI: 10.5465/AMBPP.2016.13719ABSTRACT.
- Birkel, H.S.; Veile, J.W.; Müller, J.M.; Hartmann, E.; Voigt, K.-I. 2019. Development of a Risk Framework for Industry 4.0 in the Context of Sustainability for Established Manufacturers. *Sustainability* 2019, 11, 384. <https://doi.org/10.3390/su11020384>
- Braojos, Jessica, Jose Benitez, and Javier Llorens. 2019. "How Do Social Commerce-IT Capabilities Influence Firm Performance? Theory and Empirical Evidence." *Information & Management* 56(2):155–71. DOI: 10.1016/J.IM.2018.04.006.
- Candiya Bongomin, George Okello, John C. Munene, Joseph Mpeera Ntayi, and Charles Akol Malinga. 2018. "Determinants of SMMEs Growth in Post-War Communities in Developing Countries: Testing the Interaction Effect of Government Support." *World Journal of Entrepreneurship, Management and Sustainable Development* 14(1):50–73. DOI: 10.1108/WJEMSD-06-2017-0026.
- Chatterjee, Sheshadri, and Arpan Kumar Kar. 2020. "Why Do Small and Medium Enterprises Use Social Media Marketing and What Is the Impact: Empirical Insights from India." *International Journal of Information Management* 53:102103. DOI: 10.1016/J.IJINFOMGT.2020.102103.
- Chatterjee, Sheshadri, Nripendra P. Rana, Yogesh K. Dwivedi, and Abdullah M. Baabdullah. 2021. "Understanding A.I. Adoption in Manufacturing and Production Firms Using an Integrated TAM-TOE Model." *Technological Forecasting and Social Change* 170:120880. DOI: 10.1016/J.TECHFORE.2021.120880.
- Chawla, Yash, and Grzegorz Chodak. 2021. "Social Media Marketing for Businesses: Organic Promotions of Web-Links on Facebook." *Journal of Business Research* 135:49–65. DOI: 10.1016/J.JBUSRES.2021.06.020.
- Chen, Chun-Liang. 2019. "Value Creation by SMEs Participating in Global Value Chains under Industry 4.0 Trend: Case Study of Textile Industries in Taiwan." <https://doi.org/10.1080/1097198X.2019.1603512> 22(2):120–45. DOI: 10.1080/1097198X.2019.1603512.
- Chen, Peng Ting, and Shu Chen Kuo. 2017. "Innovation Resistance and Strategic Implications of Enterprise Social Media Websites in Taiwan through Knowledge Sharing Perspective." *Technological Forecasting and Social Change* 118:55–69. DOI: 10.1016/J.TECHFORE.2017.02.002.
- Clauss, Thomas. 2017. "Measuring Business Model Innovation: Conceptualization, Scale Development, and Proof of Performance." *R&D Management* 47(3):385–403. DOI: 10.1111/RADM.12186.
- Corral de Zubielqui, Graciela, and Janice Jones. 2020. "How and When Social Media Affects Innovation in Start-Ups. A Moderated Mediation Model." *Industrial Marketing Management* 85:209–20. DOI: 10.1016/J.INDMARMAN.2019.11.006.
- Cruz-Jesus, Frederico, Andreia Pinheiro, and Tiago Oliveira. 2019. "Understanding CRM Adoption Stages: Empirical Analysis Building on the TOE Framework." *Computers in Industry* 109:1–13. DOI: 10.1016/J.COMPIND.2019.03.007.
- Davis, Fred D. 1989. "Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology." *MIS Quarterly: Management Information Systems* 13(3):319–39. DOI: 10.2307/249008.
- Denicolai, Stefano, Antonella Zucchella, and Giovanna Magnani. 2021. "Internationalization, Digitalization, and Sustainability: Are SMEs Ready? A Survey on Synergies and Substituting Effects among Growth Paths." *Technological Forecasting and Social Change* 166:120650. DOI: 10.1016/j.techfore.2021.120650.
- Effendi, Mohamad Irhas; Sugandini, Dyah; Istanto, Yuni; 2020. "Social Media Adoption in SMEs Impacted by COVID-19: The TOE Model." *The Journal of Asian Finance, Economics and Business* 7(11):915–25. DOI: 10.13106/JAFEB.2020.VOL7.NO11.915.
- Foltean, Florin Sabin, Simona Mihaela Trif, and Daniela Liliana Tuleu. 2019. "Customer Relationship Management Capabilities and Social Media Technology Use: Consequences on Firm Performance." *Journal of Business Research* 104:563–75. DOI: 10.1016/J.JBUSRES.2018.10.047.
- Futterer, Fabian, Jochen Schmidt, and Sven Heidenreich. 2018. "Effectuation or Causation as the Key to Corporate Venture Success? Investigating Effects of Entrepreneurial Behaviors on Business Model Innovation and Venture Performance." *Long Range Planning* 51(1):64–81. DOI: 10.1016/J.LRP.2017.06.008.
- Ghobakhloo, Morteza, and Ng Tan Ching. 2019. "Adoption of Digital Technologies of Smart Manufacturing in SMEs." *Journal of Industrial Information Integration* 16:100107. DOI: 10.1016/J.JII.2019.100107.

- Greco, Marco, Giorgio Locatelli, and Stefano Lisi. 2017. "Open Innovation in the Power & Energy Sector: Bringing Together Government Policies, Companies' Interests, and Academic Essence." *Energy Policy* 104:316–24. DOI: 10.1016/J.ENPOL.2017.01.049.
- Gruber, Mario. 2020. "An Evolutionary Perspective on Adoption-Diffusion Theory." *Journal of Business Research* 116:535–41. DOI: 10.1016/j.jbusres.2020.02.024.
- Hair, Joe F., Matthew C. Howard, and Christian Nitzl. 2020. "Assessing Measurement Model Quality in PLS-SEM Using Confirmatory Composite Analysis." *Journal of Business Research* 109:101–10. DOI: 10.1016/J.JBUSRES.2019.11.069.
- Hinings, Bob, Thomas Gegenhuber, and Royston Greenwood. 2018. "Digital Innovation and Transformation: An Institutional Perspective." *Information and Organization* 28(1):52–61. DOI: 10.1016/J.INFOANDORG.2018.02.004.
- Holt, Gary D., and Jack S. Goulding. 2014. "Conceptualisation of Ambiguous-Mixed-Methods within Building and Construction Research." *Journal of Engineering, Design, and Technology* 12(2):244–62. DOI: 10.1108/JEDT-02-2013-0020.
- Iacovou, Charalambos L., Izak Benbasat, and Albert S. Dexter. 1995. "Electronic Data Interchange and Small Organizations: Adoption and Impact of Technology." *MIS Quarterly: Management Information Systems* 19(4):465–85. DOI: 10.2307/249629.
- Jugend, Daniel, Charbel Jose Chiappeta Jabbour, Janaina A. Alves Scaliza, Robson Sô Rocha, José Alcides Gobbo Junior, Hengky Latan, and Manoel Henrique Salgado. 2018. "Relationships among Open Innovation, Innovative Performance, Government Support, and Firm Size: Comparing Brazilian Firms Embracing Different Levels of Radicalism in Innovation." *Technovation* 74–75:54–65. DOI: 10.1016/J.TECHNOVATION.2018.02.004.
- Kwon, Wi Suk, Hongjoo Woo, Amrut Sadachar, and Xiao Huang. 2021. "External Pressure or Internal Culture? An Innovation Diffusion Theory Account of Small Retail Businesses' Social Media Use." *Journal of Retailing and Consumer Services* 62:102616. DOI: 10.1016/J.JRETCONSER.2021.102616.
- Lin, Chinho, Ju Chuan Wu, and David C. Yen. 2012. "Exploring Barriers to Knowledge Flow at Different Knowledge Management Maturity Stages." *Information & Management* 49(1):10–23. DOI: 10.1016/J.IM.2011.11.001.
- Lin, Jiabao, Zhimei Luo, Jose Benitez, Xin (Robert) Luo, and Aleš Popovič. 2021. "Why Do Organizations Leverage Social Media to Create Business Value? An External Factor-Centric Empirical Investigation." *Decision Support Systems* 113628. DOI: 10.1016/J.DSS.2021.113628.
- Marion, T. J., Barczak, G., & Hultink, E.J. (2014). Do social media tools impact the development phase? An exploratory study. *Journal of Product Innovation Management*. Vol. 31 (S1): 18-29. <https://doi.org/10.1111/jpim.12189>
- Masood, Tariq, and Paul Sonntag. 2020. "Industry 4.0: Adoption Challenges and Benefits for SMEs." *Computers in Industry* 121:103261. DOI: 10.1016/J.COMPIND.2020.103261.
- Muhtarom, A., Syairozi, I., & Wardani, N. D. (2022). Analisis Persepsi Harga, Kualitas Pelayanan, Customer Relationship Marketing, dan Kepercayaan Terhadap Peningkatan Penjualan Dimediasi Loyalitas Pelanggan pada UMKM Ayam Potong Online Elmonsu. *Jesya (Jurnal Ekonomi dan Ekonomi Syariah)*, 5(1), 743-755.
- Müller, Julian Marius. 2019. "Antecedents to Digital Platform Usage in Industry 4.0 by Established Manufacturers." DOI: 10.3390/su11041121.
- Muninger, Marie Isabelle, Wafa Hammadi, and Dominik Mahr. 2019. "The Value of Social Media for Innovation: A Capability Perspective." *Journal of Business Research* 95:116–27. DOI: 10.1016/J.JBUSRES.2018.10.012.
- Olanrewaju, Abdus Samad Temitope, Mohammad Alamgir Hossain, Naomi Whiteside, Paul Mercieca. 2020. "Social Media and Entrepreneurship Research: A Literature Review." *International Journal of Information Management* 50:90–110.
- Orzes, G., E. Rauch, S. Bednar, and R. Poklemba. 2019. "Industry 4.0 Implementation Barriers in Small and Medium-Sized Enterprises: A Focus Group Study." *IEEE International Conference on Industrial Engineering and Engineering Management* 2019-December:1348–52. DOI: 10.1109/IEEM.2018.8607477.
- Parida, V., Sjödin, D., & Reim, W. (2019). Reviewing Literature on Digitalization, Business Model Innovation, and Sustainable Industry: Past Achievements and Future Promises. *Sustainability*. 11(2), 391; <https://doi.org/10.3390/su11020391>
- Rana, Nripendra P., Daniel J. Barnard, Abdullah M. A. Baabdullah, Daniel Rees, and Sian Roderick. 2019. "Exploring Barriers of M-Commerce Adoption in SMEs in the U.K.: Developing a Framework Using ISM." *International Journal of Information Management* 44:141–53. DOI: 10.1016/J.IJINFOMGT.2018.10.009.
- Rehm, Sven Volker, and Lakshmi Goel. 2017. "Using Information Systems to Achieve Complementarity in SME

- Innovation Networks." *Information & Management* 54(4):438–51. DOI: 10.1016/J.IM.2016.10.003.
- Roh, Taewoo, Kangmun Lee, and Ji Yeon Yang. 2021. "How Do Intellectual Property Rights and Government Support Drive a Firm's Green Innovation? The Mediating Role of Open Innovation." *Journal of Cleaner Production* 317:128422. DOI: 10.1016/J.JCLEPRO.2021.128422.
- Schlechtendahl, Jan, Matthias Keinert, Felix Kretschmer, Armin Lechler, and Alexander Verl. 2014. "Making Existing Production Systems Industry 4.0-Ready." *Production Engineering* 2014 9:1 9(1):143–48. doi: 10.1007/S11740-014-0586-3.
- Snihur, Yuliya, and Jonas Wiklund. 2019. "Searching for Innovation: Product, Process, and Business Model Innovations and Search Behavior in Established Firms." *Long Range Planning* 52(3):305–25. DOI: 10.1016/J.LRP.2018.05.003.
- Sugandini, Dyah, Mohamad Irhas Effendi, and Yuni Istanto. 2020. "The Resistance of Social Media Adoption to SMEs in Yogyakarta: Exploratory Study." *Proceeding of LPPM UPN "Veteran" Yogyakarta Conference Series 2020 – Economic and Business Series* 1(1):267–73. DOI: 10.31098/EBS.V11I1.77.
- Sugandini, Dyah, Mohamad Irhas Effendi, Yuni Istanto, Rahajeng Arundati, And Esti Dwi Rahmawati. 2019. "Technology-Organization-Environment Model And Technology Acceptance Model in Adoption of Social Media Marketing on SMEs Tourism." *Journal of Environmental Management and Tourism* 10(4):878–85. DOI: 10.14505/JEMT.10.4(36).19.
- Syairozi, M. (2015). *Pengaruh Faktor Eksternal (Inflasi, Bunga) Dan Faktor Internal (Bagi Hasil, Jumlah Bank) Terhadap Deposito Mudharabah Pada Perbankan Syariah Di Indonesia* (Doctoral dissertation, Universitas Brawijaya).
- Tajvidi, Rana, and Azhdar Karami. 2021. "The Effect of Social Media on Firm Performance." *Computers in Human Behavior* 115:105174. DOI: 10.1016/J.CHB.2017.09.026.
- Thongsri, Natenapang, Alex Kung, and -Hsiung Chang. 2019. "Interactions Among Factors Influencing Product Innovation and Innovation Behaviour: Market Orientation, Managerial Ties, and Government Support." DOI: 10.3390/su11102793.
- Torn, I. A. R., and T. H. J. Vaneker. 2019. "Mass Personalization with Industry 4.0 by SMEs: A Concept for Collaborative Networks." *Procedia Manufacturing* 28:135–41. DOI: 10.1016/J.PROMFG.2018.12.022.
- Torres de Oliveira, Rui, Marta Indulska, John Steen, and Martie Louise Verreynne. 2020. "Towards a Framework for Innovation in Retailing through Social Media." *Journal of Retailing and Consumer Services* 54:101772. DOI: 10.1016/J.JRETCONSER.2019.01.017.
- Tortorella, Guilherme Luz, Ricardo Giglio, and Desirée H. van Dun. 2019. "Industry 4.0 Adoption as a Moderator of the Impact of Lean Production Practices on Operational Performance Improvement." *International Journal of Operations and Production Management* 39:860–86. DOI: 10.1108/IJOPM-01-2019-0005.
- Tse, Caleb H., Chi Kin Bennett Yim, Eden Yin, Feng Wan, and Hao Jiao. 2021. "R&D Activities and Innovation Performance of MNE Subsidiaries: The Moderating Effects of Government Support and Entry Mode." *Technological Forecasting and Social Change* 166:120603. DOI: 10.1016/J.TECHFORE.2021.120603.
- Velu L., Manxhari M., Demiri V. & Jahaj L. (2017). The Influence of Leadership Styles on Employee's Performance. *Vadyba Journal of Management*, 31(2):59–69.
- Wang, Shiyong, Jiafu Wan, Di Li, and Chunhua Zhang. 2016. "Implementing Smart Factory of Industrie 4.0: An Outlook." DOI: 10.1155/2016/3159805.
- Zhang, Feng, and Lei Zhu. 2021. "Promoting Business Model Innovation through Social Media Strategic Capability: A Moderated Mediation Model." *European Management Journal*. DOI: 10.1016/J.EMJ.2021.02.003.