

## ANALYSIS OF THE ADOPTION OF DIGITAL MARKETING IN MSMEs IN THE ERA OF THE COVID-19 PANDEMIC

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### Article

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### Abstract

*Micro, Small, and Medium Enterprises (MSMEs) are the most numerous forms of business in Indonesia. This creates high competition among business actors. The conditions of the Covid-19 pandemic are increasing business competition with restrictions on community activities including restrictions towards business activities set by the government. Many business fields such as food, beverage, and creative industries are affected by this circumstance. MSME actors are trying to survive the business during a pandemic. Digital marketing is a form of a marketing effort by MSMEs so that they can still operate their business. The role of digital marketing is not only to market products, but also as a means of communicating with customers, disseminating information, and providing convenience for transactions. The purpose of this research is to analyze digital marketing adoption by MSMEs in the era of the Covid-19 pandemic in Indonesia. The approach applied in this research is the Technology Organization Environment (TOE) model with a quantitative research method. A total of 244 MSMEs is the respondents in this research. The results of this study show that the context of technology, organization, and environment has a positive influence on digital marketing adoption by MSMEs in the era of the Covid-19 pandemic.*

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## 1. Introduction

The Covid-19 outbreak has not only caused an impact on the health sector but also on many other sectors such as trade, education, business, transportation, and so on. Various activities have been temporarily suspended due to government advice not to travel to avoid the risk of direct physical contact with sufferers of Covid-19. This affects business actors who depend on interactions with consumers in running their businesses. The Micro, Small, and Medium Enterprises Industry (MSMEs) is experiencing obstacles due to restrictions on business activities. Operating hours are limited so that business actors run their business in a shorter time than usual. In addition, strict health protocols must also be implemented not only by businesses but also consumers. Controlling is carried out by the Civil Service Police Unit (Satpol PP) which conducts raids so that if there are business actors who violate these rules will receive sanctions.

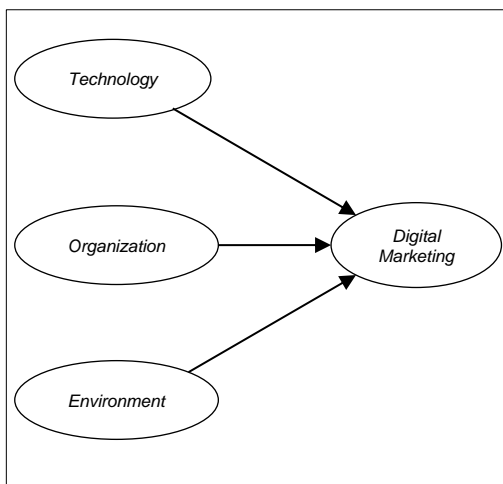
Restrictions on business operations resulted in decreased income from MSMEs. Conventional face-to-face business transactions must now be limited by new rules. 99% of business actors in Indonesia are MSMEs (Arianto, 2020). A total of approximately 163,713 MSMEs were affected by the Covid-19 pandemic. The MSME sector that has felt the impact of the pandemic includes the food and beverage industries, creative industries, as well as agrarian sector (Amri, 2020). So that to continue to run their business, MSMEs are starting to rely more on digital marketing to get around the decline in business turnover.

Digital marketing is an alternative for marketing MSME products with restrictions on community activities. The increasing use of the internet and smartphones also affects the ability of businesses and consumers to provide and access information. Information about MSME products can be disseminated by business actors through digital marketing. Direct communication between businesses and consumers, which was limited during the pandemic, can also be overcome with digital marketing as a communication intermediary. The application of technology and digital marketing can help increase turnover and MSME business practices. In addition, digital marketing is a means for

MSMEs to survive in an increasingly competitive business world, especially in the time of Covid-19 pandemic.

Peraturan Pemerintah Nomor 7 Tahun 2021 is a government regulation which defines and classifies enterprises as micro, small, or medium in Indonesia. Micro Enterprises are profitable businesses belonged to individuals and/or individual business subjects that fit the characteristics for Micro Enterprises according to Government Regulation. Small Business is a profitable economic commerce which stands independently and ran by a person or business subjects that are not subsidiaries or not branches of corporations that are belonged to, regulated, or become part of either directly or indirectly of Medium or Large Businesses in accordance with Government Regulation. Medium Enterprises are profitable economic ventures that stand alone, which are ran by a person or business subjects that are not subsidiaries or branches of corporations which are belonged to, regulated, or become part of either directly or indirectly with Small or Large Companies in accordance with Government Regulation (Pemerintah Indonesia, 2021).

Product marketing costs can be quite expensive and time consuming. Marketing using digital media is a marketing solution with minimal use of resources. Digital marketing is a marketing strategy developed by utilizing digital media. Types of digital media used to help businesses interact with consumers include websites, social media, applications, and other wireless media (Boonmalert et al., 2021). Information disseminated and accessed from digital marketing can reach consumers more quickly, broadly, and at lower costs. So that the demands of customer needs can be fulfilled more easily. MSMEs in Indonesia apply digital marketing as a technological innovation in businesses to continue to operate despite the limitations of a pandemic. Digital marketing tactics have become a major emphasis for companies, especially MSMEs, considering they interact efficiently with consumers and fulfill their necessities (Alqasa & Afaneh, 2022).



**Fig. 1.** TOE Model

Many studies have studied the circumstances that encourage the usage of technology. The Technology Acceptance Model (TAM) is believed to be the most widely used model for measuring the use of technology (Ayundyayasti & Ciptaningtias, 2022). Perceived ease of use and perceived usefulness are the main variables in TAM (Davis, 1989). However, many other factors can determine technology adoption. Research on the technology-organization-environment (TOE) model has indicated that TOE supports wide applications and able to justify adoption in many technological, industrial and national background (AlSharji et al., 2018).

This study uses the TOE model to analyze the significance of determinants on the implementation of digital marketing by MSMEs in Indonesia during the era of Covid-19 pandemic. The TOE model was proposed by Tornatzky and Fleisher to define the determinants which influence determinations of technological innovative in a business (Tornatzky & Fleischer, 1990). The TOE framework determines whether technological, organizational, and environmental aspects affect the process of new technology adoption and acceptance in a company.

A research of the social media implementation on SMEs by AlSharji is conducted in the United Arab Emirates using the TOE framework (AlSharji et al., 2018). The United Arab Emirates and Indonesia are developing countries in Asia. In this study, not only examines the use of social media as a means

of digital marketing, but also other media such as websites, applications, and instant messaging with the TOE model. This is because of social media adoption and delivery applications for MSMEs in the food, beverage, and creative industries has increased in Indonesia, especially since the Covid-19 outbreak appeared in Indonesia in 2020.

The adoption of information systems occurs due to various factors, one of which is technology. The technological context includes the technologies adopted by firms to enable innovative activities. Technology acts as a bridge between businesses and customers that can provide easy access to information and meet the needs of both parties. Access to technology is available through gadgets such as mobile devices, televisions, computers, system installations, also computerized and automated appliances. This kind of reinforcement was considered as an influential cause for corporations to utilize technology so as to be competitive (Samat et al., 2020). In this study, technology refers to perceived behavioral control, namely the adoption of usage shaped by the ability to use digital marketing in MSMEs. The three main factors considered in the context of technology in this study are perceived simplicity, perceived compatibility, and perceived value. Technological context has a substantial and reasonable impact on the adoption of new technologies (Awa et al., 2017).

Organization context is defined as the company's internal support that can encourage the acceptance of innovative actions. In a study on technology adoption in SMEs in the United Arab Emirates, organizational factor is all the aspects of the organization (consists of the total of staff members, productivity, management system) and its resources (including employees and their interrelation) (AlSharji et al., 2018). The organization in this study refers to MSMEs with business capital criteria of a maximum of IDR 10,000,000,000.00 besides land and or business buildings; or maximum sales proceeds of IDR 50,000,000,000.00 (Pemerintah Indonesia, 2021).

In this research, the organization context is measured based on the support of management or business owners, the number of employees, and the speed of operations. Top management has an

important part in the implementation of innovation, by determining how innovation appropriate with the company's general strategy, and supporting and compensating inventiveness. Small business managers have a role to play in ensuring that employees are inspired and encouraged to take part in making decisions that will help implement marketing through social media (Eze et al., 2021). Hence, it is important in establishing the suitable environment and maintaining resources to support the implementation of modern technologies (Awa et al., 2017).

Environment context is indicated as the surrounding in which companies do business and how companies are affected by the distinctive character of the industry where competition occurs, relationships with consumers and suppliers in obtaining external resources, and government principles (Hue, 2019). The environmental factors from this study are internal and external conditions that encourage the implementation of digital marketing by MSMEs.

One highly relevant factor is the intensity of competition, or the threat of unsuccessful competitive advantage. Competition arises from the increasing number of similar products offered in the market with various variations, prices, and qualities. The bigger the competition in the market, the bigger possibility of using technology (Rawash, 2021). Competitor pressure is presumably to influence a company's determination to implement technology and pressure from government organizations has a greater degree of influence on the choice of SMEs to accept technology because they are financially dependent on government and organizational support for the existence of SMEs (Kumar et al., 2019).

Pressure from the outside of the organization such as normative pressure and pressure to imitate other competitors can affect technology adoption. Normative pressure relates to the influence of policies, operational needs, strategic needs, and third parties that influence the use of digital marketing. Business actors intentionally observe and imitate other business actors to remain competitive, resulting in pressure to mirror other competitors (Awa et al., 2017). The existence of influences from the

business environment such as normative pressure and pressure to imitate competitors allows technology adoption. When the pressure is high, adoption is assumed to be faster.

In regards to the explanation above, the hypotheses developed in this research are:

H1: Technology context has a positive influence on the adoption of digital marketing by MSMEs.

H2: Organization context has a positive influence on the adoption of digital marketing by MSMEs.

H3: Environment context has a positive influence on the adoption of digital marketing by MSMEs.

## 2. Methods

This study applies a quantitative research method with primary data obtained from a questionnaire. The sampling for this research is using purposive sampling determined based on the considerations of MSMEs who already use digital marketing to be the respondents. The research respondents were MSMEs in the city of Semarang from various types of businesses. The type of business in this study is not limited only to the food and beverage business, but also various other creative businesses that meet the MSME criteria in PP Number 7 of 2021. The total number of respondents in this research is 244.

The question items contained in the questionnaire were prepared based on the theoretical model adopted from previous research by Awa (Awa et al., 2017) with modifications to suit the digital marketing technology applied by MSMEs. Measurements in this study were carried out using a Likert scale. The Likert scale is a scale used to measure respondent's view point and perceptions of a social phenomenon. The number 1 to 5 was used to imply the indicators as Strongly Disagree, Disagree, Neutral, Agree, and Strongly Agree.

The analysis method used in this research was validity and reliability tests to measure whether the questionnaire was valid or not and the consistency of the targets being measured. In addition, the analytical method that was carried

out later was the normality test to assess the distribution of research data.

**Table 1.** Validity Test Results

Variable	Indicator	R-value	Significance	Results
Technology	T1	0,583**	0,000	Valid
	T2	0,642**	0,000	Valid
	T3	0,598**	0,000	Valid
	T4	0,515**	0,000	Valid
	T5	0,616**	0,000	Valid
	T6	0,596**	0,000	Valid
	T7	0,601**	0,000	Valid
	T8	0,460**	0,000	Valid
	T9	0,451**	0,000	Valid
	T10	0,576**	0,000	Valid
	T11	0,580**	0,000	Valid
	T12	0,536**	0,000	Valid
Organization	O1	0,528**	0,000	Valid
	O2	0,634**	0,000	Valid
	O3	0,551**	0,000	Valid
	O4	0,617**	0,000	Valid
	O5	0,558**	0,000	Valid
	O6	0,594**	0,000	Valid
	O7	0,610**	0,000	Valid
	O8	0,653**	0,000	Valid
	O9	0,611**	0,000	Valid
	O10	0,529**	0,000	Valid
Environment	E1	0,523**	0,000	Valid
	E2	0,634**	0,000	Valid
	E3	0,631**	0,000	Valid
	E4	0,684**	0,000	Valid
	E5	0,572**	0,000	Valid
	E6	0,680**	0,000	Valid
	E7	0,532**	0,000	Valid
	E8	0,610**	0,000	Valid
Digital Marketing	D1	0,759**	0,000	Valid
	D2	0,665**	0,000	Valid
	D3	0,738**	0,000	Valid
	D4	0,707**	0,000	Valid
	D5	0,658**	0,000	Valid

The multicollinearity test is to test the correlation between the independent variables in the regression model, the heteroscedasticity test is to assess whether there were differences in the variance of the residuals for all observations in the linear regression model, and the F test is to test

whether all the independent variables included in the model have a joint effect on the dependent variable. In this study, the F test was used to prove whether the context of technology, organization, and environment simultaneously

had a positive influence on the adoption of digital marketing by MSMEs.

### 3. Results and Discussion

The validity test was used to measure whether the questionnaire was valid or invalid. In this study, the measurement of validity was carried out on each indicator of each of the existing variables. Data can be said to be valid if the significance value is  $< 0.05$ . Table 1 shows the results of the validity test.

To measure variables or constructs in the questionnaire indicators, reliability test is used as a test tool. A reliable questionnaire is shown by a consistent or stable answers over time. An acceptable construct or variable is proven if the Cronbach's Alpha ( $\alpha$ ) score  $> 0.7$  (Schrepp, 2020). The results of reliability testing for each variable are shown in Table 2. All variables measured in this study have a Cronbach's Alpha result above 0.7, so the reliability of the variables in this study is acceptable.

**Table 2.** Reliability Test Results

Variable	Cronbach's Alpha
Technology	0,787
Organization	0,784
Environment	0,757
Digital Marketing	0,742

**Table 3.** Normality Test Result

Test Type	Variable	Score
Kolmogorov-Smirnov	-	0,200
	Technology	1,723
Multicollinearity	Organization	2,284
	Environment	1,868
	Technology	0,838
Heteroscedasticity	Organization	0,177
	Environment	0,874

The normality test in this study was performed with the Kolmogorov-Smirnov test. Guidelines for decision-making on the Kolmogorov-Smirnov test, that is, if the significance value is  $> 0.05$ , it can be stated that the data has a normal distribution, and vice versa, if the significance value is  $< 0.05$ , it can be declared that the data is not distributed normally.

The results of the normality test in this study are shown in Table 3.

The result of the Kolmogorov-Smirnov test is 0.200, which means the significance score is above 0.05, so the data to be tested means normal. The results in Table 3 also show that there is no multicollinearity and heteroscedasticity in this study. This is indicated by the value of the variance inflating factor (VIF) for each variable having a value below 10 which indicates that there is no correlation with the independent variables in the research. The Glejser test results show a value of 0.838 for the Technology variable, a value of 0.177 for the Organization variable, and a value of 0.874 for the Environment variable so that these values are above the 0.05 significance. This means that there is no variance inequality from the residuals for all observations in the linear regression model or heteroscedasticity in the research conducted.

Hypothesis testing was performed based on the hypotheses that had been proposed in this study. Table 4 shows that the TOE model has an influence of 40.3% (0.403) on the use of digital marketing for MSMEs in the city of Semarang. This can be seen in the adjusted R square value which shows a value of 0.403 which means that the TOE model has a 40.3% influence on the adoption of digital marketing in MSMEs. The outcome of the F test in Table 4 shows that the model in this study is feasible to study. This can be seen in the significant value of the F test of 0.000, which is significant at an alpha of 0.050. This value indicates the TOE model can explain changes in digital marketing variables.

**Table 4.** Hypotheses Testing Results

Test Type	Score
Coefficient determination	0,403
F Test	0,000

**Table 5.** Results of Coefficient and Significance of Independent Variables

Variable	Coefficient	Significance
Technology	.096	0,006
Organization	.159	0,000
Environment	.165	0,000

The results of the hypotheses test show that the Technology, Organization, and Environment variables obtain a significant positive influence on the adoption of digital marketing in MSMEs. The results are presented in Table 5.

The significance value of the Technology variable is 0.006 which is significant at an alpha of 0.050 and a coefficient value of 0.096. This indicates that the higher the level of awareness of MSMEs regarding the uses and benefits of implementing technology in the form of digital marketing technology will encourage the application of digital marketing to MSMEs. The majority of MSMEs in the city of Semarang are aware of technological developments and are able to take advantage of it in running their businesses, especially during the pandemic era. Limited direct interaction between business actors and customers during the Covid-19 pandemic makes the use of technology as a way to overcome these limitations. The average age of the respondents is 29 years old which indicates the age of generation Y or Millennials. Generation Y is a generation that grew up with the rapid development of the internet so they are familiar with the benefit and advantages of the internet. Digital marketing makes interactions with customers more flexible and easier to use.

The Organization variable has a significant positive effect as seen in a significance value of 0.000 which is significant at an alpha of 0.050 and a coefficient value of 0.159. This indicates that MSME resources can encourage the application of digital marketing to these MSMEs. This is because the existence of MSME resources such as skills in using digital technology will bring benefits in the form of increased sales and promotion of MSME products through digital marketing technology. MSMEs' awareness of the benefits and the affordability of the resources needed encourages the adoption of digital marketing in their business. The use of digital marketing technology can increase the speed of business operations and affect business continuity during the Covid-19 pandemic. In addition, the cost to rent a shop and purchase business premises are being abandoned in favor

of online shops with more affordable capital such as training, skills development, experience, technology updates, as well as supporting facilities and infrastructure such as mobile devices and internet access. In the past, expensive rental costs were considered an obstacle to start a business, now using online platforms, rental costs are replaced with expenses to start an online store with less cost.

Table 5 also shows that the Environment variable has a significant positive effect as seen in the significance value of 0.000 which is significant at an alpha of 0.050 and a coefficient value of 0.165. This indicates that the corporate environment, such as industry characteristics, relationships with customers and suppliers, as well as government policies, are normative pressures that support the use of digital technology and have encouraged the application of digital marketing to MSMEs. This is influenced by 99% of MSMEs in the city of Semarang who were respondents in this study already using social media platforms in their businesses such as Facebook, Instagram, Twitter, WhatsApp, Go Food, Grab Food, Shopee Food, and others. This platform is used by MSMEs in the city of Semarang in running their business due to various reasons such as environmental conditions and competitors who have used the platform. The existence of competition, especially in similar business fields, increases the pressure to imitate competitors so that it can become a business advantage. In addition, many customers can be more easily reached through the use of social media for digital marketing.

#### **4. Conclusion**

The increasing use of the internet has triggered many innovations in technology especially digital platforms for marketing purposes to operate the business. Digital marketing is a way for MSME actors to market their products amidst intense and competitive trading. Many factors could influence the use of digital marketing technology for MSMEs. This research has proven that technology, organization, and environment context positively influence the adoption of digital

marketing by MSMEs during the pandemic Covid-19 era.

For future research, it is possible to study other factors influencing digital marketing in MSME as technology will continue to develop. Furthermore, larger number of respondents would reach a bigger scope nationally or internationally regarding this research.

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