

## **Planning Model and Questionnaire for Measuring MSME Performance through (TOE) Technology Organization Environment**

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### **Abstract**

MSMEs (Micro, Small and Medium Enterprises) as one of the factors driving the economy in Indonesia are experiencing the Covid-19 pandemic crisis which has led to the activities of the Indonesian people. This will indirectly affect the activities of human life, including the buying and selling process. Buying and selling activities that are usually carried out face-to-face can not be carried out normally due to activities from the government so that it indirectly affects the sales results of business actors, including MSME actors. During this pandemic, there was a very significant decline and caused deep anxiety for MSME actors such as payment of employee salaries, daily operational costs, and others. The existence of this phenomenon or incident has resulted in MSMEs having to rack their brains in order to survive in the midst of the ongoing crisis. In order to continue to survive, MSMEs use social media to promote sales, or make sales online with social media. The purpose of this study was to determine the effect of social media adoption on the performance of MSMEs. This research method is carried out in several stages which include problems, literature review about the research model, research design, making instruments that produce questionnaires. The result of this study is produces a research model related to the adoption of social media on the performance of MSMEs which is supported by the dependent variable of the Technology-Organization-Environment (TOE) framework, as well as a questionnaire.

**Keywords:** UMKM, Social Media, Performance

### **INTRODUCTION**

Micro, Small and Medium Enterprises (MSMEs) have a great influence in Indonesia. This is known from MSMEs which have absorbed 96.92% of the total Indonesian workforce and contributed to GDP of 60.51% (Kemenkopukm, 2019). This is supported by (Handriani, 2011) which states that small businesses in Indonesia have a role as a major player in economic activity in providing employment.

But in 2020, there was a pandemic caused by COVID-19. The existence of Covid-19 has resulted in restrictions on people's activities outside the home. This causes MSMEs to need to innovate in the field of technology so that business actors can continue to survive in the midst of the crisis. A survey conducted by (Sea Insights, 2020) on 2200 MSMEs found that MSMEs are starting to switch to digital media, and one of the highest or most widely used digital media is social media with 54%. From the data that has been disclosed earlier, it can be seen that the intention of business actors to use social media is very high (Affandi et al., 2020).

With the development of information technology, social media provides benefits to MSMEs or business actors in order to increase sales, expand market share and assist in decision making (Priambada, 2015). Meanwhile, in research conducted by (Rienda et al., 2020) it is known that the use of social media can make the company's performance higher. The research conducted by (Ainin et al., 2015) also proves that there is a significant influence between social media adoption and the performance of MSMEs. Unfortunately, in Indonesia, there are still few research models that develop factors to determine how the influence of the use of social media on the performance of SMEs.

The use, this study aims to produce a research model that can review the relationship of the factors that influence the adoption of social media on the performance of MSMEs (Siagian & Indra, 2019).

### **LITERATURE REVIEW**



**Technology Organization Environment (TOE)**

Technology Organization Environment (TOE) was originally developed by (Tornatzky et al., 1990) who developed a framework based on technology context, organizational context, and environmental context. In short, technology deals with the external and internal of a particular company. Related to the organizational context, it relates to the characteristics and resources of the company, while for The environment relates to the parties around the company such as, competitors, suppliers, or also the government (Rahayu & Day, 2015).

The context of the TOE framework according to (Dewi et al., 2018) can be seen in table 1 below:

Table 1. Context and Definition of TOE

No	Context	Definition
1	Technology	Technology Focuses on the Structure, Quality, and Technological, Characteristics, of an Organization than can influence, innovation adoption.
2	Organization	Organization Includes Several Attributes Of The Organization Which Include Structure, Object, Size, Quality Of Resources, and decision-making mechanisms that can Facilitate Adoption, Of New Innovations.
3	Environment	The environment represents all the external factors that are part of the organization such as competitors, suppliers, government, customers, or also the community, that can determine what innovation, is needed, and its ability to provide resources that facilitate innovation, and its ability to implement the innovation.

**Diffusion Of Innovations (DOI)**

The theory of Diffusion of Innovations (DOI) is a process in the spread of innovation in an organization among individuals that determines success in adoption for various purposes (Purwantini & Anisa, 2018). Research conducted by (Odoom et al., 2017) stated that As a variety of needs in various contexts, the use of social media in the context of technological innovation requires the dissemination and alignment of corporate activities.

This study will use DOI as the basis for supporting the context of technology, organization, and environment. TOE is also compatible with Diffusion of Innovation (DOI) by Rogers (1995) focusing on organization, and technology characteristics in identifying new technology diffusion (Ghobakhloo et al., 2011).

**METHOD**

In this section, we will discuss the research procedures as shown in Figure 1 below, to solve the problems that have been described in the introduction.

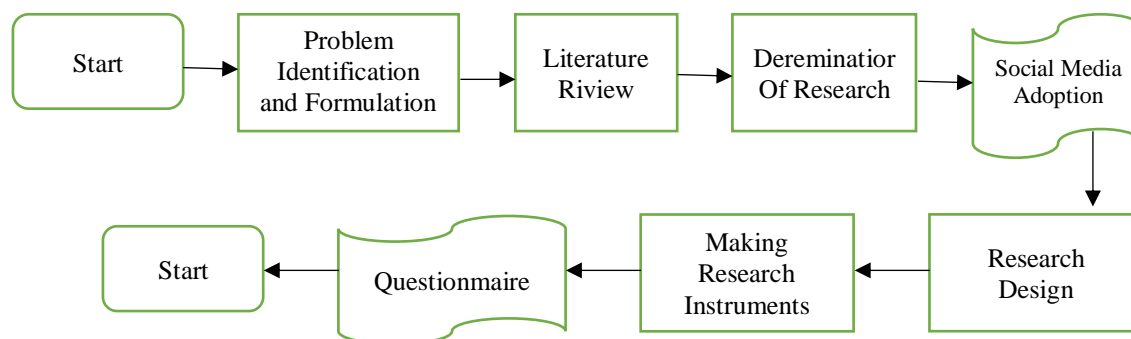


Figure 1. Research procedure

This research will answer about a model that can be used to determine the factors that influence the use of social media on the performance of SMEs. The first stage is done by identifying the problem and formulating the problem that occurs. After that, a review of previous studies related to social media adoption and MSME performance was



carried out and several other supporting models. Then after reviewing previous research, the researcher decided to use the TOE framework that had been developed with the variables of social media adoption and MSME performance. The TOE is supported by variables from DOI. Furthermore, the researchers made the preparation of research instruments that would produce a questionnaire that could be used for further research.

### RESULT and DISCUSSIONS

This study aims to produce a research model as shown in Figure 2, which relates to the influence of social media adoption on the performance of MSMEs, the factors used are based on the Technology Organization Environment (TOE). This study will use a construct from (Qalati et al., 2020) in which each variable is supported by a variable from the Diffusion of Innovation Theory.

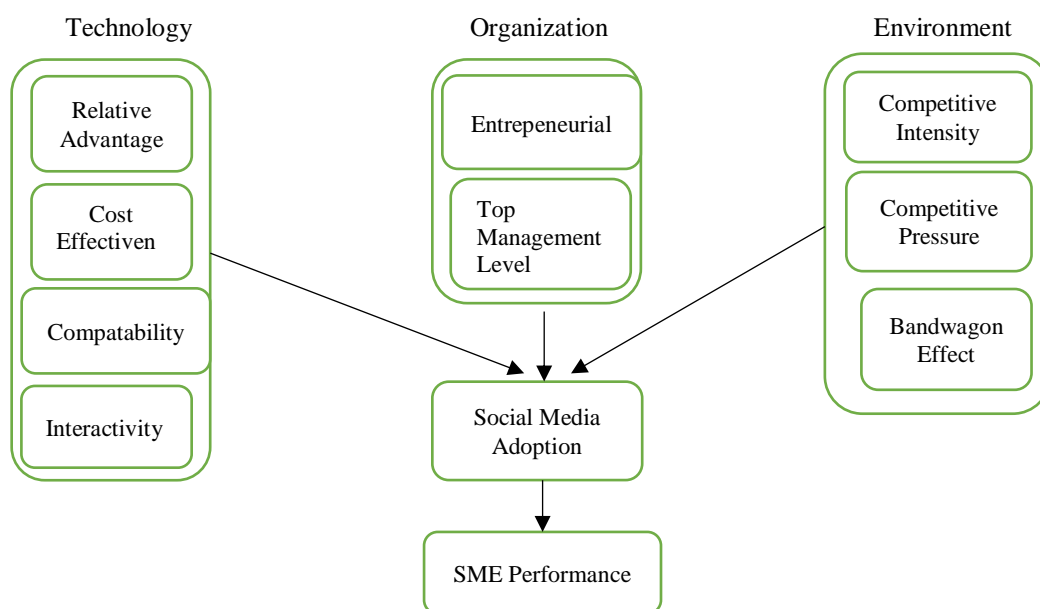


Figure 2. Measurement Model

#### 1. Technology

In the context of the technology used by (Qalati et al., 2020) including cost effectiveness, interactivity, compatibility, visibility, and relative advantage. While this technology will be developed by reducing one supporting variable, namely visibility, this is because visibility is still limited to technology variables that have a significant relationship with social media adoption. The results of researchers who reviewed several studies from (Ahmad et al., 2019; Ainin et al., 2015; Odoom et al., 2017; Purwantini & Anisa, 2018) that the variables that are often used are cost effectiveness, interactivity, compatibility, and relative advantage so that researchers will use these variables. The following are some explanations of each variable that will be used:

- a. Cost Effectiveness, shows that cost effectiveness is an important variable in determining the adoption of new technologies (Chong & Chan, 2012). Where the new technology used in this case is the adoption of social media, while cost-effectiveness itself has low costs, low barriers to participation do not require high technology mastery in its use (Derham et al., 2011).
- b. Interactivity, defined as interactivity as the level of interaction between two or more parties in the communication media and the ability to respond to the communicant (Liu & Shrum, 2002). The “social” context of social media emphasizes interaction at the individual/interpersonal level or the collective intergroup level (Kietzmann et al., 2012) which often requires some level of responsiveness especially from the company.
- c. Compatibility has an understanding as whether the innovation has consistency with the technology that has been used previously by the company. According to (Chong & Chan, 2012) compatibility is defined as the degree to which an innovation matches the values, practices and needs of potential adopters. Previous research has shown that MSMEs tend to consider adopting and using social media based on the compatibility of the company's values and

goals (Ainin et al., 2015)

d. Relative advantage is defined as the extent to which a potential adopter can perceive an innovation that is better than before (Ahmad et al., 2019).

Based on the variables described in the previous section, this is used because there is some empirical evidence that cost effectiveness, interactivity, compatibility, visibility, and relative advantage have a significant influence on social media adoption (Ahmad et al., 2019; Ainin et al., 2015; Odoom et al., 2017; Tajudeen et al., 2018).

## 2. Organization

In the context of this organization, it will be used (Qalati et al., 2020; Tajudeen et al., 2018) where the variables in this organization are top management and entrepreneurial orientation. Here is an explanation of supporting variables in context

organizations:

a. Top management, is important in building a supportive environment and providing sufficient resources for the adoption of new technologies (Lin, 2014). The literature on the assimilation of innovations mostly views top management as the institution responsible for changing norms, values, and culture in an organization; in turn, this allows other member organizations to adapt to new technological artifacts.

b. Entrepreneurial orientation is defined as the methods, practices, and decision-making styles used by managers to act entrepreneurially (Tajudeen et al., 2018). By adding an entrepreneurial orientation, it has contributed to the growth of the company's business performance.

Based on the variables described in the previous section, this is used because there is some evidence that organizations with top management supporting variables and entrepreneurial orientation have a significant influence on social media adoption (Qalati et al., 2020; Tajudeen et al., 2018).

## 3. Environment

In the context of Environment, it is used by (Ahmad et al., 2019; Qalati et al., 2020). The variables in the environment are competitive intensity, bandwagon effect, and competitive pressure. The following is an explanation of the supporting variables in the context of the Environment:

a. Competitive intensity, defined as the pressure that arises as a result of the loss of competitive advantage. As for the understanding of (Dias Canedo et al., 2020) which states that this occurs when there are several or many competitors but has little chance for the business to grow.

b. Bandwagon Effect, is a psychological phenomenon where companies adopt an innovation because competitors or other business people do the same, not because of the company's strategy (Jin & Hurd, 2018).

c. Competitive Pressure, competitive pressure describes the level of competition in an industry (Lertwongsatien & Wongpinunwatana, 2003). This occurs possibly due to the influence of globalization factors, technological developments, and the rapid spread of technology (Derham et al., 2011).

The variables described in the previous section are used because there is some evidence that the environmental context with supporting variables, namely competitive intensity, bandwagon effect, and competitive pressure, has a significant influence on social media adoption (Ahmad et al., 2019; Qalati et al., 2020).

## 4. Social Media Adoption and SMEs Performance

According to Sharif et al (2017) MSME performance refers to the actual benefits MSMEs get from social media applications, both in terms of financial and non-financial performance. Meanwhile, social media adoption itself explains that social media is a general term used to describe several website-based platforms developed for individuals and communities to share information and opinions and to create content (Kietzmann et al., 2012).

In this case, the relationship between social media adoption and MSME performance has been widely discussed in several previous studies. As the statement from research findings (Schaupp and Bélanger, 2014) shows empirical evidence of the value of Facebook social media that has an impact on MSME performance including customer service, sales, marketing and internal operations. (Schaupp & Bélanger, 2014). In this all-digital era, not only Facebook has become social media, but there are also Instagram, Twitter, WhatsApp and others that can be used for social media adoption.

Social media adoption has a positive impact on performance, because social media is very effective in helping individuals/organizations communicate with relatives, co-workers, and consumers (Wong, 2012). Several previous studies say that there is a positive influence between social media adoption and MSME performance (Ahmad et al.,



2019; Ainin et al., 2015; Odoom et al., 2017; Purwantini & Anisa, 2018; Qalati et al., 2020 ).

**5. Research Instruments**

In this section, questions that can be used by subsequent research will be presented to measure the effect of social media adoption on the performance of MSMEs. This statement is based on previous research (Ahmad et al., 2019; Odoom et al., 2017; Qalati et al., 2020; Tajudeen et al., 2018). The following is table.3 which shows the items of the questions.

Table2. Question Items

<i>Context</i>	<i>Question</i>
Technology	
<i>Relative Advatage</i>	Social media enhances company image
	Social media allows us to increase our productivity
	Social media allows us to achieve certain tasks faster
<i>Cost effect-tiveeness</i>	We adopt social media to reduce costs marketing communication
	Save costs associated with time and effort in marketing, branding, and customer service
	More cost-effective for us than traditional media
<i>Compability</i>	Compatible with our business processes and operations
	It's easy to integrate social media with your existing strategy
	Social media adoption is compatible with our business processes and operations
<i>interactivity</i>	Social media provides features for interactive communication with our customers.
	Social media contains components to help the interaction between it and consumers.
	Social media makes it possible to engage customers through mentions and replies with controlled message content
Organization	
<i>Top Management</i>	Top management considers social media adoption to be important for the organization
	Top management effectively communicates its support for the use of social media
<i>Entrepreneurial orientation</i>	My business is often trying new ideas
	My attempt to find new ways to do things
	My efforts are creative in the method of operation
Environment	
<i>Competitive intensity</i>	easy for our customers to switch to the company others for similar services/products without much difficulty
	There is competition among companies in the industry, our company operates intensely
<i>Competitive pressure</i>	Social media will enable a stronger company's competitive advantage



	Social media will enable companies to generate higher profit
	Social media will increase the company's ability to outperform the competition
Bandwagon effect	Social media is a popular application; therefore our company wants
	We follow others in adopting social media
	We chose to adopt social media because many other companies are already using it
Social media adoption	
To maintain relationships with clients and customers	
To communicate the company brand online	
Receive feedback	
Answer questions from customers and respond	
MSME Performance	
Increase in sales transactions	
Increasing number of customers	
Improved brand visibility	
Service quality improvement	

### CONCLUSION

From the explanation in the previous section, it can be concluded that this research can produce a research model to measure the adoption of social media on the performance of MSMEs by utilizing context of technology, organization, and environment. This research also produces a questionnaire that can be used in the previous section. In the context of this technology, the supporting variables include cost effectiveness, interactivity, compatibility, and relative advantage. For the organizational context, supporting variables can be used, namely top management, and entrepreneurial orientation, and finally the environmental context can be used for supporting variables, including competitive intensity, bandwagon effect, and competitive pressure. The results of the previous model formation, then made a questionnaire instrument containing questions referring to the variables mentioned earlier in the measurement model that was formed.

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