

Technological Context Toward Social Media Adoption: Perceived Ease of Use as Mediating Variable

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ABSTRACT

Currently MSMEs are one of the contributors to the country's economic development, not a few MSMEs use technology as a marketing tools because they feel the ease with the existence of technology, one of which is the use of social media. This paper aims to determine the mediating role of perceived ease of use on the influence of technological context (relative advantage, complexity and compatibility) toward social media adoption in SMEs. Data were collected by conducting an online questionnaire to 72 respondents that joined in Tuka Tuku Purbalingga and analyzed using PLS. The result of this research show that complexity and compatibility directly affect social media adoption, complexity directly affects perceived ease of use, and perceived ease of use indirectly affect complexity through social media adoption.

Keywords: Relative Advantages, Complexity, Compatibility, Social Media Adoption, Perceived Ease of Use.

1. Introduction

Micro, Small, Medium Enterprises Becomes important for the country because has give significant contribution to development the country 's economy. Based on information Ministry Cooperatives and Small and Medium Enterprises March 2021, the number of SMEs in Indonesia reached 64.2 million with contribution to gross domestic product (GDP) of 61.07% or Rp 8,573.89 trillion. For could endure and carry on developing MSMEs must adapt self with environment, because change environment business external especially change technology. Social media adoption is a marketing strategy for survive and thrive for MSMEs. MSME actors are still not yet many take advantage of means Technology Information (IT) for support his business that is for marketing and sales online via the internet or more known with *Electronic Commerce (E-Commerce)*, even though one of the key success of SMEs is Availability of a broad and clear market for product business (Tajuddin and Manan, 2017). Like research conducted by Maan Ali et al (2021), Adel Al Sharji et al (2017) *technological context* is not take effect significant to *social media adoption*, meanwhile research conducted by (Qalati, et al 2020); (Ali Abassi et al, 200); (Ilona, Desi et al, 2022); (Trawnih et al, 2021) *technological context* has an effect significant to *social media adoption*.

Study this use technology-organizational-environmental (TOE) paradigm for test influencing factors adoption social media marketing by SMEs. The advantages of the TOE model are in ability adapt it in predict level adoption of ICT by businesses. Context technology considered have influence big to MSME IT adoption including social media (Ramdani, Chevers , & Williams, 2013). Context technology include, excellence relative, complexity, and compatibility (AlBar&Hoque , 2019). Dimension technology used here is relative advantages, complexity and compatibility, three dimensions the chosen because still there is inconsistency results to adoption that social media alone. So that destination from study this is for test effect from third dimensions the name through variable *perceived ease of use*.

A number of studies find effect positive from relative advantage over adoption umkm social media by Albar&Hoque (2019) and Ahani, Rahim & Nilashi (2017). Different with results study from Ahmad, Bakar (2019) found that relative advantage not have significant relationship with adoption social media. Complexity impact positive to adoption social media Ahani, Rahim & Nilashi (2017) and Religia et al (2021), depart behind with results study from Low, Chen & Wu (2011) and Chong & Olesen (2017) found that complexity negative impact on adoption social media. Studies conducted by Ramdani et al (2013) and Ahani et al (2017) found that that compatibility take effect positive to adoption social media, while results a study conducted by Albar&Hoque (2019) did not find significant relationship Among compatibility with adoption social media. Venkatesh, Morris, Davis (2003) argue bring convenience perceived use is the most significant predictor from adoption social media, convenience use found be one determinant main adoption all social media Step adoption (Eze & Bello, 2019). Study this expected could contribute with study influence third dimensions to adoption social media with *perceived ease of use* as mediation.

2. Literature Review

2.1 TOE

Framework TOE work was developed by Tornatzky (1990). This thing recognized useful for analyze adoption technology by organizations on three level-technology, organization, and environment. The TOE model classifies technology, organization and environment as three drivers affecting SMEs (regarding social media adoption and its impact to SMEs performance). According to Baker (2012), this framework especially focus on adoption and implementation various product or service IT related from lens various perspective; perspective technology, organization and environment. Context technology describe technology whatever the organization uses or available and known potential useful, but not yet used (Zhu and Kraemer, 2016).

2.1.1 Relative advantage

Relative advantage defined as to what extent an innovation considered more superior than the idea it replaces or could serve as added features score product or service good from corner look customer nor company. Relative benefits from adopt social media tagging on SMEs can characterized as perceived benefits from adoption. (Roger, 2010). It shows profit or possible loss obtained company with accept or reject technology (AlBar&Hoque, 2019).

2.1.2 Complexity

Complexity interpreted as something condition where level adoption innovation considered relatively difficult for used, so that required knowledge technical about e-commerce for could

adopt (CE Ocloo et al, 2018). Chong and Olesen (2017) define complexity as the extent of innovation technology new difficult used. Perception about complexity use technology information usually linked with denial users on social websites who become forerunner will e-commerce adoption (Ali et al., 2015)

2.1.3 Compatibility

Compatibility defined as "to what extent an innovation considered consistent with existing values, past experience, and potential _ adopter needs" (Rogers, 2010). Premkumar (2003) claims that availability is one factor most important influencing ICT adoption by SMEs. Compatibility related with function technology in profession user, so compatibility Becomes factor important in adoption and use technology information, deep Thing this is e-commerce (S. Gono et al, 2016).

2.2 Perceived ease of use

Perception convenience use defined as "to what extent a person believes that use system certain will free from effort" (Davis, 1989). *Perceived Ease of Use* could define as how far is the business could with easy use technology new. Effort in context this could refers to investment monetary, time training employees, barriers transition technology and cost maintenance (Yu & Tao, 2009).

2.3 Social Media Adoption

Adopt social media is a marketing strategy for permanent survive and thrive for effort small and medium. Social media refers to the use of bait come back time real, exchange content created user and build community consumer for support business processes (Constantinides E, Fountain SJ 2008). (Bernoff J, Li 2008) argues that adoption of social media by organizations business could increase operation business, support customers, research and development, and sales and marketing.

2.4 Development Hypothesis

2.4.1 The Relationship of relative advantage and adoption social media

Chong and Olesen (2017) stated that superiority relatively by consistent influence adoption innovation. Chandra and Kumar (2018) explain role factor superiority relatively technology in influence adoption of augmented reality in organization for e-commerce purposes. Organization will adopt innovation technology if could bring benefit for organization good in performance organization nor by economics (Nedbal & Stieninger, 2014; Oliveira et al., 2014).

H1: relative advantage has positive effect on social media adoption.

2.4.2 The Relationship of complexity and adoption social media

Zhai (2010), Wu, and Chuang (2009) show that complexity influence social media adoption. Porter (2012) shows that individual with belief in ability excellent performance will easy to use technology new based on the experience he has. El-Gohary (2012) also concludes that complexity influence decision adoption social media marketing.

H2: complexity has positive effect on social media adoption.

2.4.3 The Relationship of compatibility and adoption social media

El-Gohary (2012) shows that compatibility also makes it easier for SMEs to adopt tool digital marketing. Ghobakhloo et al. (2011) found that compatibility influence ability organization for develop system business them.

H3: compatibility has positive effect on social media adoption.

2.4.4 The Relationship of relative advantage, complexity, compatibility and perceived ease of use

The technological features in AI-based technology refer to the suitability of the technology, the ease of use, its compatibility with the existing technology, and its functional advantages. The selection or adoption of a new technology by an organisation requires the consideration of its advantages or functions, as compared to the existing technology. According to the theory of innovation diffusion by Rogers, it was indicated that the introduction of new or innovative technology by an organisation should coincide with the values of the company, the demand for new technology, and the experience of potential users (Rogers,2010).

H4 : *relative advantage* has positive effect on *perceived ease of use*.

H5 : *complexity* has positive effect on *perceived ease of use*.

H6 : *compatibility* has positive effect on *perceived ease of use*.

2.4.5 The Relationship of relative advantages, complexity, compatibility and *perceived ease of use*

Research conducted by Ali Trawnih et al (2021) shows that: that implementation social media direct influenced by three factor that is factor environment *perceived ease of use* and *perceived usefulness*, results from study the identify that context technology relevant for explain how influence implementation social media with *perceived ease of use* and *perceived usefulness* as a mediator.

H7: *perceived ease of use* mediates relative advantage to adoption social media.

H8: *perceived ease of use* mediates complexity to adoption social media.

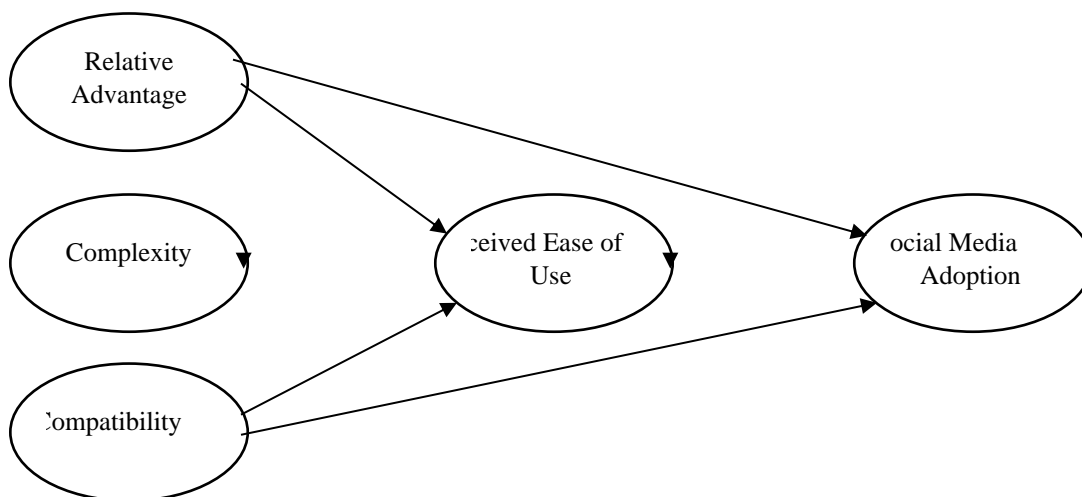
H9: *perceived ease of use* mediates compatibility to adoption social media.

2.4.6 The Relationship of *perceived ease of use* and adoption social media

Ali Trawnih et al (2021) showed that *perceived ease of use* has an effect positive significant to adoption social media, the same results were also carried out by (Blucky & Harandi, 2017; Akgi,, 2018; Ahmad et al, 2018; Matikiti et al, 2018; Nofal et al, 2020).

H10: *perceived ease of use* has a positive effect to adoption social media.

The following is an explanation of how the hypothesis developed.



3. Research Methodology

3.1 Population and Sample

The Population used in this research is SMEs who used social media to promoting their product. The size of the population cannot be known with certainty. Thus, the sample size is SMEs who joined as member of “Tuka Tuku” 72 respondent is obtained. The sampling technique used in this research is the purposive sampling technique, which is a technique to determine the sample using specific consideration (Sugiyono,2016). The consideration in this sample are SMEs who used social media as a primary tools to promote their product and communicate with customers.

3.2 Data Analysis Tool

This research consists of 3 independent variable, 1 mediating variable, and 1 dependent variable. Measurement of variables using a 5-point Likert scale shows point 1 as strongly disagree to point 5, which indicates strongly agree. The analytical tool in this study uses mediation analysis with the PLS application that tests structural equations based on variance. PLS can simultaneously test the measurement model and the structural model (Ghozali, 2012). The measurement model is used to test the validity and reliability, while the structural model is used to test causality or hypotheses with a predictive model.

4. Results

4.1 General Description of Respondents

This research survey was conducted on 72 respondents who have participated in Tuka Tuku in 2022. Table 1 shows the general decription of respondents based on gender, and the kind of product. It is know that 72 respondents in this study consisting of 57% female and 43% male. Based on the kind of product mostly 79% products is food and 21% is a craft.

Table 1. General Description of respondents

Gender	Frequency	Percentage
Female	41	57%
Male	31	43%
Total	72	100%
Kind of product	Frequency	Percentage
Foods	57	79%
Craft	15	21%
Total	72	100%

Based on table 1, most respondents are female with a presentation of 57% than male 43%. And mostly the product is food, the other product is craft.

4.2 Outer Model Evaluation

4.2.1 Convergent Validity

Table 2. Convergent Validity Analysis Results

No	Indicator	Loading	Cut of Value	Explanation
1	RA.1	0.730	0.50	Valid
2	RA.2	0.754	0.50	Valid
3	RA.3	0.796	0.50	Valid
4	RA.4	0.634	0.50	Valid
5	RA.5	0.695	0.50	Valid
6	RA.6	0.767	0.50	Valid
7	CX.1	0.783	0.50	Valid
8	CX.2	0.757	0.50	Valid
9	CX.3	0.735	0.50	Valid
10	CX.4	0.797	0.50	Valid
11	CX.5	0.639	0.50	Valid
12	CB.1	0.673	0.50	Valid
13	CB.2	0.655	0.50	Valid
14	CB.3	0.765	0.50	Valid
15	CB.4	0.778	0.50	Valid
16	CB.5	0.846	0.50	Valid
17	SMA.1	0.756	0.50	Valid
18	SMA.2	0.823	0.50	Valid
19	SMA.3	0.892	0.50	Valid
20	SMA.4	0.802	0.50	Valid
21	SMA.5	0.831	0.50	Valid
22	PEOU.1	0.771	0.50	Valid
23	PEOU.2	0.837	0.50	Valid
24	PEOU.3	0.815	0.50	Valid
25	PEOU.4	0.729	0.50	Valid

Convergent validity is used to see the status of various indicators used to measure research whether variables are included in the valid category or not. The indicator is declared valid if the Loading value is greater than 0.7. But according to Ghazali (2012), the Loading value 0.5-0.6 is still acceptable. This study refers to Ghazali's opinion, so the cut of value used is 0.5-0.6. Based on table 2, all indicators have been declared valid. The overall loading value exceeds the minimum limit, the cut of value is 0.50. Thus, it can be processed to the following analysis process.

4.2.1 Discriminant Validity

Discriminant validity is part of the measurement model to see the validity of a model. In this study, the method used to assess discriminant validity is by comparing the square root value of the Average Variance Extracted for each construct with the correlation between the constructs and other constructs. Ghazali (2015) states that the model has sufficient discriminant validity if the AVE root of each construct is greater than the correlation between constructs. The results of the analysis for the first stage of discriminant validity are presented in table 3.

Table 3. Result Of The Discriminant Validity

Variable	CB	CX	PEOU	RA	SMA
CB	0.747				
CX	0.791	0.744			
PEOU	0.658	0.730	0.789		
RA	0.539	0.551	0.424	0.731	
SMA	0.749	0.645	0.897	0.504	0.822

The discriminant validity results show that the AVE root value for all variables is greater than the correlation value between constructs. Thus, it has fulfilled the requirements and can be processed to the next stage.

4.2.1 Composite Reliability and Cronbach's Alpha

Composite Reliability and Cronbach Alpha are used to see the reliability of a construct. A construct is considered reliable if it has a composite reliability value and a Cronbach Alpha greater than 0.70. The results of the analysis of composite reliability and Cronbach Alpha are presented in table 4.

Tabel 4. Result analysis of the Composite Reliability and Cronbach Alpha

Variable	Cronbach's Alpha	Composite Reliability	Cut of Value	Explanation
CB	0.862	0.860	0.700	Reliable
CX	0.861	0.861	0.700	Reliable
PEOU	0.868	0.868	0.700	Reliable
RA	0.873	0.869	0.700	Reliable
SMA	0.912	0.912	0.700	Reliable

The analysis results in table 4 are the data obtained in full with Cronbach's Alpha value greater than 0.700 for all variables. Thus, it is accepted that the variables are stated reliable.

4.3 Inner Model Evaluation

The inner model describes the effect between variables. The evaluation of the inner model is done by looking at the value of the R square. The results of the R Square analysis can be seen in table 5.

Table 5. The results of the inner model evaluation analysis.

Variable	R square	Rule of Thumb	Conclusion
PEOU	0.550	0.67, 0.33, 0.19 (indicates strong, moderate, weak models (Chin,1998))	Moderate
SMA	0.892		Strong

Based on table 5, the result of the R square for the perceived ease of use variable is 0.559. In the variable model, perceived ease of use is affected by the relative advantage, complexity and compatibility. It shows that relative advantage, complexity and compatibility affects perceived ease of use by 55.0% with an R square value of less than 0.67. It concluded that the model is in the moderate category. Based on table 5, the result of R square for the social media adoption variable is 0.892. In the variable model, social media adoption is affected by relative advantage, complexity and compatibility, perceived ease of use. It shows that social media adoption is affected

by relative advantage, complexity and compatibility, perceived ease of use by 89.2%, with an R square value of more than 0.67. Hence, the model is in the strong category.

4.4 Hypothesis Testing

Hypothesis testing is used to see the significance of the independent variable on the dependent variable. The independent variable is stated influential if the t statistic has a value greater than 1.96 and the p-value or significance is below alpha 0.05. The results of the t-test analysis and significance can be seen in table 6.

Table 6. Direct Effect Hypothesis Test

Causality between variables (direct effect)	Coefficient	t-value	p-value	Cut of value	Explanation
RA -> SMA	0.124	1.947	0.052	0.05	H ₁ rejected
CX -> SMA	-0.371	3.778	0.000	0.05	H ₂ accepted
CB -> SMA	0.427	3.119	0.002	0.05	H ₃ accepted
RA -> PEOU	0.000	0.002	0.999	0.05	H ₄ rejected
CX -> PEOU	0.561	3.805	0.000	0.05	H ₅ accepted
CB -> PEOU	0.214	1.697	0.090	0.05	H ₆ rejected
PEOU -> SMA	0.834	11.088	0.000	0.05	H ₇ accepted

Based on table 6, the results of testing the direct influence between variables. In the relative advantage on social media adoption and relative advantage, compatibility on perceived ease of use t-count is less than 1.96 and p-value more than 0.05. For the other results are in line with the expectation and are accepted.

4.5 Mediation Effect Hypothesis Testing

The mediating effect shows the relationship between the independent and dependent variables through the connecting variable or mediation. The effect of the variable on the dependent variable does not occur directly but through a transformation process represented by the mediating variable (Baron and Kenney, 1986). Table 7 below shows the results of calculating the mediating effect of perceived ease of use variables on the relationship between relative advantage, complexity, compatibility and social media adoption.

Table 7. Mediation effect hypothesis test

Causality between variables (direct effect)	Coefficient	t-value	p-value	Cut of value	Explanation
RA -> PEOU -> SMA	-0.000	0.002	0.999	0.05	H ₈ rejected
CX -> PEOU -> SMA	0.468	3.338	0.001	0.05	H ₉ accepted
CB -> PEOU -> SMA	0.178	1.722	0.086	0.05	H ₁₀ rejected

Based on table 7, it is found that the p-value of the effect of relative advantage on social media adoption through perceived ease of use is 0.999 or bigger than 0.05 thus fourth hypothesis is rejected, and then the p-value for compatibility on social media adoption through perceived ease of use is 0.086 which is bigger than 0.05 so the sixth hypothesis is rejected. Perceived ease of use

mediates complexity toward social media adoption because p-value is 0.001 which is less than 0.05 so fifth hypothesis is accepted.

5. Discussion

The findings of this research indicate for the technological context is relevant to explaining and how it affects the implementation of social media by way of the PEOU as mediators. However, the technological contexts consisting of complexity, compatibility and relative advantage factors that had the highest positive factor loading on social media adoption t-value = (3.778), sig < 0.05). This could be interpreted as SMEs believe that adopting social media has many benefits and would enhance the performance of their online businesses. Previous research such as that of Tripopsakul (2018) and Salamzadeh and Tajpour (2021), conducted in the same area, has confirmed this finding. However, a study conducted by Ahmad et al. (2018) confirmed that relative advantage factor are not significant concerning the implementation of social media.

The final factor directly affects social media adoption is the perceived ease of use factor. The results revealed that sufficient knowledge and skills are essential to implement social media in SMEs. However, previous research results such as that of (Biucky & Harandi, 2017; Akgül, 2018; Ahmed et al., 2018; Matikiti et al., 2018; Nofal et al., 2020) conducted in the same area, and verified with this finding. In contrast, Gavino et al. (2019) discovered that perceived ease of use has little impact on social media implementation.

6. Limitation and Future Research

This study mostly employed a quantitative methodology and used an online survey to collect data. Thus, the requirement for qualitative data is included in suggestions for future study. A deeper grasp of the study's findings and a deeper knowledge of how social media usage affects SMEs could both come from interviewing the SMEs. A portion of TAM and TOE were employed in the study, but other components that would have been modified to understand the adoption of social media were left out. Future research should take into account the incorporation of these important elements in order to broaden the perspective on the adoption success model for social media. It is also planned that future research will assess the impact of additional elements, particularly those that affect SMEs' happiness with using social media, in order to comprehend the quality antecedents of contentment.

7. Conclusion

This study investigated the impact of relative advantage, complexity and compatibility as important factors on social media adoption, it also examined the mediating role of perceived ease of use. Based on our findings not all hypothesis are accepted, this study shows that complexity and compatibility affects social media adoption, complexity directly affect perceived ease of use and the indirect effect is perceived ease of use mediates complexity through social media adoption.

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