

Implementation of the people's market application to improve the performance of MSMEs in Kendal Regency: Integration of Theory Acceptance Model (TAM) and Extended Theory of Planned Behavior (TPB)

Eka Kurnia Patmasari * and Haifa Hannum Arija

Faculty of Economics and Business. University of Selamat Sri. Indonesia.

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Abstract

The emergence of Covid 19 has devastated the performance of Micro, Small and Medium Enterprises (MSMEs) including in Kendal Regency. Through the People's Market application, it is hoped that it can encourage the performance of MSMEs after the pandemic. However, the problem that occurs is that users of the People's Market application in MSME players are still low which can hinder growth and competitiveness in the digitalization era. This study aims to analyze the behavior of MSME players in adopting the People's Market application in Kendal Regency through the integration of the Theory Acceptance Model (TAM) and the Extended Theory of Planned Behavior (TPB). This research is a causality study using seven main variables tested from the TAM and TPB models, namely: perceived benefits; perceived ease of use; attitude in adopting the People's Market application; subjective norms; perceived behavioral control; behavioral intention in adopting the People's Market application; and actual behavior. The sample of this study used a purposive sampling method with a total sample that met the criteria of 231 respondents. The data was obtained from distributing questionnaires via google form. The data were statistically tested through the AMOS program. The results showed that perceived benefits and perceived ease of use affect attitudes. Attitude affects the behavioral intention of traders in adopting the People's Market application. However, subjective norms and perceived behavioral control have no significant effect on behavioral intentions. The results also prove that behavioral intentions can encourage merchants to carry out actual behavior in adopting the People's Market application.

Keywords: People's Market Application; Theory Acceptance Model (TAM); Extended Theory of Planned Behavior (TPB)

1. Introduction

Economic activity in Indonesia is currently a serious concern in promoting sustainable economic development. Micro, Small and Medium Enterprises (MSMEs) play an important role in improving sustainable economic development (Suminah et al., 2022). However, this disappeared when the Covid 19 pandemic emerged in 2020 (Saefudin, Kurdi, & Fauzi, 2022). This deadly virus has devastated the global economy, including Indonesia. The impact of the emergence of this virus is that sales in MSME players have decreased significantly (Takeda et al., 2022). Previous findings prove that during the pandemic the survival of businesses has decreased significantly (Islam & Fatema, 2023). Survey results by LIPI reported that as many as 94.69% of MSMEs during the pandemic experienced a decline in sales (LIPI, 2020). Meanwhile, in Kendal Regency, the number of MSMEs negatively affected during the pandemic was 82.9% (Pemkab. Kendal, 2022). This shows that the majority of MSME players are experiencing pressure (Kurdi et al., 2022).

The implementation of effective recovery strategies, shaping resilience solutions, and government support, play an important role in avoiding the downturn of MSME actors (Abhari, 2021). One of the ways carried out by the Kendal Regency government is by publishing the Pasar Rakyat application, which is a positive step in supporting the performance of MSMEs in a sustainable manner. The application can provide a platform for MSMEs to sell their products

* Corresponding author Eka Kurnia Patmasari

and services online, which can help them reach a wider customer base and increase their sales. In addition to providing a platform for MSME players to sell their products, the app aims to promote local businesses and help them grow by providing marketing and promotional tools to help merchants increase their visibility and attract more customers.

Various ways are carried out by the local government to encourage MSME players to adopt the People's Market application, such as conducting socialization and training on the People's Market application. However, the current problem is the low number of MSME players in adopting the People's Market application. The data shows that the number of MSME players who have adopted and used the People's Market application is only 7.51% of the total MSMEs in the district (Pemkab. Kendal, 2022). The low use of the People's Market application among MSME players in Kendal is a significant challenge that can hinder their growth and competitiveness during the pandemic and beyond. Digitalization is essential for MSMEs as a solution to stay relevant and adapt to the changing business landscape (Takeda et al., 2022). The Theory Acceptance Model (TAM) and Theory of Planned Behavior (TPB) are both frameworks for understanding and assessing user behavior and attitudes towards technology acceptance in a comprehensive manner (Lee, 2009).

TAM is an extended theory of the Theory of Reasoned Action (TRA) that explains the determinants of conscious behavior (Ajzen, 1991). This theory was first developed by Davis in 1985 to explain the acceptance of information technology that focuses on focusing on the usefulness and ease of use perceived by users (Naeem et al., 2022). In TAM can provide an overview of the theoretical basis that discusses influencing factors to explain the motives towards technology use (Kim, 2006). Meanwhile, TPB was first developed by Ajzen in 1991 to analyze the behavior of a person who is able to claim and predict the relationship between intention and action (Tang et al., 2022). In addition, TPB can be used by companies in designing marketing strategies and developing sustainable business models (Ong et al., 2022). TPB considers additional factors such as social norms, attitudes, and perceived behavioral control that can drive intentions and actual behavior (Ajzen, 1985).

In TAM, a person's attitude in adopting the People's Market Application can be driven by perceived benefits and perceived ease of use (Davis, 1989). For example, several previous studies have found that perceived benefits and perceived ease of use can affect a person's attitude towards adopting technology. In this case, a person's attitude can be formed because the service provides benefits and convenience for its users (Wong et al., 2022). Other research integrating the TAM model with TPB on internet banking users proves that perceived benefits and perceived ease of use can shape attitudes, and attitudes, subjective norms and perceived behavioral control can significantly encourage a person's behavioral intentions (Lee, 2009). Recent research on post-Covid 19 bicycle users provides the same results that a person's attitude can be influenced by perceived benefits and perceived ease of use, and a person's behavioral intention can be formed by three important elements, namely attitude, subjective norms and behavioral control (Irawan et al., 2022). However, previous research analyzing the behavior of MSMEs in accepting online shopping applications including the People's Market application that integrates the TAM and TPB models has never been done before, especially in Indonesia. In addition, some previous studies only tested the TAM and TPB models up to behavioral intentions. Whereas in TPB, actual behavior is the final result of TPB after behavioral intention because it is the real condition of a particular behavior (Ajzen, 1985). Therefore, this is a novelty in this study.

Combining the TAM framework with the extended TPB can gain a more comprehensive understanding to evaluate the use of the People's Market application on MSME actors. This model can help identify potential barriers and facilitate the use of the People's Market application and develop strategies to overcome them. Therefore, the specific objectives of this study are expected to contribute insights to the central and local governments, especially Kendal Regency through the integration of TAM and extended TPB in evaluating the perceptions of MSME players in adopting online market applications.

2. Methods

This type of research is causality research. Causality research is used to analyze the relationship between two variable relationships and can be more (Creswell, 2014). In this study, seven variables were tested in the TAM and TPB models. The study population refers to the group of individuals or subjects that the researcher chooses to participate in the research study (Cooper & Schindler, 2014). The research population chosen is MSME players in Kendal Regency. In this case, we conducted sampling. A research sample refers to a subset of individuals or subjects selected from a larger research population to participate in a research study (Cooper & Schindler, 2014). The sample in this study was selected based on purposive sampling or based on criteria determined by the researcher. The research sample criteria selected were: 1) MSME actors in Kendal Regency; and 2) making sales in the People's Market Application > 6 months.

The number of samples in this study is based on the formula adopted by Ferdinand, which is based on the number of sample sizes determined at least 5 times the number of indicators used (Ferdinand, 2014). The number of indicators in this study from the TAM and TPB models were 21 indicators of the 7 variables tested, so that the minimum research sample was 105 respondents. This amount is in accordance with Roscoe's opinion that the number of good research samples is at least 30 samples and a maximum of 500 samples (Roscoe, 1975).

The research data uses primary data obtained directly by researchers (Cooper & Schindler, 2014). Primary data was obtained through distributing online questionnaires to respondents via google form. The questionnaire in this study is divided into two parts. The first part contains respondent characteristics, such as gender, age, type of business, length of business, and the like, while the second part contains research statements to determine respondents' perceptions related to TAM and TPB in using the People's Market application. The results of the distribution of the questionnaire are then classified into a modified Likert scale to make it easier to process and analyze research data. The Likert scale in this study, namely: 1) point 5 for Strongly Agree; 2) point 4 for Agree; 3) point 3 for Disagree; 4) point 2 for Disagree; and point 1 for Strongly Disagree.

The results of the questionnaire distribution were tested empirically through the AMOS program with three stages of testing, namely: Confirmatory Factor Analysis (CFA) test, Goodness of Fit (GoF) test, and regression analysis. The CFA test is used to test whether a construct has unidimensionality or not and the indicators used can confirm a construct or not using three tests, namely: Convergent Validity (Loading Factor ideally 0.70 or at least ≥ 0.50); Construct Reliability (Construct Reliability (CR) ≥ 0.70); and Average Variance Extracted (AVE) (AVE ≥ 0.50) (Hair et al., 2010).

Goodness of Fit (GoF) test to test the suitability of the research model used (Hair et al., 2010). Some GoF methods used are the Goodness of Fit Index (GFI) test, Adjusted Goodness of Fit Index (AGFI), Comparative Fit Index (CFI), Tucker Lewis Index (TLI), and The Root Mean Square Error of Approximation (RMSEA). The third step is to conduct a path analysis test to analyze the influence between the variables tested in the TAM and TPB models. The criteria used are the P-value ≤ 0.05 , then there is a significant influence between the research variables (Hair et al., 2010).

3. Results and discussion

3.1. Characteristics of Respondents

The sample of this study, namely MSME players in Kendal Regency who sell by utilizing the People's Market Application, met the research criteria as many as 231 respondents. The results showed that the most respondents were female as many as 129 respondents (55.8%), aged 18 years to 30 years as many as 157 respondents (68.0%), and had a high school education equivalent to 124 respondents (53.7%). The data shows that the people's market application is more easily accessed and used by millennial and educated female groups who are often more familiar with technology and smartphone applications. They sell online to fill their spare time as housewives and feel more comfortable in using technology and applications than those with lower education levels.

Table 2 Characteristics of Respondents

Characteristics	Category	Frequency	%
Gender	Male	102	44.2
	Female	129	55.8
Age	18-30	157	68.0
	31-45	42	18.2
	46-60	22	9.5
	>60	10	4.3
Education	SMP	48	20.8
	SMA	124	53.7
	Diploma	12	5.2
	S1/S2/S3	47	20.3
Total		231	100.0

3.2. CFA Test Results

The CFA test in this study uses three approaches, namely: Convergent Validity, Construct Reliability, and Average Variance Extracted. The research results in Table 3 show that the Convergent Validity test results have a loading factor value > 0.50 , so the data meets the Convergent Validity criteria. The Construct Reliability test results have a CR value > 0.60 , so the data meets Construct Reliability. While the Average Variance Extracted has an AVE value > 0.50 so that the data meets the Average Variance Extracted. The results showed that overall the data had met the quality of the instrument.

Table 3 CFA Test Results

Variable	Item	Loading Factor	CR	AVE	Result Search
Perceived Usefulness	PU1	0.794	0.917	0.897	Valid and reliable
	PU2	0.900			
	PU3	0.960			
Perceived Ease of Use	PEOU1	0.610	0.668	0.449	Valid and reliable
	PEOU2	0.585			
	PEOU3	0.703			
Attitude	ATT1	0.916	0.895	0.864	Valid and reliable
	ATT2	0.877			
	ATT3	0.783			
Subjective Norms	SN1	0.758	0.741	0.601	Valid and reliable
	SN2	0.840			
	SN3	0.472			
Perceived Behavioral Control	PB1	0.711	0.750	0.612	Valid and reliable
	PB2	0.858			
	PB3	0.533			
Behavioral Intention	BI1	0.733	0.785	0.671	Valid and reliable
	BI2	0.661			
	BI3	0.825			
Actual Behavior	AB1	0.778	0.765	0.629	Valid and reliable
	AB2	0.712			
	AB3	0.671			

3.3. Goodness of Fit (GoF) Test Results

The GoF test is used to measure the extent to which the observed data fits the theoretical model or the expected distribution. The research results in Table 4 show that GFI ($0.878 > 0.90$) is in the marginal fit category; AGFI ($0.834 > 0.90$) is in the marginal fit category; CMIN/DF ($1.974 < 2.0$) is in the good fit category; TLI ($0.909 > 0.90$) is in the good fit category; CFI ($0.926 > 0.90$) is in the good fit category; and RMSEA ($0.065 < 0.08$) is in the good fit category. Referring to these results shows that overall the data is declared to meet the suitability of the structural model.

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3.4. Path Analysis Test Results

The path analysis test is used to analyze the effect between research variables in the TAM and TPB models with a P-Value value criterion ≤ 0.05 . The results showed that perceived benefits have a significant effect on attitudes ($0.005 < 0.05$); perceived ease of use affects attitudes ($0.000 < 0.05$); attitudes affect behavioral intentions ($0.000 < 0.05$); subjective norms have no effect on behavioral intentions ($0.193 > 0.05$); perceived behavioral control has no effect on behavioral intentions ($0.122 > 0.05$); behavioral intentions have a significant effect on actual behavior ($0.000 < 0.05$).

Table 3 Path Analysis Test Results

		Estimate	S.E.	C.R.	P-Value
ATT	<--- PU	0.287	0.103	2.781	0.005
ATT	<--- PEOU	0.687	0.187	3.674	0.000
BI	<--- ATT	0.401	0.055	7.275	0.000
BI	<--- SN	0.058	0.045	1.302	0.193
BI	<--- PB	0.070	0.045	1.545	0.122
AB	<--- BI	0.480	0.116	4.126	0.000

4. Discussion

The results of this study were tested Bayesian using path analysis. The results show that perceived benefits have a significant effect on attitudes towards adopting public market applications. The public market applications in this study can provide benefits in terms of improving the operational efficiency of merchants. including better inventory management. real-time monitoring of sales. or automation of administrative tasks. Merchants who perceive these benefits will have a positive attitude towards the application because they see the potential to increase productivity and save time. Similar to the research by Ariffin et al. (2021); Daragmeh et al. (2021); Chawla & Joshi (2019) that perceived benefits can increase the attitude of traders in adopting the People's Market application.

The results showed that the perceived ease of use can have a significant effect in increasing the attitude of traders in adopting the People's Market application. The results of the study prove that the People's Market application is able to assist traders in performing their tasks more efficiently. Merchants do not need to spend a lot of time or effort to learn how to use the application properly which can increase their productivity and save time. Traders tend to have a positive attitude towards applications if they feel that there is good user support that can minimize the need for intensive support. These results are in line with research by Liu et al. (2022); Yao et al. (2022) that perceived ease of use can encourage traders' attitudes in adopting the People's Market application.

The results showed that attitudes can encourage traders' intentions in adopting the People's Market application. These results indicate that a positive attitude towards the People's Market application creates a positive motivation to adopt it. Traders who have a positive attitude tend to feel enthusiastic and motivated to try the application. These results are in line with Saefudin et al. (2022); Singh et al. (2020); Olya et al. (2019) that attitudes can encourage a person's behavioral intentions.

The results showed that subjective norms had no effect on traders' intention to adopt the People's Market application. In this case. traders face significant external barriers in adopting applications. such as technical limitations or technology accessibility. Strong barriers do not have a significant impact on traders' intentions. These results are similar to research by Yao et al. (2022); Nadlifatin et al. (2021); Liu et al. (2022) that subjective norms have no effect on one's intention. But contrary to Saefudin et al. (2022) that subjective norms can affect behavioral intentions. The results showed that perceived behavioral control had no significant effect on the behavioral intention of traders in adopting the People's Market application. These results indicate that there are changes or improvements in the applications used. traders feel that they lose control over situations that can make them hesitant in their intention to adopt the application. Limited resources. such as the technical skills required to operate the application. the perceived control will not have a significant impact. These results are in line with Amankwa et al. (2023); Acikgoz et al. (2023) that perceived behavioral control has no effect on one's intention. However. contrary to Albayati et al. (2023); Yao et al. (2022) which proved that the two variables had no statistical effect.

Behavioral intentions reflect the level of awareness and consideration that individuals have made towards an action. Before taking action, traders usually plan and consider their decisions. Strong intentions indicate that they have thought about the consequences, benefits, and other considerations related to app adoption. The results showed that behavioral intentions had a significant effect on the actual behavior of traders in adopting the People's Market application. These results indicate that traders have a strong intention to sell online, encouraging them to actually carry out these actions. In this case, if the trader has a strong intention to adopt the People's Market application to sell online. These results are in line with research by Saefudin et al. (2022) that behavioral intentions can have a significant effect on actual behavior in adopting technology.

3. Conclusion

Referring to the discussion presented earlier, the integration of TAM and TPB on the behavior of peddlers in adopting the People's Market application shows that perceived benefits and perceived ease of use affect the attitude of peddlers in adopting the People's Market application. Attitudes can have a significant effect on the behavioral intentions of peddlers in adopting the People's Market application. However, subjective norms and perceived behavioral control have no significant effect on behavioral intentions. The results showed that behavioral intentions have a significant effect on actual behavior in adopting the People's Market application.

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