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RESEARCH ARTICLE

How Habit Drives the Acceptance of Game Marketplace Technology: Indonesian Business Behavioral Perspective

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ABSTRACT

The objective of this research is to answer the research question on how the habit drives the modified technology acceptance model (TAM) on consumers' game marketplace consumers' intention. The determinant evaluation factors were consisting of habit, perceived ease of use, perceived usefulness, hedonic motivation, and behavior intention. The total of six hypotheses were tested by using partial least square structural equation modelling. A total of 396 data was obtained and used as the instrument data analysis. The result confirmed that all the hypotheses were accepted. Hedonic motivation has the highest beta correlation with 0.606. Theoretical and practical applications were discussed in this paper. This paper extends the TAM theory application to incorporate the habit on the Indonesia Game Marketplace Technology case study.

INTRODUCTION

When society becomes accustomed to advanced technological developments, the technologies play an important role in many business models including the game industry. In early development, games were created in the form of physical devices across the platforms. People enjoyed games by buying cassettes or disk, and they only can play together in the one location. As time passes, technologies are getting more advanced, making it possible for people to enjoy playing games in different locations. Thus, the game types have become accustomed to digital approaches. Consequently, the business model for games was also changed. The concept of digital distribution services or game marketplace is becoming more popular throughout the world (Toivonen & Sotamaa, 2010).

Game marketplace is taking the similar concept with regular marketplace, where consumers and buyers can make transaction digitally related to game activities (Rahman et al., 2020). Since the geographical limitation is eliminated in the game marketplace, many people across the world can interact, thus creating a challenge

on facilitating the universal acceptance of technology in game marketplace. Previous studies had discussed on customer acceptance on playing online game (Chen & Kuan, 2012; Rafdinal & Qisthi, 2020), consumer reviews on mobile gaming market (Jang et al., 2021), specific location of gaming marketplace penetration (Borowy, 2017). From the previous studies, few studies specifically discuss on game marketplace technology acceptance.

To answer the question on how to see the gamers' technology acceptance, the objective of this research is to analyze the gamers use intention on game marketplace. Specifically, the present study evaluates the use intention by using the modified Technology Acceptance Model (TAM) to include habit as the external variable (Davis, 1989). Further, instead of denoting attitude, this research modified the variable into hedonic motivation. The study result will bring benefit not only for theoretical aspect, but also practical industry insight. The rest of this article is presented by chapter 2 methodology section, where the hypotheses development and research instrument were discussed. Chapter 3 elaborate the results, where the statistical interpretation was focused. Chapter 4 elaborate the insight of the results in practical manners. Chapter 5 conclude the research by drawing future investigation.

1. LITERATURE REVIEW

Technology Acceptance Model (TAM) is one of most popular models in describing the technological acceptance declared by Davis (Davis, 1989). The TAM model comprises of at least four variables namely perceived ease of use, perceived usefulness, attitude, and behavior intention (see Figure 1). In the present research, the external variables are substituted to habit and the attitude is changed to hedonic motivation (see Figure 2).

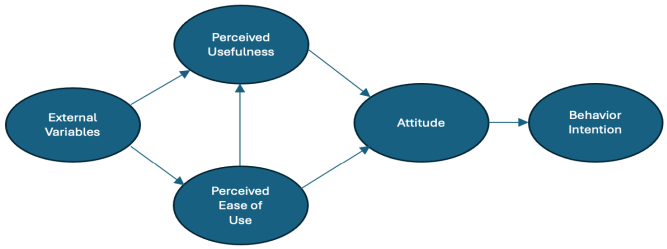

Figure 1. Original TAM model by Davis

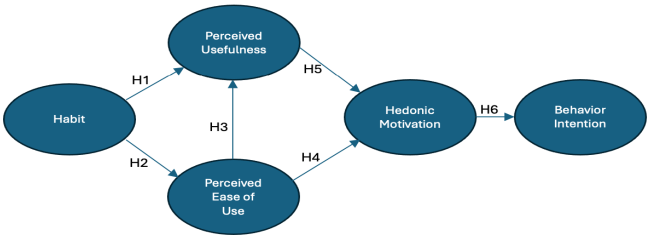

Figure 2. The modified TAM model

Habit refers to the degree to which an individual perceives a behavior as automatic (Venkatesh et al., 2012). Perceived ease of use refers to the extent to which an individual believes that engaging in a specific system will require minimal effort. Perceived usefulness is the extent to which an individual believes that utilizing a specific system will improve work performance. Hedonic motivation is the perceived of positive fun in using the technology. Behavior intention is the psychological state of interest to do specific behavior. TAM has been widely use on various research studies to understand the technological acceptance (Lin et al., 2017;

Marangunić & Granić, 2015; Nadlifatin et al., 2020; Prasetyo et al., 2023). The present research proposed six hypotheses, where the details of the hypotheses are:

H1: "Habit has positive influence on perceived usefulness."

H2: "Habit has positive influence on perceived ease of use."

H3: "Perceived ease of use has positive influence on perceived usefulness."

H4: "Perceived ease of use has positive influence on hedonic motivation."

H5: "Perceived usefulness has positive influence on hedonic motivation."

H6: "Hedonic motivation has positive influence on behavior intention."

2. METHODOLOGY

2.1. Research Instrument

To validate the hypotheses, the data collection was performed. An online questionnaire survey was conducted in early 2020, with the total of 396 respondents involved. The questionnaire was instrumented by using five points Likert scale, ranging from "1: I strongly disagree" to "5: I strongly agree". Each variable was instrumented with an average of 3-4 indicators each (see Table 1). The collected data was analyzed by using Partial Least Square-Structural Equation Modelling (PLS-SEM).

Table 1. Variable Operations

Variable	Indicators	Code
Habit	"Using game marketplace has become a habit for me"	H1
	"I am quite addicted to using game marketplace"	H2
	"I must use game marketplace"	H3
	"My habit in playing is always by game marketplace"	H4
Perceived Ease of Use	"It was easy for me to learn to operate game marketplace"	EE1
	"The instructions on the game marketplace are easy to follow"	EE2
	"I think game marketplace is easy to use"	EE3
	"It is easy for me to become proficient in using game marketplace"	EE4
Perceived Usefulness	"Game marketplace is a very useful platform for my game usage process"	PE1
	"Game marketplace can help me in accessing various games easily"	PE2
	"Using game marketplace can improve my performance in gaming"	PE3
	"The usefulness of game marketplace can help improve my game operation"	PE4
Hedonic Motivation	"Using game marketplace is fun for me"	HM1
	"For me game marketplace is quite enjoyable"	HM2
	"Game marketplace provides entertainment for me"	HM3
	"I feel game marketplace fulfils my sense of pleasure"	HM4
Behavior Intention	"I plan to use game marketplace as my gaming platform"	BI1
	"I will always use game marketplace as my gaming platform"	BI2

	"I will be using game marketplace more often for my gaming platform"	BI3
	"Game marketplace is my top choice for a gaming platform"	BI4

3. RESULT

The results chapter elaborate the descriptive and statistical analysis from the respondents. Based on descriptive analysis on Table 2, many respondents were dominated by male. The categorization of teenager was seen in 20-30 years old of respondent domination. Most of the respondents were detected as students or unemployed. The respondents were majorly using the game marketplace in between 1-5 times. In the game marketplace usage, the respondents were dominated in between 2-3 hours. They most commonly did the transaction by bank transfer.

Table 2. Respondents Demographic

Gender	**Number**
Male	364
Female	32
Total	396
Age	**Number**
10-20	146
20-30	246
30<	4
Total	396
Occupation	**Number**
Students/unemployed	306
Worker	59
Entrepreneur	31
Total	396
Monthly Use	**Number**
<1 time	39
1-5 times	194
6-10 times	70
>10 times	93
Total	396
Frequency Usage	**Number**
"1 hour"	32
"2-3 hours"	190
"3-4 hours"	113
">4 hours"	61
Total	393
Transactions	**Number**
Bank Transfer	266

Credit Card	9
Paypal	4
Visa/Master Card	12
Others	105
Total	393

The structural equation modeling comprises of outer and inner model analysis. Specifically, outer model will elaborate on reliability and discriminant validity tests. The inner model will focus on hypothesis. Figure 3 depicts the first iteration of variables relationship. There were two outer loadings indicators detected on below 0.7 according to rule thumbs (Balinado et al., 2021; Chin et al., 2018; Prasetyo et al., 2021). Consequently, the PE2 and PE3 indicators were removed. Figure 4 projecting the final model, where the outer loadings were all more than 0.7.

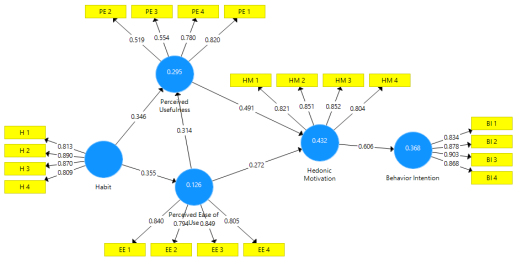

Figure 3. Beta coefficient (first iteration)

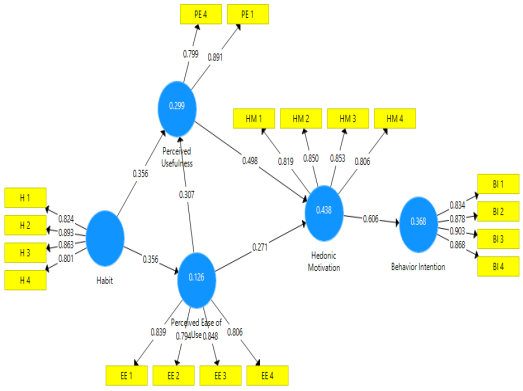

Figure 4. Beta coefficient (final iteration)

Table 3 emphasize on the reliability and validity tests. The tests comprise of Cronbach alpha, Composite Reliability (CR), and Average Variance Extracted (AVE). The entire tests were supposed to have the score 0.7, 0.7, and 0.5 respectively based on the rule of thumbs on various research studies (German et al., 2022; Mufidah et al., 2018; Ong et al., 2021). Based on Table 3, the reliability indicators of Perceived Usefulness are slightly below 0.7, which is 0.6. Several evidence from research studies concluded that reliability on 0.6 is still acceptable (Morgan et al., 2004; Rahimnia & Hassanzadeh, 2013; Ratnawati & Malik, 2024; Ruangtip et al., 2024; Vongurai, 2024; Yana et al., 2015). Thus, the reliability and validity constructs were valid. Table 4 emphasize on the discriminant validity tests. The test was based on Heterotrait-Monotrait Ratio of Correlation (HMTM) and the score must be below 0.9. Thus, based on Table 4, the discriminant validity has been established.

Table 3. Construct Reliability and Validity

Indicators	**Loadings**	**Cronbach**	**CR**	**AVE**

H1	0.819	0.867	0.875	0.715
H2	0.850			
H3	0.853			
H4	0.806			
EE1	0.839	0.840	0.845	0.676
EE2	0.794			
EE3	0.848			
EE4	0.806			
PE1	0.799	0.610	0.641	0.716
PE4	0.891			
HM1	0.819	0.852	0.852	0.693
HM2	0.805			
HM3	0.853			
HM4	0.806			
BI1	0.834	0.894	0.896	0.759
BI2	0.878			
BI3	0.903			
BI4	0.868			

Table 4. HTMT Discriminant Validity Test

	BI	**H**	**HM**	**EE**	**PE**
BI					
H	0.750				
HM	0.693	0.632			
EE	0.418	0.415	0.574		
PE	0.631	0.637	0.835	0.579	

Table 5 elaborate on test of multicollinearity by using Variance Inflation Factors (VIF), where the score below 5 were preferred. Based on Table 5, there was no multicollinearity problem. Table 6 projecting on the model fit tests. The tests use Standardized Root Mean Square Residual (SRMR) and Normed Fit Index. The values of these tests should less than 0.08 and more than 0.7 accordingly (Ding et al., 1995; Lin et al., 2017; Nadlifatin et al., 2020). Based on Table 6, the model is fit enough.

Table 5. Multicollinearity test

	VIF
BI1	1.947
BI2	2.676
BI3	3.056
BI4	2.535
EE1	1.976
EE2	1.739
EE3	2.011

EE4	1.925
H1	1.935
H2	2.920
H3	2.819
H4	2.050
HM1	2.011
HM2	2.349
HM3	2.396
HM4	2.007
PE4	1.238
PE1	1.238

Table 6. Model fit test

	Saturated Model
SRMR	0.069
NFI	0.776

Table 7 presenting the hypotheses validation based on T-value and p-value. Since all the T-values above 1.96 and the p-values are below 0.05, the entire hypotheses were accepted. Table 8 emphasizing the R and Q Square. R-Square is the coefficient of determinant, where the coefficient described the representative of involved factors. Based on Table 8, the BI R-square was 36%, where the possibility of 64% were explained by other factors. Q-square is the predictive relevance, where the score should be more than 0. All the dimensions have the Q-square above 0, which indicate the good predictive for each variable. Table 9 discussion the F-square, which elaborate the effect magnitude. The F value of 0.02, 0.15, and 0.35 were presenting the weak, moderate, and strong respectively. Most F-square values in the dimensions range from moderate to strong.

Table 7. Path coefficient

Hypotheses	**T Statistics**	**p-value**	**Note**
H1: H à PE	8.700	0.000	Accepted
H2: H à EE	7.773	0.000	Accepted
H3: EE à PE	7.039	0.000	Accepted
H4: EE à HM	6.045	0.000	Accepted
H5: PE à HM	12.194	0.000	Accepted
H6: HM à BI	17.363	0.000	Accepted

Table 8. R-Square and Q-Square Coefficient

Hypotheses	**R-Square**	**Q-Square**
BI	0.368	0.273
HM	0.438	0.299
EE	0.126	0.084
PE	0.299	0.206

Table 9. F-Square

	BI	H	HM	EE	PU
BI					
H				0.145	0.158
HM	0.582				
EE			0.106		0.117
PU			0.358		

The analysis underscores the substantial influence of Habit in shaping the revised TAM. All six variables have been confirmed and accepted. The Habit positively influences the revised TAM. The gaming marketplace can stimulate this intensified behavior by gaining insights about gamers' preferences. The game creators can devise strategies to enhance gamers' propensity to utilize the game marketplace more frequently. The game marketplace suppliers must also accommodate the requirements and feedback from gamers. Both sides must collaborate to ensure the satisfaction of the consumer's needs. Considering the advanced state of internet infrastructure and digital payment systems, it is now feasible to enhance segmentation nationwide.

4. CONCLUSIONS

This study seeks to validate the attributes that promote habit to drive the modified TAM dimension. The model has explained 36.8% of the overall intention to use. The beta coefficient of HM 0.606 signifies that contentment is the predominant factor in forecasting use intention. A variety of recommendations were put up. The original proposal involved improving the acceptance of the gaming marketplace by Habit. The gaming marketplace must include customer recommendations and comments. The second recommendation concerned the coordination and cooperation between game providers and marketplace suppliers. Collaborating to offer various helpful features will enhance consumers' acceptance to utilize the game marketplace.

The study has several limitations, the foremost being a gender dominated by men. Achieving equilibrium between genders may yield novel insights. The second factor relates to the regional setting of the inquiry subject. Engaging with a different nation can provide a novel perspective. Consequently, subsequent research may employ multigroup analysis. The third factor is to the analytical tool, where the incorporation of supplementary analysis methodologies, such as qualitative analysis, can enhance the comprehensiveness of the analysis.

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