The Effects of Social Influence, Hedonic Motivation, and Habit on E-Money Behavioral Intention: The Role of Perceived Risk as a Moderator

Rahmiati Rahmiati[1], Perengki Susanto[2]*

[1,2] Universitas Negeri Padang, Padang, Indonesia
*Corresponding author. Email: perengki@fe.unp.ac.id

ABSTRACT

The goal of this research is to see how social influence, hedonic motivation, and habit affect e-money behaviour. This study also examines whether perceived risk influences the link between habit and behavioral intention. The current and future behavioral intention to use electronic money is described by behavioral intention. Data obtained from 484 e-money users in West Sumatra who took part in an online survey. Data analysis with SmartPls reveals that social influence, habit, and hedonic motivation all have a direct impact on behavioral intention. The findings also shows that the social influence and hedonic motivation have an indirect effect on behavioral intention via habit. Furthermore, there is no evidence that the influence of habit on behavioral intention is moderated by perceived risk.

Keywords: Behavioral intention, e-money, social influence, hedonic motivation, perceived risk, habit

1. INTRODUCTION

The introduction of new payment innovations is influenced by the growth of electronic-based payment systems. Electronic money is a payment system innovation designed primarily for small-scale transactions. Bank Indonesia regulation No. 20/6/PBI/2018 governing electronic money governs the issuance and use of e-money in Indonesia. Electronic money issuers are defined under the regulation as both bank and non-bank financial firms. With the issuance of the legal basis for e-money, many publishers participate and compete to issue e-money. As of June 28, 2021, there are 59 companies that have obtained permission to issue e-money [1].

The development of e-money raises various issues and problems related to the use and technology of e-money. The problem of user attitudes and behaviour towards e-money or security and risk issues in the use of e-money is a major constraining factor in the development of e-money. The many issues that have developed around e-money have attracted the interest of many researchers to study further. Theories related to the adoption of new technologies are applied to analyse why someone accepts or rejects certain technologies, whether risk plays a role in influencing user behaviour and interests. Theories that focus on technology

acceptance and adoption mainly adapt social psychology theory [2]. Davis et al. [3] stated that in order to increase user acceptance of technology, it is necessary to measure the attitudes and interests of users.

2. LITERATURE REVIEW

E-Money adoption

The use behaviour (UB) of e-money describes the intensity of the use of e-money by the user. This behaviour is measured based on the frequency of use of e-money. Venkatesh et al. [4] states that UB is directly and indirectly influenced by habit and facilitating conditions. Susanto et al. [5] revealed that perceived risk directly affects the behaviour of using e-money. This is due to the fact that e-money entails a number of risks, including those related to performance, financial, time, psychological, social, and privacy. Perceived risk is defined as the extent to which the use of e-money will bring risk to the user. Hoque et al. [6] states that non-cash payment media contain elements of uncertainty, risk and the possibility of loss. The greater the risk arising from the use of e-money, the lower the level of use of e-money. It is assumed that the perceived risk will have a negative impact on e-money usage based on this description.

Social influence

Social influence [7], defined as the extent to which individuals believe that people who are important and influential to them should use the new technology [8,] represents the social environment in terms of user ideas and beliefs. Social influence is defined in this study as an individual's belief that other influential people should utilize e-money. According to the findings of Abrahao et al. [9], social influence has a direct impact on behavioral intention. Individuals and social groups that exchange experiences can become used to doing so. The findings of Husnil et al's [7] study show that social influence has a direct impact on habit. As a result, the hypotheses are as follows:

H1: Social influence has a significant and positive impact on behavioral intention.

H2: Social influence has a significant and positive impact on habit

Hedonic motivation

The pleasure experienced when employing particular technology is known as hedonic motivation [4]. Baabdullah [10] found a positive effect of hedonic motivation on behavioral intention on mobile game adoption by consumers. The pleasure generated when using e-money (especially when consumers make payments) can increase the attachment to continue using it in the future [11]. Therefore, it is expected that hedonic motivation will have a positive effect on consumer habits and intentions to use e-money.

H3: Hedonic motivation has a significant and positive impact on habit

H4: Hedonic motivation has a significant and positive impact on behavioral intention

Habit

Habit is defined as the degree to which people perform behaviours automatically as a result of prior experiences [2]. Venkatesh et al. [4] states that habit is a perceptual construct that reflects the results of previous experiences. Furthermore, Venkatesh et al. [4] indicate that depending on the interaction and experience gained with a given technology, the chronology of time might build varied levels of habits. In the context of this study, the use of e-money is not something new but has become an action that is carried out repeatedly both consciously and unconsciously so that it becomes a habit. Herting et al. [12] asserted that habit is a mechanism of unconscious behaviour repetition. In the case of India, habit is a significant factor influencing behavioral intention to accept mobile payment [13]. It is hypothesized that habit has a favourable influence on behavioral intentions based on this description.

H5: Habit has a significant and positive impact on behavioral intention

Perceived risk

Risk is thought to be a significant component in determining customer behaviour intentions [14]. Uncertainty is supposed to heighten the sense of risk in online transactions. A consumer's subjective judgment about the potential for errors when undertaking online service transactions is known as perceived risk (PR) in electronic services [15]. Risk has a detrimental impact for e-money adoption in the context of e-money. Featherman & Pavlou [16] discuss PR as a potential drawback in achieving desired objectives from employing electronic services in the context of technological adoption. This definition pertains to e-money adoption. "Performance risk," "financial risk," "time risk," "psychological risk," "social risk," "privacy risk," and "overall risk" are the seven types of risk they presented. They also advise that, given the many sorts of risks, it is sensible to use a multidimensional PR metric when analysing technology adoption. PR theory also assumes that public relations can have a major impact on customer intentions and behaviour. As a result, Susanto et al. [5] discovered that PR mitigates the impact of habit on behavioral intentions. This study believes that PR can explain m-payment service adoption for these reasons.

H6: Perceived risk moderates the influence of habit on behavioral intention
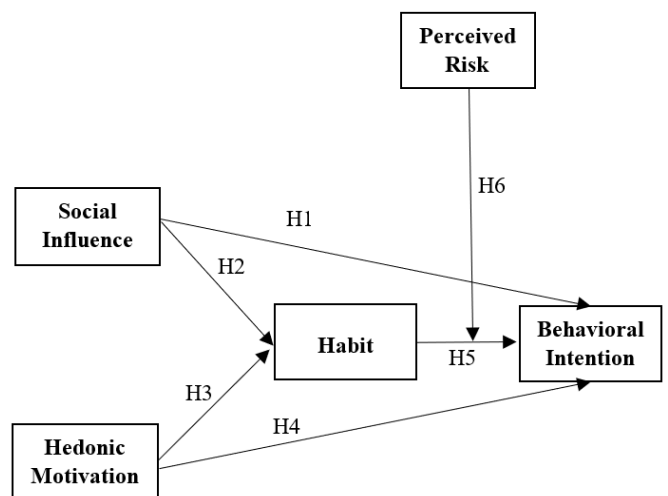
Figure 1. Research Model

3. METHOD

The survey method was used to test the proposed research model. Samples were obtained through the distribution of online questionnaires. The sampling technique used was purposive sampling method. The data analysis was based on 484 responses (168 males and 316 females). Respondents range in age from 17 to 58 years old, with degrees ranging from high school to PhD degrees (S3). SmartPLS 3.0 is used to analyse the information. The structural model is analysed first, followed by the measurement model. Validity and

reliability of the instrument are included in the measurement model testing. The value of outer loading, cross loading, and average variance extract is used to measure convergent and discriminant validity (AVE). Composite reliability and Cronbach alpha were used to examine the instrument's reliability.

4. RESULT

Measurement Model

Measurement model testing was conducted to ensure that the instrument used met the valid and reliable criteria. There are two validity criteria tested, namely convergent and discriminant validity A positive correlation between indicators that measure the same

construct is referred to as convergent validity. As a result, a reflective construct's measuring indicators should have a high amount of variance [17]. The value of the outer loading indicator and the average variance retrieved can be used to assess a reflective construct's convergent validity (AVE).

When a construct has a high outer loading, it means that the connected indicators have a lot in common with it. The rule of thumb for determining convergent validity is that for confirmatory research, outer loading must be larger than 0.7, and the AVE value must be greater than 0.5 [18]. Figure 2 illustrates that, based on outer loading larger than 0.70, all indicators have convergent validity.
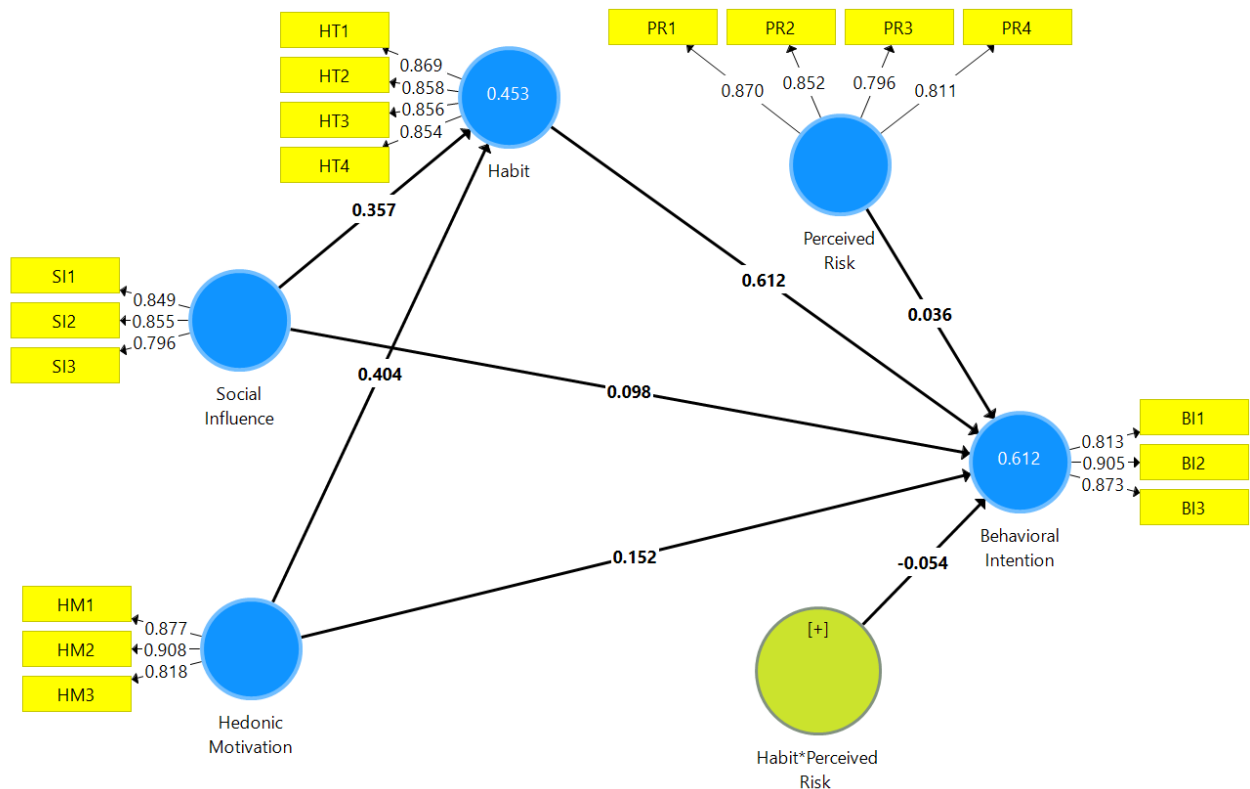

Figure 2. Outer loading indicators

Based on the AVE value in Table 1, convergent validity testing suggests that all variables have an AVE value greater than 0.5. As a result, all variables are found to have convergent validity.

Table 1. Average Variance Extract (AVE)

Variable	AVE
Behavioral Intention	0.747
Hedonic Motivation	0.754
Habit	0.738
Social Influence	0.695
Perceived Risk	0.694
Habit*Perceived Risk	1,000

Discriminant validity denotes that a construct is empirically unique from the other constructs [19]. It is evaluated by Fornell-Larcker Criterion. The square root of AVE for each construct (diagonals in bold) is larger than the correlation value of the construct with other constructs, according to the discriminant validity test results in Table 2. As a result, discriminant validity has been established for all constructs.

Testing the reliability of the construct seen from the value of Cronbach alpha and composite reliability. Table 3 shows that all constructs are reliable with values above 0.7. Overall the measurement model shows that the model meets the requirements of validity and

reliability so that it can be continued in testing the structural model.

Table 2. Discriminant Validity (Fornell-Larcker Criterion)

	Behavioral Intention	Habit	Habit*Perceived Risk	Hedonic Motivation	Perceived Risk	Social Influence
Behavioral Intention	**0.864**					
Habit	0.765	**0.859**				
Habit*Perceived Risk	0.036	0.074	**1.000**			
Hedonic Motivation	0.575	0.605	0.105	**0.868**		
Perceived Risk	0.176	0.209	0.386	0.074	**0.833**	
Social Influence	0.539	0.585	0.189	0.565	0.237	**0.834**

Table 3. Reliability of construct

	Composite reliability	Cronbach Alpha
Behavioral Intention	0.899	0.830
Habit	0.919	0.882
Habit*Perceived Risk	1,000	1,000
Hedonic Motivation	0.902	0.836
Perceived Risk	0.900	0.870
Social Influence	0.872	0.780

Structural Model

Evaluation of the structural model is carried out to see whether the proposed hypothesis can be accepted. Table 4 summarizes the results of hypothesis testing, and shows that 5 of 6 proposed hypotheses, proved significant with a positive direct correlation coefficient. Thus H1, H2, H3, H4, H5 are accepted. The moderating effect of perceived risk on the interaction between habit and behavioral intention proved insignificant, so H6 was rejected. In addition, as shown in Table 5, habit mediates the effect of hedonic motivation and social influence on behavioral intention.

Table 4. Hypotheses Testing

Hypothesis	Original Sample (O)	T Statistics (|O/STDEV|)	P Values	Result
H1: Social Influence -> Behavioral Intention	0.098	1,728	0.042	Supported
H2: Social Influence -> Habit	0.357	5.938	0.000	Supported
H4: Hedonic Motivation -> Behavioral Intention	0.152	2,560	0.005	Supported
H3: Hedonic Motivation -> Habit	0.404	6,967	0.000	Supported
H5: Habit -> Behavioral Intention	0.612	9,724	0.000	Supported
H6: Habit*Perceived Risk -> Behavioral Intention	-0.054	1.192	**0.117**	Not Supported

Table 5. Indirect effects

	Original Sample (O)	T Statistics (|O/STDEV|)	P Values
Hedonic Motivation -> Behavioral Intention	0.247	6.068	0.000
Social Influence -> Behavioral Intention	0.218	4.939	0.000

Table 6 displays the explained variance (R2) and adjusted R 2 for each endogenous variable, with values ranging from moderate to high [18]. 61.2 percent of the variance in behavioral intention can be explained by social influence, habit, and hedonic motivation; the rest is impacted by variables not investigated in this study. While social impact and hedonic motivation account for 45.3 percent of habit variance, the remaining 54.7 percent is influenced by factors not addressed in this study.

Table 6. R-Square and Adjusted R-Square

	R-Square	Adjusted R-Square
Behavioral Intention	0.612	0.605
Habit	0.453	0.449

5. DISCUSSION

This study combines the UTAUT variable with perceived risk (PR) to look into the variables that can predict e-money usage, such as social influence (SI),

hedonic motivation (HM), habit (HT), and behavioral intention (BI). This study's findings suggest that HT mediates the effect of SI and HM on BI. This result shows that the social environment (such as family and colleagues) and the pleasure obtained from the use of e-money make e-money transactions a habit and so influence the behavior of using e-money. This study confirms Husnil et al. [7]. The research findings also yield a direct effect of HM on BI. This indicates that user acceptance of a particular technology is influenced by the underlying motivation. The direct effect of HM on BI is in line with previous studies [7], [11] , [10].

SI has a direct effect on BI, according to the study's findings. This suggests that important and prominent people's opinions and suggestions can be a driving force for technology adoption, which is consistent with prior study that found users are strongly impacted by the opinions of others in their social milieu [20]. According to Jung et al. [21], most people are uneasy about the adoption of a new technology since it is unclear. Individuals often rely on their social networks to help them make decisions in order to alleviate this discomfort. Many prior research employed the SI variable to gauge user adoption of new technologies. The results of this study are consistent with the findings of Tarhini et al. [22], Trinh et al. [23] and Rahmiati & Susanto [24].

Contrary to what was hypothesized, PR was found not to moderate the effect of HT on BI. PR is concerned with people's perceptions of their vulnerability to threats. The adoption of new technologies such as the use of electronic services contains an element of uncertainty, especially in the form of the possibility of errors when conducting online transactions [15]. However, when the use of online services has become a routine and a habit, the perception of risk can no longer affect the BI of users. In addition, it is probably that PR is not a moderating variable, but has a direct effect on BI, as the findings of Abrahao et al. [9] and Luo et al. [25] .

6. CONCLUSION

Based The findings revealed that habit had the significant impact on e-money behavioral intentions. This indicates, to increase behavioral intention, transactions with e-money must become a habit. An activity becomes a habit if the activity is entertaining and fun to do. This can be done by increasing the convenience of transacting with e-money. The results of this study also have implications for policy makers. To increase the use of e-money, retail business players and other authorities need to create a wider electronic payment environment, for example in cafes, restaurants, supermarkets, mini market, transportation services and entertainment/tourist places. The more places that

accept payments with e-money, the more e-money transactions will increase, and in the end, payments with e-money will become a habit. When the use of e-money has become a habit, consumers no longer think about the risks of using e-money. The increase in payment transactions using e-money indicates the success of the government's program in realizing a less cash society.

REFERENCES

[1] Https://www.bi.go.id/PJSPQRIS/default.aspx, "Sistem Pembayaran dan Pengelolaan Uang Rupiah." .

[2] M. Limayem, S. G. Hirt, and C. M. K. Cheung, "How habit limits the predictive power of intention: The case of information systems continuance," MIS Q. Manag. Inf. Syst., vol. 31, no. 4, pp. 705–737, 2007, doi: 10.2307/25148817.

[3] F. D. Davis, R. P. Bagozzi, and P. R. Warshaw, "User Acceptance of Computer Technology: A Comparison of Two Theoretical Models," Manage. Sci., vol. 35, no. 8, pp. 982–1003, 1989, doi: 10.1287/mnsc.35.8.982.

[4] V. Venkatesh, J. Y. L. Thong, and X. Xu, "Consumer acceptance and use of information technology: Extending the unified theory of acceptance and use of technology," vol. 36, no. 1, pp. 157–178, 2012.

[5] P. Susanto, M. E. Hoque, N. M. H. N. Hashim, N. U. Shah, and M. N. A. Alam, "Moderating effects of perceived risk on the determinants–outcome nexus of e-money behaviour," Int. J. Emerg. Mark., vol. 17, no. 2, pp. 530–549, 2022, doi: 10.1108/IJOEM-05-2019-0382.

[6] M. E. Hoque, N. M. H. Nik Hashim, and M. H. Bin Azmi, "Moderating effects of marketing communication and financial consideration on customer attitude and intention to purchase Islamic banking products: A conceptual framework," J. Islam. Mark., vol. 9, no. 4, pp. 799–822, 2018, doi: 10.1108/JIMA-01-2017-0005.

[7] H. Khatimah, P. Susanto, and N. L. Abdullah, "Hedonic motivation and social influence on behavioral intention of e-money: The role of payment habit as a mediator," Int. J. Entrep., vol. 23, no. 1, pp. 1–9, 2019.

[8] B. Šumak and A. Šorgo, "The acceptance and use of interactive whiteboards among teachers: Differences in UTAUT determinants between pre- and post-adopters," Comput. Human Behav., vol. 64, pp. 602–620, 2016, doi: 10.1016/j.chb.2016.07.037.

[9] R. de S. Abrahão, S. N. Moriguchi, and D. F. Andrade, "Intention of adoption of mobile payment: An analysis in the light of the Unified Theory of Acceptance and Use of Technology (UTAUT)," RAI Rev. Adm. e Inovação, vol. 13, no. 3, pp. 221–230, 2016, doi: 10.1016/j.rai.2016.06.003.

[10] A. M. Baabdullah, "Consumer adoption of Mobile Social Network Games (M-SNGs) in Saudi Arabia: The role of social influence, hedonic motivation and trust," Technol. Soc., vol. 53, no. 2018, pp. 91–102, 2018, doi: 10.1016/j.techsoc.2018.01.004.

[11] K. Nikolopoulou, V. Gialamas, and K. Lavidas, "Habit, hedonic motivation, performance expectancy and technological pedagogical knowledge affect teachers' intention to use mobile internet," Comput. Educ. Open, vol. 2, no. March, p. 100041, 2021, doi: 10.1016/j.caeo.2021.100041.

[12] D. Chávez Herting, R. Cladellas Pros, and A. Castelló Tarrida, "Habit and social influence as determinants of PowerPoint use in higher education: A study from a technology acceptance approach," Interact. Learn. Environ., vol. 0, no. 0, pp. 1–17, 2020, doi: 10.1080/10494820.2020.1799021.

[13] K. Gupta and N. Arora, "Investigating consumer intention to accept mobile payment systems through unified theory of acceptance model: An Indian perspective," South Asian J. Bus. Stud., vol. 9, no. 1, pp. 88–114, 2020, doi: 10.1108/SAJBS-03-2019-0037.

[14] K. Al-Saedi, M. Al-Emran, T. Ramayah, and E. Abusham, "Developing a general extended UTAUT model for M-payment adoption," Technol. Soc., vol. 62, no. September 2019, 2020, doi: 10.1016/j.techsoc.2020.101293.

[15] J. Mou, D. H. Shin, and J. F. Cohen, "Trust and risk in consumer acceptance of e-services," Electron. Commer. Res., vol. 17, no. 2, pp. 255–288, 2017, doi: 10.1007/s10660-015-9205-4.

[16] P. A. Feathermen, M. S & Pavlou, "Predicting E-Services Adoption: A Perceived Risk Facets Perspective," Int. J. Hum. Comput. Stud., vol. 59, no. 4, pp. 451–474, 2003.

[17] M. Hair, Jr. Joseph F., Hult, G. Tomas M., Ringle, Christian M., Sarstedt, A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM). 2017.

[18] H. Ghozali, Imam., Latan, Partial Least Squares: Konsep Teknik dan Aplikasi Menggunakan Program SmartPLS 3.0. 2014.

[19] J. F. Hair Jr., L. M. Matthews, R. L. Matthews, and M. Sarstedt, "PLS-SEM or CB-SEM: updated guidelines on which method to use," Int. J. Multivar. Data Anal., vol. 1, no. 2, p. 107, 2017, doi: 10.1504/ijmda.2017.10008574.

[20] T. Oliveira, M. Thomas, G. Baptista, and F. Campos, "Mobile payment: Understanding the determinants of customer adoption and intention to recommend the technology," Comput. Human Behav., vol. 61, pp. 404–414, 2016, doi: 10.1016/j.chb.2016.03.030.

[21] J.-H. Jung, E. Kwon, and D. H. Kim, "Mobile payment service usage: U.S. consumers' motivations and intentions," Comput. Hum. Behav. Reports, vol. 1, no. January, p. 100008, 2020, doi: 10.1016/j.chbr.2020.100008.

[22] A. Tarhini, R. M. Deh, K. A. Al-Busaidi, A. B. Mohammed, and M. Maqableh, "Factors influencing students' adoption of e-learning: A structural equation modeling approach," J. Int. Educ. Bus., vol. 10, no. 2, pp. 164–182, 2017, doi: 10.1108/JIEB-09-2016-0032.

[23] H. N. Trinh, H. H. Tran, and D. H. Q. Vuong, "Determinants of consumers' intention to use credit card: a perspective of multifaceted perceived risk," Asian J. Econ. Bank., vol. 4, no. 3, pp. 105–120, 2020, doi: 10.1108/ajeb-06-2020-0018.

[24] R. Rahmiati and P. Susanto, "Use behavior of e-money: Empirical analysis using the UTAUT model," in Proceedings of the Sixth Padang International Conference On Economics Education, Economics, Business and Management, Accounting and Entrepreneurship (PICEEBA 2020), 2021, vol. 179, no. Piceeba 2020, pp. 398–403, doi: 10.2991/aebmr.k.210616.061.

[25] X. Luo, H. Li, J. Zhang, and J. P. Shim, "Examining multi-dimensional trust and multi-faceted risk in initial acceptance of emerging technologies: An empirical study of mobile banking services," Decis. Support Syst., vol. 49, no. 2, pp. 222–234, 2010, doi: 10.1016/j.dss.2010.02.008.