Original Article

Behavioral intention of mobile health application adaptation with demographics and m-financial incentives payment as moderating variable

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Abstract

Information technology has been seen to improve rapidly over the last decade. This increase was due to the increase in the number of internet users and advances in mobility technology(Aswani et al., 2018). The presence of non-banking institutions engaged in the world of digital technology has begun to reduce the dominance of conventional banking institutions that has been going on so far(Fahlevi, 2021). The growing complexity of consumer needs, the increasing cost of traditional methods and the need for innovative customer-centric solutions make it necessary to design alternative mobile-based technologies as business solutions(Kuganathan & Wikramanayake, 2014). These various things have created tremendous opportunities to innovate through online-based payment systems(Fahlevi & Alharbi, 2021). The Less Cash Society (LCS) is an effort by Bank Indonesia to increase the use of non-cash transactions.

Keywords: financial incentives, demographics, social influence, hedonic motivation, behavioral intention, mobile health application.

1. INTRODUCTION

Information technology has been seen to improve rapidly over the last decade. This increase was due to the increase in the number of internet users and advances in mobility technology(Aswani et al., 2018). The presence of non-banking institutions engaged in the world of digital technology has begun to reduce the dominance of conventional banking institutions that has been going on so far(Fahlevi, 2021). The growing complexity of consumer needs, the increasing cost of traditional methods and the need for innovative customer-centric solutions make it necessary to design alternative mobile-based technologies as business solutions(Kuganathan & Wikramanayake, 2014). These various things have created tremendous opportunities to innovate through online-based payment systems(Fahlevi & Alharbi, 2021). The Less Cash Society (LCS) is an effort by Bank Indonesia to increase the use of non-cash transactions. One of the efforts made by Bank Indonesia to realize LCS is to establish the National Non-Cash Movement (GNNT) on August 14, 2014. The goal of GNNT is expected to be able to increase public awareness of cashless payments which are considered easier, faster, and more efficient(Karjaluoto et al., 2019). Society is gradually formed that uses non-cash transactions more. Less Cash Society becomes an important issue in this research. The phenomenon of burning money (burning money) has sprung up many times, carried out by players in the digital wallet (e-wallet) industry in Indonesia by offering various kinds of large sales promotions such as; cashback, discounts, vouchers, points, and others. Players such as Halodocand others are competing in the competition to be able to increase consumer penetration and behavioral intention in adopting the mobile health application(Sutia et al., 2019).

This study includes social influence and hedonic motivation as independent variables, and behavioral intention as the dependent variable which refers to social cognitive theory (SCT) from the study(Chang et al., 2014). SCT Bandura(Bandura, 1986) modeled individual behavior by explaining the relationship between environmental influences (social influence), personal cognition (hedonic motivation), and behavioral outcomes (behavioral intention)(Carillo, 2010). SCT has been widely accepted and applied in the information systems literature(Chang et al., 2014). Bandura developed a reciprocal deterministic model consisting of three main factors, namely: environment, personal cognitive and behavior. These factors interact with each other

in the learning process. Environmental factors affect behavior, personal cognitive factors affect behavior and behavior affects the environment. This study refers to Social Cognitive Theory to test the research model.

This study uses demographics moderator variables (age and gender) to see whether age and gender can strengthen the influence of social influence and hedonic motivation on behavioral intentions to adopt mobile health applications. Several studies have examined the effect of gender moderating variables on the adoption and use of innovative information systems including; m-banking(Riquelme & Rios, 2010), m-commerce(Faqih & Jaradat, 2015) and m-internet(Okazaki & Hirose, 2009). Gender is also used as a moderating variable in adopting information technology(Chawla & Joshi, 2020; Hussain et al., 2020). Previous research has used gender as a moderating variable regarding research on technology acceptance and use(Venkatesh & Morris, 2000).

Gender is an important moderator variable in testing behavioral intentions on mobile health applications. The study of Dong and Zhang (Dong & Zhang, 2011) shows the results that gender affects consumer perceptions of information technology adoption. Gender has a significant consideration for adopting mobile health applications(Rouibah et al., 2016). Little research has been done to determine the influence of gender on mobile-based technologies such as m-wallet in developing countries and is limited to a few developed countries(Singh, 2014). Many researchers consider gender as an important factor and its influence in determining consumer intentions (Riquelme & Rios, 2010). Age as a moderator is also considered an important variable to study consumer perceptions of new technologies in the literature. Singh's research (Singh, 2014) found that young consumers are more satisfied and have shown greater intention to adopt m-wallet. Young consumers are more interested in using it for payments and other purposes. Previous research identified a relationship between consumer age and the probability that Millennials will use smartphones during shopping activities(Lian & Yen, 2014).

The researcher introduces the m-financial incentives payment as a new perspective in reviewing the financial incentives variable by combining the m-payment perspective as a moderation in the formation of behavioral intention. Zhao et al. (Zhao et al., 2019)mentions another term for sales promotion with financial incentives. The study of Carbo and Linares (Carbó-Valverde & Liñares-Zegarra, 2011) states that financial incentives such as cashback, discounts and points have a positive effect in encouraging the use of credit cards as an alternative payment instrument for cash.

Mobile health application (m-payment) is an e-payment method that is not connected to a bank account, where payments can be made using a smartphone. Mobile health application, known as e-payment, generally refers to a mode of payment that does not involve cash(Ab Hamid et al., 2013). Mobile health application users store their money in an electronic media (e-money) that is connected to a server for use in non-cash payment transactions. Financial incentives can be done offline and online. Offline financial incentives use real media such as brochures, banners, flyers, and others that can be found in various outlets (merchants), shops, showrooms, dealers, and others, while online financial incentives use online media, namely the internet which can be found in various forms. Financial incentives can be done online and offline, but m-financial incentives payments can only be made with cashless payment transactions by adopting mobile health applications such as Halodocand others. The role and effectiveness of m-financial incentives payments need to be studied further, so testing the effect of m-financial incentives payments as moderating in this study on mobile health applications is important to expand the literature on the adoption of payment technology in general.

Millennials who live in Jakarta were chosen to be the research subjects. Mobile health application services are one of the payment methods idolized by the Millennial Generation in Indonesia, with the highest adoption rate on the island of Java, especially Jakarta, which generates almost 58.5% of Indonesia's Gross Domestic Product (GDP) in 2016. The researcher chose server-based e-wallet or mobile health application as the object of research. Server-based e-wallet is increasingly being adopted because of its practicality, convenience, and speed.

2. Materials and Method.

The population used in this study is an infinitive population, namely the Millennial Generation of Halodocmobile health application users who are domiciled in DKI Jakarta. The number of samples set is = 10 x 24 items = 240 samples. The size of the sample set by the researcher in this study was 300 respondents to reduce the error rate. The sampling technique used in this research is Non-Probability Sampling with Purposive Sampling method. The criteria for selecting the sample in this study are as follows: the respondent has owned and used the Halodocmobile health application at least once, is domiciled in the city of DKI Jakarta and is a Millennial born in 1980-2000 who is included in the age group of 20-39 years (age range adjusts to the

data). from BPS in 2020). Data collection with questionnaires is carried out by distributing online via Google Forms connected to an email address.

The characteristics of the majority of respondents are female, reaching 57.7% as Halodoc users, compared to 42.3% for males. The characteristics of respondents aged 20-24 years in this study were the highest at 63% compared to 3 other age ranges. Characteristics of the type of work obtained that the highest Halodoc users are students as much as 52%, when compared to other types of work. Characteristics of respondents using Halodoc frequency, seen more than once a week dominates 41.7%, when compared to the frequency of other Halodoc users. Characteristics of respondents, the average expenditure per one-time transaction using Halodoc is Rp. 50,001 - Rp. 100,000, reaching 47.3%. Characteristics of respondent's activities that are often carried out when using Halodoc are for the purchase of food/beverage orders for online delivery as much as 61% and followed by payments for online transportation services as much as 24.3%. Characteristics of other mobile health application respondents used, apart from Halodoc, dominated by digital wallet as much as 47%.Inferential statistical analysis is intended to test all hypotheses in this study, namely by using Partial Least Square (PLS) analysis with the Smart PLS program.

3. Discussion.

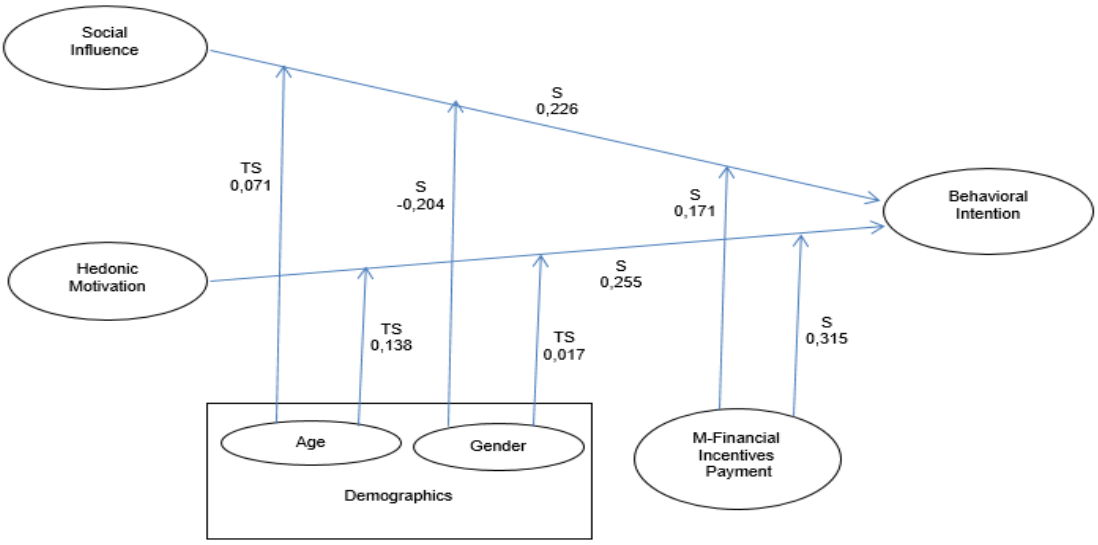

Figure 1. Final Model Structure

This study found social influence to be a supporting factor in determining an individual's behavioral intention to adopt mobile health application. Basically a person will be more accepting and adopting new technology in his life, when this technology is recommended and supported by other important people (Mbrokoh, 2016). Family, friends, peer groups, opinion leaders (influencers) and virtual communities on social media have a big influence on people's behavior in adopting mobile health applications.This study found hedonic motivation to be a supporting factor in determining an individual's behavioral intention in adopting mobile health application. Hedonic motivation basically provides pleasure and convenience in using mobile health applications which can affect the user's desire to continue using mobile health applications as a means of non-cash payment transactions and is expected to make the transaction system as simple and easy as possible that makes Millennials like to use online transactions with mobile health applications.

This study found that m-financial incentives payment can increase social influence and hedonic motivation on behavioral intention. This indicates that mobile health application industry players in Indonesia must continue to increase promotions to win the market through innovation in applications. Some useful ways to proactively attract users include special discounts,

friend referrals, communication via social media, encouragement from application developers and assistance for first-time users(Humbani & Wiese, 2019). Mobile health application industry players need to listen to consumer input and needs, so as to be the first in product and service innovation.The theory's contribution to the research model of the m-financial incentives payment variable strengthens and supports the synergy between SCT and the theory of sales promotion. M-financial incentives payment is the development of the theory of e-payment, e-money, e-wallet, and m-payment as well as the theory of sales promotion or in other terms financial incentives. M-financial incentives payment is a novelty positioned as a moderating variable, this becomes a new research model construct in responding to the inconsistency of the research gap between the influence of social influence and hedonic motivation on behavioral intention to adopt mobile health application.

4. Conclusion.

The mobile health application allows users to be more flexible in transactions, especially during the Covid-19 pandemic, as a result everyone will get used to using new technology that makes them explore. The facts show that leading users to switch from conventional payment methods to mobile health applications is not easy. It is important for mobile health application industry players to be able to understand and know what factors or determinants can influence behavioral intention to use mobile health applications in Indonesia. The impact of the current pandemic accommodates the implementation of an alternative payment system to avoid physical contact which supports Bank Indonesia's efforts through the National Non-Cash Movement (GNNT) in the context of realizing Indonesia towards a Less Cash Society (LCS).

REFERENCES

1. Ab Hamid, N. R., Akhir, R. M., & Cheng, A. Y. (2013). Social media: An emerging dimension of marketing communication. Journal of Management and Marketing Research, 12, 1.
2. Aswani, R., Ilavarasan, P. V., Kar, A. K., & Vijayan, S. (2018). Adoption of public WiFi using UTAUT2: An exploration in an emerging economy. Procedia Computer Science, 132, 297–306.
3. Bandura, A. (1986). Social foundations of thought and action. Englewood Cliffs, NJ, 1986(23–28).
4. Carbó-Valverde, S., & Liñares-Zegarra, J. M. (2011). How effective are rewards programs in promoting payment card usage? Empirical evidence. Journal of Banking & Finance, 35(12), 3275–3291.
5. Carillo, K. D. (2010). Social cognitive theory in is research–literature review, criticism, and research agenda. 20–31.
6. Chang, I.-C., Liu, C.-C., & Chen, K. (2014). The effects of hedonic/utilitarian expectations and social influence on continuance intention to play online games. Internet Research.
7. Chawla, D., & Joshi, H. (2020). The moderating role of gender and age in the adoption of mobile wallet. Foresight, 22(4), 483–504. https://doi.org/10.1108/FS-11-2019-0094
8. Dong, J. Q., & Zhang, X. (2011). Gender differences in adoption of information systems: New findings from China. Computers in Human Behavior, 27(1), 384–390.
9. Fahlevi, M. (2021). Corporate branding in banking environment: Evidence from acquisition process. 729(1), 012130.
10. Fahlevi, M., & Alharbi, N. (2021). Adoption of e-payment system to support health social security agency. International Journal of Data and Network Science, 5(4), 737–744.
11. Faqih, K. M., & Jaradat, M.-I. R. M. (2015). Mobile healthcare adoption among patients in a developing country environment: Exploring the influence of age and gender differences. International Business Research, 8(9), 142.
12. Humbani, M., & Wiese, M. (2019). An integrated framework for the adoption and continuance intention to use mobile payment apps. International Journal of Bank Marketing.
13. Hussain, S., Melewar, T. C., Priporas, C. V., Foroudi, P., & Dennis, C. (2020). Examining the effects of celebrity trust on advertising credibility, brand credibility and corporate credibility. Journal of Business Research, 109(November 2019), 472–488. https://doi.org/10.1016/j.jbusres.2019.11.079
14. Karjaluoto, H., Shaikh, A. A., Leppäniemi, M., & Luomala, R. (2019). Examining consumers' usage intention of contactless payment systems. International Journal of Bank Marketing.
15. Kuganathan, K., & Wikramanayake, G. N. (2014). Next generation smart transaction touch points. 96–102.
16. Lian, J.-W., & Yen, D. C. (2014). Online shopping drivers and barriers for older adults: Age and gender differences. Computers in Human Behavior, 37, 133–143.
17. Okazaki, S., & Hirose, M. (2009). Does gender affect media choice in travel information search? On the use of mobile Internet. Tourism Management, 30(6), 794–804.
18. Riquelme, H. E., & Rios, R. E. (2010). The moderating effect of gender in the adoption of mobile banking. International Journal of Bank Marketing, 28(5), 328–341.
19. Rouibah, K., Lowry, P. B., & Hwang, Y. (2016). The effects of perceived enjoyment and perceived risks on trust formation and intentions to use online payment systems: New perspectives from an Arab country. Electronic Commerce Research and Applications, 19, 33–43.
20. Singh, S. (2014). Customer Perception of Mobile Banking: An Empirical Study in National Capital Region Delhi. Journal of Internet Banking and Commerce, 19(3).
21. Sutia, S., Adha, S., & Fahlevi, M. (2019). Why do Customers Intend to Repurchase Transportation Online in Indonesia?125, 1–5. https://doi.org/10.1051/e3sconf/201912523010
22. Venkatesh, V., & Morris, M. G. (2000). Why don't men ever stop to ask for directions? Gender, social influence, and their role in technology acceptance and usage behavior. MIS Quarterly, 115–139.

23. Zhao, H., Anong, S. T., & Zhang, L. (2019). Understanding the impact of financial incentives on NFC mobile payment adoption: An experimental analysis. International Journal of Bank Marketing.