
INTENTION TO USE MOBILE BANKING APPLICATION: GENDER-BASED

Ignatius Hari Santoso^{1*}, Lutfi Nurcholis², Erawati Kartika³

¹Department of Management, Faculty of Economics and Business, Stikubank University
Kendeng V street, Bendan Ngisor, Semarang, Indonesia

²Department of Management, Faculty of Economy, Sultan Agung Islamic University
Kaligawe Km 4 street, Semarang, Indonesia

³Department of Management, Faculty of Economy, AKI University
Imam Bonjol No. 15-17 street, Semarang, Indonesia

*Corresponding Author: ignatiusharisantoso@edu.unisbank.ac.id

Received: February 2020; Revised: July 2020; Published: September 2020

ABSTRACT

This research is aimed to examine the gender difference toward intention to use the mobile banking application in Semarang. Data is collected by self-administered questionnaire, and pass over to bank customer which done their financial transaction by Automatic Teller Machine. The Sample used in this research is 50 respondents, consist of 30 male respondents and 20 female respondents who never have a mobile banking application before. The results of this study indicate that there is a gender difference in the intention to use mobile banking applications. On the other side, even it is easy to be used, female customers are not feeling the benefit offered, thus resistant to use mobile banking applications. This result brings another contradiction toward The Technological Acceptance Model. Data is examined by the SPSS application, and Mann – Whitney statistical model.

Keywords: *Mobile application; bank; gender difference*

INTRODUCTION

The development of information technology and communication can be assured to provide a financial benefit for financial and banking industrialists in lowering the customer service operational cost compared with the traditional way. The raise competing situation between bankers also becomes the pushing factor for each banker to maintain their customer loyalty and hunting for new customers.

Before the era of Industry 4.0, bank industrialist already applies the internet-based customer service. According Laukkanen (2007) the very basic difference between internet banking and mobile banking is the access location and the size of the communication tool used.

Besides, from the perspectives of service, customers will gain new experience and feel more comfortable if the banks provide mobile service which can be accessed anywhere and every time. Even the usage of mobile telecommunication is already wide array Riquelme and Rios (2007) said that only half of all internet banking users willing to switch to mobile banking. The skeptical opinion which supported by the unsupported internet network provider, low data security, and the low customer knowledge regarding mobile banking will push harder the barrier of mobile banking application usage.

Several early research by Klejnen *et al.* (2004) only provide information about the factors which increase the usage level of mobile banking such as age, computer usage ability, personal mobile technology availability, and social effect. Wan *et al.* (2005) proved that male customers in Hongkong are easy to adopt mobile banking technology compared with female customers. This research is supported by Yang (2005) which proved that female customers in Singapore are more concern about security matters compared with male customers which concerned with transaction effectivity.

Even the mobile banking application is attractive, Seidel (2009) by his research showed that the majority of US citizens never try to settle up the transaction by their mobile banking application. Further, Faqih and Jaradat (2015) have proven that the gender difference can affect the mobile banking usage level, thus attitude difference between male and female customers in mobile banking application usage is still attractive to be examined. Based on these facts, researchers will continue the research regarding the intention to use mobile banking application in Semarang, based on gender differences.

LITERATURE REVIEW

Mobile Banking

The term of mobile banking that used in this research is an application created by the banking industry through communication tools which connected to the internet and provide the possibility for the customer to acquire financial service form the bank. Sinisalo *et al.* (2007) said that mobile banking application is one of the most popular marketing tools, which bring the potential impact to bank promotion activity. Laukkanen (2007) has proven by using the mobile banking application, service quality is improved because of the customers available to conduct the transaction in everywhere, and anytime. Even though the research conducted by Souanta and Mattila (2004) has proven that only half of Finland citizens use the mobile banking application, based on age differences.

Several constructs have been widely applied to predict the intention to use mobile banking applications. It is perceived risk (Chung and Kwon, 2009), ease of use, perceived benefit, system quality, and self-efficacy (Luarn and Lin, 2005).

Perceived Risk

Generally, society will concern about the risk that should be taken if using the new technology, this is proposed by Laforet and Li (2005) by their research. Further Wu and Wang (2005) have proven the relationship between perceived risk and intention to use mobile banking in Taiwan. The perceived risk will be the most important factor if related to mobile communication tools because it is directly connected by wireless networks which usually have a higher risk of a data security violation.

Perceived Ease of Use and Perceived Benefit

In the basic theory, the easier information technology to be used, then customers will more fell comfortable and trust to adopt it. Davis (1989) has proven the significant effect of perceived ease of use toward the level of IT adoption. A similar result also has been shown by Luarn and Lin (2005), and also Wang and Liao (2007). Besides, Venkatesh and Davis trough their research explained that the bigger perceived benefit, bank customers will adopt the mobile banking application frequently.

Social Norm and Gender

The social norm is a kind of thing that is related to family and friends in technology usage. Pedersen and Ling (2002) explained that external factors and customer social relationships have a significant impact on new technology adoption. The customers will use mobile banking applications if they have positive suggestions from their friends and families. The research conducted by Riquelme and Rios (2010) also proved that social norms affect mobile banking application adoption.

Further, Dong and Zhang (2011), has proven that gender differences have a significant effect on information technology usage level. More specifically, research conducted by Faqih and Jaradat (2015) promoted that gender differences also provide different implications for new technology implementation. Based on the literature review above, thus the researcher proposes this hypothesis to be tested.

H₁ : There is different intention to use mobile banking application between male and female customers in Semarang.

H₀ : There is no different intention to use mobile banking application between male and female customers in Semarang

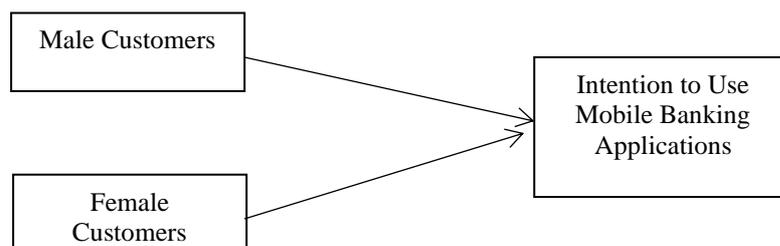


Figure 1. Research Model.

RESEARCH METHODS

Research Sample

Samples used in this research are bank customers in Semarang which not use mobile banking applications yet in their gadgets. The total sample size used are 50 customers, comprised of 30 male respondents, and 20 female respondents. The sampling techniques used in this research are a combination of purposive sampling and convenience sampling.

The data derived from the printed questionnaires which directly handover to the customers after they settle their transaction activity in an automated teller machine. The questionnaires consist of 23 items of statements and respondents are demanded to choose the agree, very agree, disagree, and very disagree option based on Likert – like scale.

Measurement Model Evaluation

The questionnaire used in this research, previously used by Riquelme and Rios (2010). Even has been used before, the validity and reliability test are still commenced in this research.

Table 1. Questionnaire's Statement Item

No	Statements List
1	I think, using a mobile application to transaction settlement is a risky action.
2	I doubt the transaction can be settled smoothly by using a mobile banking application.
3	Conducting a banking transaction using the mobile banking application is full of risk, and the data can be lost easily
4	Sending information regarding transactions using mobile banking application is a dangerous thing.
5	Conducting a banking transaction through a mobile banking application is dependable.
6	Conduction banking transaction through mobile banking applications gives me more benefits than through PC.
7	Conduction banking transaction through mobile banking application is comfortable than through PC.
8	Banking transactions using mobile banking will eliminate the time and place limitations than through PC.
9	Mobile banking application is not a substituted technology for better banking transaction
10	Conducting a banking transaction through a mobile banking application is easy to be done.
11	It is very easy for me to remind the steps of conducting a banking transaction through mobile banking.
12	I believe that mobile banking application is easy to use to settle the banking transaction.
13	Conducting a banking transaction through mobile banking is a simple activity that can be done by me.
14	If the mobile banking facility is provided, I will use it soon.
15	If the mobile banking facility is provided, I will use it regularly.

16	If the mobile banking facility is provided, I will use it to seek the information regarding banking product only, but not to use for the transaction.
17	Mobile banking applications will make it easy to conduct a banking transaction.
18	Mobile banking application is very useful when I need to settle a banking transaction.
19	Mobile banking application is useful to eliminate the limitation of time and place to banking transaction
20	Mobile banking application will give me full authority control of all my banking transaction
21	If I use the mobile banking application to conduct a banking transaction, I will earn a higher social status between friends.
22	If I use the mobile banking application to conduct the transaction, I will be considered more prestigious than the others who do not use mobile banking.
23	I will become a trendy person if using a mobile banking application to conduct a banking transaction.

Model Evaluation

Collected data is examined by the SPSS application through the Mann Whitney U Test method. This is one of several non-parametric statistical techniques that testing the difference in constructs based on the 5% significance level.

RESULT AND DISCUSSION

Descriptives

With the amount of 50 respondents which consist of 30 male respondents, and 50 female respondents used in this research. All respondents are bank customers who do not have a mobile banking application and never use it before. Based on their age, we can classify them in 3 categories, 17-30 years old (20 respondents), 31-40 years old (13 respondents), and above 40 years old (17 respondents). Based on their education level, we can classify them in 3 categories, a master's degree (3 respondents), a bachelor's degree (43 respondents), and a high school degree (4 respondents).

Validity and Reliability Test

Reliability testing result shows that items which used to measure the difference intention to use mobile banking application between male and female customers in Semarang are reliable to be examined with Cronbach's Alpha value 0,803. Besides, the validity test which using critical value 0,235 as R table showed that only 14 items of questionnaires can be used for this research. The results of reliability and validity are shown below.

Table 1. Reliability Test

Cronbach's Alpha	Cronbach's Alpha on Standardized Item	<i>item</i>
0.803	0.801	23

Table 2. Validity Test

	<i>Scale Variance if Item Deleted</i>	<i>Corrected Item-Total Correlation</i>	<i>Squared Multiple Correlation</i>	<i>Cronbach's Alpha if Item Deleted</i>
<i>Item10</i>	255,024	,860	,838	,985
<i>Item11</i>	250,385	,867	,850	,984
<i>Item12</i>	249,634	,913	,853	,984
<i>Item13</i>	245,684	,901	,884	,984
<i>Item14</i>	246,686	,933	,916	,983
<i>Item15</i>	252,449	,912	,900	,984
<i>Item16</i>	251,976	,947	,928	,983
<i>Item17</i>	245,236	,931	,896	,983
<i>Item18</i>	245,592	,939	,916	,983
<i>Item19</i>	249,063	,929	,894	,983
<i>Item20</i>	252,763	,833	,766	,985
<i>Item21</i>	240,891	,948	,917	,983
<i>Item22</i>	250,951	,852	,783	,985
<i>Item23</i>	248,671	,878	,816	,984

Hypothesis Testing

This research is using the Mann Whitney method to examine the different intentions between male and female customers in using mobile banking applications. Based on this method, the researcher will determine the hypotheses tested are accepted if the significance value is below 0,05. The statistical test is shown in table 3.

Table 3. Mann Whitney Test Result.

Metode Analisis	Signifikansi	Kriteria Signifikansi
Mann - Whitney U	0,00	0,05
Wilcoxon W	210,000	
Asymp Sig	0,00	

Based on the statistical test by the Mann Whitney technique, we can conclude that the hypotheses proposed in this research are supported. Thus, this research shows us the different intentions between male and female customers to use mobile banking application in Semarang. To examine the difference, the researcher provides the tabulation which informed us regarding the mean value of each item in questionnaires.

Table 4. Mean Value

Construct	Item	Score		Mean	
		Male	Female	Male	Female
Ease of Use	Item 10	4,26	4,45		
	Item11	4,3	4,35	4,305	4,4125
	Item12	4,26	4,45		

	Item13	4,4	4,4		
Intention to Use	Item14	4,33	1,7		
	Item15	4,06	1,85	4,13	1,76667
	Item16	4	1,75		
Perceived Benefit	Item17	4,33	1,65		
	Item18	4,5	1,85	4,3075	1,8125
	Item19	4,3	1,85		
	Item20	4,1	1,9		
Social Norm	Item21	4,3	4,4		
	Item22	4,16	4,4	4,25333	4,43333
	Item23	4,3	4,5		

Discussion

Table 4 above showed the difference in intention to use. The mean value of male respondents answers agrees to a user the mobile banking application with a mean score of 4,13, while female respondents answer most disagree with a mean score 1,76. Thus this research shows us the consistency to support the previous research that gender brings the effect to technology usage (Wan *et al.*, 2005; Faqih dan Jaradat, 2015).

Another difference as the result of this research is from Perceived Usefulness, which male customers strongly agree that mobile banking application is useful in banking transaction with a mean score of 4.30. On the other side, the opposite answer comes from female customers with a mean score of 1.81. Even previous research conducted by Venkatesh and Davis (2000) has proven when technology is assumed as useful, then customers will have the intention to adopt it, this research provides another result that gender has the significant power to make difference.

Another result showed by table 4 above is the similar perception between male and female customers regarding the ease of use of the mobile banking application. Before the handover, the questionnaire, the researcher do some demonstration on how to use the mobile banking application for a specific purpose like balance checking and transaction settlement. Almost all respondents are savvy to interact with the application, and fast to learn and operate the mobile banking application

Another result of this study is the similarity in perception between male and female customers that the mobile banking application is easy to operate with an average answer of male customers is 4.30 and female customers is 4.41. However, although it is perceived as easy to use, it turns out that female customers do not have the intention to use the mobile banking application further.

Further, a similar matter is also found in the Social Norms, in which mobile banking application users are considered to have a higher social status and keep up with the times when compared to those who do not use mobile banking applications. Hyde-Clarke *et al.* (2014) have succeeded in proving that there are differences in the ability to use communication technology. This is due to the differences in education levels. The higher the level of education, the more social networks one has. By looking at the descriptive statistics of this study, where respondents are predominantly by educated customers, it can be believed that the social networks owned

by each respondent also have a contribution in forming customer perceptions of the mobile banking application.

The interesting issue that showed by this research is items from the Perceived Risk construct is not tested, because they are not valid, even though Riquelme and Rios (2010) in their research stated that the statement items were valid. Besides, if we look specifically at female customers, there is a clash of theoretical concepts. The Technological Acceptance Model (TAM) theory developed by Davis (1989) reveals that if a technology is beneficial and easy to use, consumers will tend to accept and use the technology.

Even so, the results of this study indicate that although customers find it easy to use the mobile banking application, female customers have not felt the perceived benefits so they do not need to use the application. Thus, further research is needed to confirm the contradictions that occur in the Technological Acceptance Model concept used in this study.

CONCLUSION

This study proves that there are differences in the intention to use mobile banking applications between male and female customers in Semarang. Particularly the difference lies in the perceived benefit and the intended use, where the female customers do not feel the perceived benefit from using the application so that they do not have the intention to use it. The results of this study are useful for enriching the academic literature in the field of Management.

Some limitations of this study are only 14 items of questionnaires is declared valid. This can be material for improvement for further research, especially in the development of measuring instruments. Also, further research is expected to examine the differences that arise in the use of mobile banking applications by using the generation category as a differentiator. Thus the research carried out can give different results. Besides, it is also hoped that further research can use a larger sample size to get more comprehensive.

REFERENCES

- Chung, N., and Kwon, S.J. (2009). The Effects of Customers' Mobile Experience and Technical Support on the Intention to Use Mobile Banking. *CyberPsychology & Behavior*, 12(5), 539 - 543.
- Davis, F.D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly*, 13(3), 318 - 339.
- Dong, J.Q., and Zhang, X. (2011). Gender Differences in Adoption of Information Systems: New Findings From China. *Computers in Human Behavior*, 27(1), 384 - 390.
- Faqih, K.M., and Jaradat, M.I.R.M. (2015). Assessing the Moderating Effect of Gender Differences and Individualism-Collectivism at Individual-Level on the Adoption of Mobile Commerce Technology: TAM3 Perspective. *Journal of Retailing and Consumer Services*, 22, 37 - 52.
- Hyde-Clare, N., Ngcongco, M., and Mnisi, J. (2014). A Gender Gap? Uses and Perception of Mobile Phone Banking in South Africa. *International Journal of Humanities and Social Science*, 4(1), 170 - 178.
- Kleijnen, M., Wetzels, M., and de Ruyter, K. (2004). Consumer Acceptance of Wireless Finance. *Journal of Financial Services Marketing*, 8(3), 206 - 217.

- Laforet, S, and Li, X. (2005). Consumer Attitudes towards Online and Mobile Banking in China. *International Journal of Bank Marketing*, 23(5), 362 - 380.
- Laukkanen, T. (2007). Internet vs Mobile Banking: Comparing Customer Value Perceptions. *Business Process Management Journal*, 13(6), 788 – 797.
- Luarn, P., Lin, H.H. (2005). Toward an Understanding of the Behavioral Intention to Use Mobile Banking. *Computers in Human Behavior*, 21(6), 873 – 891.
- Pedersen, P., and Ling, R. (2002). Modifying Adoption Research for Mobile Internet Service Adoption: Cross-Disciplinary Interactions. *Proceedings. Presented at The 36th Hawaii International Conference on System Sciences*, January 6-9, Big Island, HI
- Riquelme, H.E., and Rios, R.E. (2010). The Moderating Effect of Gender in the Adoption of Mobile Banking. *International Journal of Bank Marketing*, 28(5), 328 – 341
- Seidel, G. (2009). Challenges but Opportunities for Mobile Banking. *Card Technology Today*, 2, 5-6.
- Sinisalo, J., Salo, J., Karlajuoto, H., Leppaniemi, M. (2007). Mobile Customer Relationship Management: Underlying Issues and Challenges. *Business Process Management Journal*, 13(6), 771 - 787.
- Venkatesh, V., and Davis, F.D. (2000). A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies. *Management Science*, 46(1), 186 – 204.
- Wan, W., Luk, C.L., and Chow, C. (2005). Customers' Adoption of Banking Channels in Hong Kong. *The International Journal of Bank Marketing*, 23(2), 255 – 263.
- Wang, Y.S., and Liao, Y.W. (2007). The Conceptualization and Measurement of M-Commerce User Satisfaction. *Computers in Human Behavior*, 23(1), 381 - 398.
- Wu, J.H, and Wang, S.C. (2005). What Drives Mobile Commerce? An Empirical Evaluation of the Revised Technology Acceptance Model. *Information & Management*, 42(5), 719 - 729.
- Yang, K.C. (2005). Exploring Factors Affecting the Adoption of Mobile Commerce in Singapore. *Telematics and Informatics*, 22(3), 257 - 277.