Women and Digital Financial Inclusion in Indonesia as Emerging Market

Subiakto Soekarno, Indra Yudha Mambea, Marla Setiawati*

Institut Teknologi Bandung, Indonesia. *Email: patriciamarla601@gmail.com

ABSTRACT

Digital financial inclusion is digital access to and use of formal financial services. This paper aims to examine the significance of gender dimension in digital financial inclusion in Indonesia as an Emerging Market. By using surveys, we expect to relate women and digital financial inclusion. The ordinal logistic regression model was used as a method to model one of the key variables, gender. The result concluded that women as the gender we concerned gives a significant impact to behavioral intention that represents the digital financial inclusion.

Keywords: Women Digital Financial Inclusion; Financial Services; Gender Dimension
JEL Classifications: G4, I20

1. INTRODUCTION

Better and more effective financial inclusion will help to reduced gender inequality. That fact leads us to concern whether women and financial inclusion can be related to each other. Financial inclusion ensures that all groups of society can have access to regulated financial products and services, even those with the lowest income without gender gaps. Digital technology has already emerged in many sectors as a game-changing enabler and is now beginning to have a significant impact on financial services. Digital financial services have the potential to have a significant impact on financial inclusion. Research in the area of financial inclusion has been widely performed. In Tanzania, 17.3% of adults had bank accounts in 2011, rising to 39.8% in 2014. Allen et al. (2015) concluded that lower transaction costs, greater access to financial intermediaries, stronger legal rights, and a more politically secure climate are related with greater financial inclusion. Kim et al. (2018) found that financial inclusion has had a positive impact on economic growth in OIC (Islamic Cooperation Organization) countries, where data on the use of financial services such as deposits, credit and insurance are key indicators for calculating

financial inclusion, while GDP is a variable for economic growth. Asian Development Bank researched and found that digital financial inclusion could play a key role in bridging financial inclusion gaps.

In this technology era, focus of financial inclusion is moving to digital financial inclusion. Digital Financial Inclusion (DFI) is the digital access to and use of formal financial services and products. Ozili (2018) stated digital finance by Fintech providers has positive effects on financial inclusion in emerging and developed economies, and that the convenience of digital finance for low- and variable-income individuals is often more significant. Ouma et al. (2017) concluded that it is important to support those who use mobile financial services.

According to the UN study, women make up nearly 50% of the world's population, do almost 67% of the world's jobs, earn just 10% of the world's income, and own <1% of the world's land. The World Bank study (World Bank, 2001) confirms that gender-based societies are paying the cost of higher poverty, slower economic growth, poorer governance, and lower living standards for their people. Referring to these facts, Indonesia needs to address

the role of women in the particular field of inclusion in digital finance. Women continue to have a lower proportion than men in any specific field of financial inclusion. The risk of gender discrimination cannot be neglected. The Sustainable Development Goals (SDGs) number five claimed that gender equality means that women will play the same role as men now and in the future.

Indonesia as an emerging market has a low rate of financial inclusion, which is even lower for women. Based on the Global Gender Gap Report (2016), Indonesia ranks 88 out of 144 countries in the Global Gender Gap Index with a score of 0.682 (0 for inequality and 1 for parity). In 2016, Indonesia ranks 89 out of 144 countries for the literacy rate.

Based on the Central Bureau of Statistics (2018) the percentage of women population in Indonesia is 49.76% compared to men at 50.24%. The number of residents who have mobile phones according to the Ministry of Communication and Information Technology (the number of Indonesians active as smartphone users) is more than 100 million, which is more than 40% of the total population of Indonesia. These findings promotes work on digital financial inclusion for women in Indonesia. Digital financial inclusion is one research that is very rare in Indonesia. Women continue to be financial managers in the family, although the gender gap in access to finance (Gender and Development Unit, 2013) is one field where inequality is relatively common and is attracting attention. The gender gap is troubling as the absence of women from economic activities means that their significant contribution to the economy will be ignored. Economic transition is definitely the most critical and perhaps most dynamic of all economic issues in Indonesia. Financial inclusion for women helps to turn them in order to improve the economy of the country. This gender disparity can be reduced by digital access to financial technology. Based on Ozili (2018), one of the advantages of digital financial inclusion is to raise the GDP of digitalized economies by rising aggregate expenditure. Women with direct access to financial services may increase their prospects to become entrepreneurs, thereby suggesting their individual incomes and chances of being more independent.

We conducted the survey to women in Indonesia in 2019. The research aims to examine the significance of gender dimension in Digital Financial Inclusion in Indonesia as Emerging Market. The remainder of the paper is organized as follows: Section 2 provides the literature review. Section 3 describes the data and methodology. We analyze and discuss in section 4 and conclude the paper in section 5.

2. LITERATURE REVIEW

2.1. TAM and UTAUT2
Beside women as main variables, we use models that represent technology acceptance of digital financial inclusion. Between various theoretical models representing acceptance of technology, the Technology Acceptance Model (TAM) was the most commonly used by many researchers and Google Scholar. It had more than 7000 citations. In predicting the adoption of information systems by a person, TAM proved to be a robust and parsimonious model (Davis and Davis 1989). Davis and Davis (1989) developed this

model to describe the influence of external variables on individual beliefs and attitudes towards the information system, the two variables reflecting an attitude towards use are perceived of use and an information system's perceived usefulness.

Originally, Davis and Davis (1989) developed TAM to test the acceptance of word processor technology by IBM employees. Nevertheless, TAM has recently provided solid empirical evidence to explain e-commerce, mobile trading, personal computers, telemedicine technology and the World Wide Web (Mathieson, 1991; Igbaria et al., 1997; Chen et al., 2002; Vijayasarathy, 2004; Chen, 2008). TAM has been widely used as a research model to predict and describe the adoption and actual use of ATMs, telephone banking, mobile banking, and internet banking.

For three reasons, TAM is common among researchers. First, TAM is designed to explain the adoption of information systems or information technology in different organizations, cultures, technology contexts, and different levels of expertise. Second, TAM has strong measurement scale validity and is effective in its theoretical literacy. Third, the results of specific empirical studies that have fully supported their explanatory power using TAM (Yousafzai, Foxall, and Pallister, 2010).

Despite its popularity, there are few limitations to using TAM that is linked to its extensibility and explanatory power. Therefore, to the extent of the TAM, many researchers have proposed additional variables to make the model more powerful (Quan et al., 2010). Some scholars suggest that TAM cannot provide practitioners with sufficient consequences (Benbasat and Zmud, 1999). In addition, evidence suggests that this model does not capture the inhibiting influence and personal control factors that may impact adoption behavior, such as consumer unconscious habits and time of adoption (Mathieson and Keil, 1998; Taylor and Todd, 1995).

Furthermore, TAM has been criticized for neglecting the importance of social issues, especially subjective standards related to perceived social pressure, whether or not it has been involved in certain behaviors. In addition, TAM was intended to be used in the conduct of computer use (Davis and Davis 1989). Because of these shortcomings, some researchers consider TAM to be too

Table 1: Main variables

Variables	Definition
Gender	0 female 1 male
Behavioral Intention	Intent to continue using mobile financial services in the future frequently
Perceived usefulness	Positive effect, users will adopt new system if they perceived that it more useful than previous system
Performance expectancy	Positive effect, users likely to adopt mobile financial services if they perceive that it is beneficial to their job performance.
Habit	Positive effect, users likely to adopt mobile financial services if the perceive that using mobile financial services is a must.
Effort expectancy	Positive effect, users likely to adopt mobile financial services if they perceived that it is easy to use
Edu	Have at least bachelor's degree

Table 2: Empirical result

Ordered logistic regression				Number of obs		622	
				Wald Chi square (12)		291.23	
				Pro > Chi square		0.0000	
Log pseudolikelilihood	−542.32179			Pseudo R2		0.3547	
BI	Coef	Robust std. err.	z	P > |z|	(95% conf. interval)		Sig
PU	0.0251424	0.167176	0.15	0.880	−0.3025165	0.3528013	
PE	0.3503524	0.1876201	1.87	0.062	−0.0173763	0.718081	*
Habit	1.059617	0.1560628	6.79	0.000	0.7537399	1.365495	***
EE	1.596308	0.2114586	7.55	0.000	1.181857	2.010759	***
Gender	0.7955858	0.4554839	1.75	0.081	−0.0971462	1.688318	*
Employ	0.1558359	0.347212	0.45	0.654	−0.5246836	0.8363625	
Edu	0.1310233	0.3119771	0.42	0.675	−0.4804405	0.7424872	
Gender#edu	0.0371066	0.3667177	0.1	0.919	−0.6816469	0.7558601	

***.**.*Refer to the significance level from 1%, 5%, to 10%, respectively

general and therefore cannot support a reasonable understanding of the use of advanced mobile services and technologies (Bouwman and Van De Wijngaert, 2009; Salimon et al., 2017).

The next model that we used in this research is the Theory of Acceptance and Use of Technology 2 (UTAUT2). From this model, there are four variables that significant in explaining the behavioral intention and the actual use of technology. Those variables are performance expectancy, effort expectancy, social influence, hedonic motivation, and facilitating conditions. Table 1 shows us the variables that we used. By using both models we can examine the factors that influence mobile financial service adoption by women in Indonesia.

2.2. Women and Digital Financial Inclusion

Kemal, Atika (2015) said that the expansion of mobile banking empowers women in certain ways to achieve financial inclusion. There are several obstacles that women face in terms of financial inclusion in the Gender Economic Equality Study (2018). There are therefore three sets of recommendations to promote business growth through the use of financial services, cross-cutting concerns required to support women's financial inclusion, and to determine how to close the gender gap by promoting the participation of financially excluded non-banked women. We are concerned to explore the importance of the gender aspect of digital financial inclusion in Indonesia as an emerging market. As Lusardi and Mitchell (2014) have noted, many people around the world are financially illiterate, including women. ICRW (2017) reported that the number of research studies related to digital financial inclusion is smaller than that of financial inclusion itself. This void is leading us to do this work.

3. DATA AND METHODOLOGY

To investigate 622 respondents are used. We concentrate on the use of mobile financial services, also known as digital financial inclusion, by significant women. We use ordered logistic regression to explore the determinant of the adoption model. The logistic regression model analyzes the ordinal outcomes.

4. EMPIRICAL RESULTS

Table 2 summarizes the results of this research. There are four variables that positive significant to behavioral intention, namely performance expectancy, habit, effort expectancy, and gender. We show the dependent variable is behavioral intention. Behavioral intention means the users tend to use mobile financial services in the future frequently. This behavioral intention represents digital financial inclusion. Gender has significant toward the behavioral intention. It means that women in Indonesia tend to have digital financial inclusion in their daily life. Performance expectancy means that digital financial inclusion is beneficial to the user and comfortable to use. Habit explains to us that digital financial service has become natural to use. Effort Expectancy means that ease of use of the digital financial service makes the respondent eager to use it, it includes the friendly and clear interface of the application.

5. CONCLUSION

Generally, there is a gender gap and this gap confirms in emerging economies. This study was designed to examine the significance of gender dimension in Digital Financial Inclusion in Indonesia as Emerging. The empirical results show that first, gender have a positive significant effect to user behavior. Second, by using TAM and UTAUT as the reference of the variables included, there are other variables that significant, namely performance expectancy, habit, and effort expectancy.

Digital financial services deliver a number of benefits, such as convenient access, flexible and real-time services. On the basis of these advantages, digital financial services are projected to be more widely implemented in order to increase financial inclusion. Mobile financial services can also be more convenient and affordable compared to traditional banking, which can help users manage their money on a daily basis, especially women as financial controllers in their families who tend to plan for the future, compare financial products and keep them informed.

One way for women in Indonesia to achieve digital financial inclusion is through digital financial education. This is significant in research on understanding that greater digital financial inclusion will contribute to greater financial stability. Hopefully, this work would lead the banking industry to realize that women have a positive effect on consumer behaviour. This will strengthen the banking industry to help women in Indonesia become more involved in digital financial inclusion. Bank may develop

variations on the platform to attract women. It needs to be studied for further analysis.

REFERENCES

Allen, F., Demirguc-Kunt, A., Klapper, L., Soledad, M., Peria, M., Allen, F. (2015), The foundations of financial inclusion: Understanding ownership and use of formal accounts⇔. Journal of Financial Intermediation, 27, 1-30.

Benbasat, I., Zmud, R.W. (1999), Empirical research in ınformation systems: The practice of relevance. MIS Quarterly, 23(1), 3-15.

Bouwman, H., Van De Wijngaert, L. (2009), Coppers context, and conjoints: A reassessment of TAM. Journal of Information Technology, 24(2), 186-201.

Central Bureau of Statistics. (2018), National Economic Census. Nepal: Central Bureau of Statistics.

Chen, L. (2008), A model of consumer acceptance of mobile payment. International Journal of Mobile Communications, 6(1), 32-40.

Chen, L., Gillenson, M.L., Sherrell, D.L. (2002), Enticing online consumers: An extended technology acceptance perspective. Information and Management, 39(8), 705-719.

Davis, F.D., Davis, F. (1989), Perceived usefulness, perceived ease of use, and user acceptance of ınformation technology. MIS Quarterly, 13, 319-340.

Gender and Development Unit (2013), Available from: https://www.unstats.un.org/unsd/statcom/doc13/2013-10-GenderStats-E.pdf.

Gender Economic Equality Study. (2018), Available from: http://www3.weforum.org/docs/WEF_GGGR_2018.pdf.

Global Gender Gap Report. (2016), Available from: http://www3.weforum.org/docs/GGGR16/WEF_Global_Gender_Gap_Report_2016.pdf.

ICRW. (2017), Available from: https://www.icrw.org/wp-content/uploads/2017/06/EICM-Global-Conference-Edition-June-27-FINAL.pdf.

Igbaria, M., Zinatelli, N., Cragg, P., Cavaye, A.L.M. (1997), Personal computing acceptance factors in small firms: A structural equation model. MIS Quarterly, 21(3), 279-290.

Kabakova, O., Plaksenkov, E. (2018), Analysis of factors a ff ecting fi nancial inclusion: Ecosystem View, 89, 198-205.

Kemal, A.A., Yan, L. (2015), Mobile Banking Adoption and Diffusion: Enabling and Constraining Social or Financial Inclusion among Poor Women in Pakistan? Available from: http://www.weforum.org/docs/WEF_GGGR_2018.pdf. Available from: https://www.icrw.org/wp-content/uploads/2017/11/Gender-and-digital-financial-inclusion.pdf

Kim, D., Yu, J., Hassan, M.K. (2018), Research in ınternational business and finance financial inclusion and economic growth in OIC countries. Research in International Business and Finance, 43, 1-14.

Lusardi, A., Mitchell, O.S. (2014), The economic ımportance of financial literacy: Theory and evidence. Journal of Economıc Lıterature, 52, 5-44.

Mader, P. (2016), Card crusaders, cash infidels and the holy grails of digital financial inclusion. Behemoth A Journal on Civilisation, 9(2), 59-81.

Mathieson, K. (1991), Predicting user intentions: Comparing the technology acceptance model with the theory of planned behavior. Information Systems Research, 2(3), 173-191.

Mathieson, K., Keil, M. (1998), Beyond the interface: Ease of use and task/technology fit. Information and Management, 34(4), 221-230.

Ouma, S.A., Odongo, T.M., Were, M. (2017), Mobile financial services and financial inclusion: Is it a boon for savings mobilization? Review of Development Finance, 7(1), 29-35.

Ozili, P.K. (2018), Borsa Istanbul Review Impact of Digital Finance on Financial İnclusion and Stability, Paper. Borsa Istanbul Review.

Poverty, A. (2001), In: Kanbur, R., Lustig, N., editors. World Development Report 2000/2001. Geneva, Switzerland: World Health Organization.

Quan, S., Hao, C., Jianxin, Y. (2010), Factors influencing the adoption of mobile service in China: An integration of TAM. Journal of Computers, 5(5), 799-806.

Salimon, M.G., Yusoff, R.Z.B., Mokhtar, S.S.M. (2017), The mediating role of hedonic motivation on the relationship between adoption of e-banking and its determinants. International Journal of Bank Marketing, 35(4), 558-582.

Taylor, S., Todd, P. (1995), Assessing IT usage: The role of prior experience. MIS Quarterly, 19(4), 561-570.

Vijayasarathy, L.R. (2004), Predicting consumer intentions to use on-line shopping: The case for an augmented technology acceptance model. Information and Management, 41(6), 747-762.

Yaumidin, U.K., Suhodo, D.S., Yuniarti, P.I., Hidayatina, A. (2017), Financial inclusion for women: Impact evaluation on Islamic microfinance to women's empowerment in Indonesia. In: Financial Inclusion and Poverty Alleviation. Cham: Palgrave Macmillan. p81-140.