

# Trust Role in Acceptance of Digital Banking in Indonesia

Nurrani Kusumawati and Azzahra Almadelia Rinaldi

**Abstract**—The technology advance creates digital banking as a new technology in banking industry. All banking activities can be solved by one application in smartphone, they do not even provide an offline branch. Many Indonesian customers still use the conventional bank instead of digital banking since it is a new product and technology in bank industry. This paper aims to elaborate the influence of trust in customer acceptance of digital banking technology in Indonesia. The researchers applied quantitative survey with distributed the questionnaires to 500 respondents in conducted the research. The outcome indicates that hedonic motivational factors, habits, and trust have significant results on behavioral intentions to use, meanwhile trust has influence to performance expectancy, effort expectancy and facilitating condition.

**Index Terms**—Digital banking, customer acceptance, Indonesia, trust, PLS-SEM.

## I. INTRODUCTION

The increase number of smartphone user in Indonesia creates new opportunity for banking industry to develop new product in mobile application format. Many banks and companies built the financial technology (fintech) application for smartphone-based [1]. Three fintech services predicted have positive growth in 2018 that created by private companies: mobile payment method, Peer to peer lending and financial management application. Meanwhile, for banks, they still played on internet banking and mobile banking as additional services for their customers. Two Indonesia banks saw the opportunity to create new product, digital banking product or call as virtual bank. They are Bank Tabungan Pensiunan Negara (BTPN) developed Jenius Digital Banking and Development Bank of Singapore (DBS) established Digibank [2]. Digital banking is a new platform that goes way beyond an online or mobile banking platform which represents a virtual process that includes online banking. It provides the ability for the users to access financial data through mobile, that the platform must cover the function as head office, branch office, online service, bank cards and ATM. The advantages of digital banking covers credit card for online shopping, free administration fee, free withdrawal fee in any ATMs, transfer fee wave to other banks, simple and easy to use, deposit. Otherwise, they have disadvantages as well especially in transaction issues, security, hard to find physical ATM for both Digital Banking, top up into the account, depend on smartphone and internet

connection.

Digital Banking is a new product for customers, as a new product it was not easy to be accepted by the customers, especially for banking product. Trust becomes one of the consideration factors in choosing the banking services. [3] said that the transaction between customers and the financial system will be facilitated by trust. Trust plays a vital role in the acceptance of the technology, the reliability and availability of the system when the user needs the service is an important factors affecting adoption of such service [4]. Trust is sees as faith or confidence that the other party will fulfil obligations set forth in an exchange. The digital banking offered many features which require privacy that makes trust as the importance factor. Recent literature on internet banking showed the lacking of trust has to be considered to be one of the main reasons why consumers are still reluctant to conduct their financial transactions online [5]–[8].

Some previous researches stated trust has relationship with the adoption process and behavioral intention of a new product. [9] Trust has a positive impact on perceived usefulness, perceived behavioural control and subjective norm. [10] Trust has significant relationships with perceived usefulness and perceived ease of use. Nevertheless, some researchers [10], [11] stated that trust has influence to traditional adoption model (TAM).

## Problem Statement

Digital banking as new product innovation in financial services industry. With the benefit that Jenius and Digibank offer, digital banking user receives ease of financial transaction. Those benefits include such as easy to transfer, cheaper transfer fees to other banks, paying bills, term deposits, and saving. The development of digital banking is positive since it first launched. This can be seen through increasing number of digital banking users. Digital Banking Head BTPN said that since Jenius was launched in August 2016, as of December 2018 there was about 1.2 million digital savvy as Jenius users meanwhile their targeted 3 million of users. Also the digibank said that until February 2019 the customers that have signed up for Digibank reached amount of 600.000 users and they target in the next 3 years aimed to 3.5 million users.

However, until now there are pro-contra about the digital banking system (in this case about Jenius and Digibank). Such as; cybercrime, attaining app perfection, an image of getting hacked and fear of theft, customer service handling that is less responsive. Whereas if people use conventional bank, it will be much safer because there are people who arrange the financial data and there is physical bank. Thus, the focus of this research is to explore which factors of

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customer acceptance have the greatest impact with the influence of trust toward their behavioural intention to use digital banking products in Indonesia, in this case Jenius and Digibank.

This research aims to explore customer acceptance factors of digital banking and the influence of trust toward behavioural intention. The limitation of this research was the respondents only digital banking user whose live in Jakarta, Bogor, Depok, Tangerang, Bekasi (Jabodetabek) and Bandung, with age range between 17 – 50.

## II. LITERATURE

### A. Digital Banking

The differences between digital banking with the online banking services that online banking only covers transactions such as remote deposits, money transfers, bill pay, and basic online management of accounts. While digital banking is the digitization of all activities and programs from the traditional bank, online banking is only the digitization of core activities from traditional banking. So, digital banking encompasses and cover all banking activities (internet banking and mobile banking) but in online ways.

### B. Customer Trust and Customer Acceptance

There are some of previous literature that shown trust can be related with behavioural intention to adopt and also some equivalent variables in UTAUT. The variables for example Wu and Chen [9] found that trust has a positive impact on perceived usefulness, perceived behavioural control, and subjective norm. Also, Pavlou [10] showed significant relationships between trust and perceived usefulness and perceived ease of use.

### C. UTAUT 2

The full name of UTAUT Model is Unified Theory of Acceptance and Use of Technology [11]. The Unified Theory of Acceptance and Use of Technology (UTAUT) [11] provides a framework for explaining and predicting ICT use. This theory is made based on an extensive literature review and empirical comparison that included Theory of Reasoned Action, the Technology Acceptance Model, the Theory of Planned Behaviour, a model combining the Technology Acceptance Model and the Theory of Planned Behaviour, the Model of PC Utilization, the Motivational Model, the Social Cognitive Theory and the Innovation Diffusion Theory, including their extensions. From all those models, the key element is the behaviour.

### D. Hypothesis Development

Previous studies [11]–[13] discovered that performance expectancy encompasses a positive impact on a user's behavioural intention to use internet banking services. Zhou, Lu, and Wang [14] reported similar findings in m-banking, whereas Jaradat and Al Rababaa [15] reported similar findings regarding m-commerce in Jordan. Therefore, the propose hypothesis is: *H1: Performance expectancy will significantly affect behavioural intention to adopt.*

Effort expectancy is “the degree to that an individual perceives that the innovation are simple to use” [16]. Indeed, users' perceptions of ease may be raised after they are using a simple technology, which needs very little information, and is, therefore, easy to run. Littler & Melanthiou [12] found that the larger the user's effort expectancy, the larger the user's behavioural intention to use e-banking services. Therefore, the propose hypothesis is: *H2: Effort expectancy will significantly affect behavioural intention to adopt*

Social influence (SI) is outlined because the result of environmental factors, as an example the opinions of user's friends, relatives [11]. [17] social influence can have an effect on user's intention to adopt internet banking services. Therefore, the propose hypothesis is: *H3: Social influence will significantly affect behavioural intention to adopt.*

Facilitating conditions have an immediate impact on behavioural intention, and former research reveals its positive impact on intention to use internet banking [18]. Therefore, the propose hypothesis is: *H4: Facilitating condition will significantly affect behavioral intention to adopt*

The factors of hedonistic motivation are thought-about because the most important aspects in affecting customer's disposition to just accept internet banking [19], [20]. Therefore, the propose hypothesis is: *H5: Hedonic motivation will significantly affect behavioral intention to adopt*

The price value is positive once the advantages of using a technology are known to be larger than the monetary cost. Such price value worth positive impact on intention [21]. Therefore, the propose hypothesis is: *H6: Price value will significantly affect behavioural intention to adopt*

The empirical findings concerning the role of habit in technology use have painted completely different underlying processes by that habit influences technology use [21]. Davis and Venkatesh [22] recognised habit as another issue that affects the activity intention and therefore the usage of technology. Therefore, the propose hypothesis is: *H7: Habit will significantly affect behavioural intention to adopt*

Trust has been thought-about as a crucial issue that affects the customer's willingness towards the acceptance of internet banking [23], [24]. Along with this, Alwan and Al-Zubi [25] examined the impact of trust on intention to adopt internet banking in Jordanian Banks. They concluded that trust contains important impact on intention to adopt internet banking. Customers are choosey once it involves trust on technology and to convert themselves to use that technology [26]. In previous studies, several studies examined the link between trust and behavioural intention [27], [28]. The link between the initial variables (Performance expectancy, Effort expectancy, and Social influence) with behavioural intention to adopt shows similar results to the previous models. The same happened with the link between Trust in technology with Performance expectancy, Effort expectancy and behavioural intention to adopt [29]. Therefore, the propose hypothesis are:

*H8a: Trust will significantly affect performance expectancy*

- H8b: Trust will significantly affect effort expectancy
- H8c: Trust will significantly affect facilitating condition
- H8d: Trust will significantly affect behavioural intention to adopt.

### III. METHODOLOGY

The researcher will conduct a market survey using questionnaire that will be randomly distributed via online (Line, Whatsapp, Instagram, and Twitter) to people who are users of digital banking, to know more about their behavioural intention to use digital banking. Before the questionnaire was distributed, there will be a pilot test with at least 30 respondents to get feedback about the questionnaire.

The population of this study are people who are users of digital banking in Indonesia. Those people should be aged between 17-50 years old living in Jabodetabek and Bandung area, digital savvy, the digital banking users. The questionnaires distributed to 500 respondents but the valid respondents only 411. The respondents must answer 31 list of questions. Data analysis for questionnaires were Partial Least Squares (PLS) – SEM.

The questionnaires have nine variables, they are performance expectancy, effort expectancy, social influence, facilitating condition, hedonic motivation, price value, habit, behavioural intention (borrowing scale by venkatesh) [21] and trust (borrowing scale by Jarvenpaa, S. L., Tractinsky, N & Vitale)[30]. The questionnaires applied seven likert scale measurements, number 1 = strongly disagree and 7 = strongly agree.

### IV. RESULT AND DISCUSSION

The respondents profile result shown that the domination of respondent's occupation in this research is college students which match with digital banking's target market which is millennial generation that started from 17 years old and educational background mostly S1. Based on SES, the expenditure was divided into 6 categories as shown in the table 4.6. The expenditure is dominated with spending more than Rp 3.000.000 in a month and also followed spending between Rp 2.000.000 - Rp 3.000.000 in a month. The expenditure could be divided into food, shopping, entertainment, and college or work stuff expenditure.

Descriptive analysis for all variables presented that Performance Expectancy with mean variable 6,222 include as very good variable. Effort Expectancy with mean variable 6,273 include as a very good variable. Social influence with mean variable 5,093 include as rather good variable. Facilitating condition with mean variable 6,036 include as a good variable. Hedonic Motivation with mean variable 5,811 include as a good variable. Price value with mean variable 5,965 include as a good variable. Habit with mean variable 5,565 include as a good variable. Behavioural Intention with mean variable 6,023 include as good variable. The last one is trust with mean variable 5,832 include as a good variable. Hence, performance expectancy and effort expectancy are the

best variables.

Partial Least Square (PLS) – SEM Result presented all variables pass the reliability and validity test. All variables have cronbach alpha result above 0.6, meanwhile for the validity test said all variables score were above 0.5. It declared that all variables can be used for the next analysis test. The hypothesis testing will be presenting the result of PLS calculation By using two- tailed t-test with 5% of significant level, the path coefficient will be considered significant if the T-statistics is greater than 1.96 according to the inner model path coefficient and significance indicated by the T-values. The outcomes show that H1, H2, H3, H4, H6 were rejected because the t-value is below 1.96 and H5, H7, H8a, H8b, H8c, H8d were accepted.

Based on the calculating result of hypothesis test (H1), H1 is rejected. However this result is not corresponding with the research of Venkatesh, *et al.*, [12] which state that performance expectancy has a significant positive effect on behavioural intention. Nevertheless, Wahyu Meiranto [31] which states that performance expectations do not affect the interest in using new technology. This explain that even though some people found digital banking will lead them to increase their performance so they could gain some advantages in daily life, that is not enough to be their initial reason to use digital banking.

Based on the calculating result of hypothesis test (H2), H2 is rejected. Even though this result is not corresponding with the research of Venkatesh, *et al.*, [12] and Marchewka & Kostiwa [32] which states that effort expectancy has a significant positive effect on behaviour intention, this research is supported by Chau and Hu [33], argued that effort expectancy does not have significant influence to intention to use behaviour. This explain that the users might be relatively new in using digital banking system and do not have enough knowledge about digital banking itself.

Based on the calculating result of hypothesis test (H3), H3 is rejected. This result is corresponding with the previous research that stated insignificant relationship between social influence and behavioural intentions [34], [35] also from research by Gupta and Dogra [36] the results revealed no significant relationship of social influence on behavioural intentions. This can be caused by their environment and influence of other people has not become their initial reason to use digital banking.

Based on the calculating result of hypothesis test (H4), H4 is rejected. This result is not consistent with previous research by Venkatesh, *et al.*, [28] that stated facilitating conditions have significant positive effect on behaviour intention to use. However it is corresponding with previous research which stated facilitating conditions was found to have no significant effect in either the behavioural intention [34] also earlier research by Pertiwi and Ariyanto [37] which stated that facilitating conditions have no significant positive effect on behaviour intention to use. This implies that even though the users have enough resources such as smartphone and the internet that supported application based digital banking, but other indicator such as help by other people when the user find it hard to use digital banking is not

important for them.

Based on the calculating result of hypothesis test (H5), H5 is accepted. This result is in line with previous studies by Venkatesh, *et al.*, [28] and Gupta, A., & Dogra, N. [36] which state hedonic motivations were found to be statistically significant in explaining behavioural intentions. This implies that to find pleasure and joy could be the users' intention to use digital banking.

Based on the calculating result of hypothesis test (H6), H6 is rejected. This result is not in line with previous research by Venkatesh, *et al.*, [28]. On the contrary this result is in line with research that revealed no significant relationship of price value on behavioural intentions [34] and [37]. Price value was also found to be not significant over behavioural intention, essentially due to the fact that mobile banking service is actually seen as free of charges by users, without special fees, and with lower costs than other means or financial channels. These findings are consistent with some earlier research S. Yang, Lu, Gupta, Cao, & Zhang [37]. This defined that the benefit gains from the cost to use digital banking account is not that important for the users to be initial reason to use digital banking. However, this variable does not influence their behavioural intention to use digital banking in the future. Because for the Jenius users, they only provided free transfer fee and free withdrawal fee 25x a month, only for users that has average money in the account Rp 10.000.000.

Based on the calculating result of hypothesis test (H7), H7 is accepted. This result is aligned with some earlier research reports customer habit to be a major predictor of intention [38]. Also Saumell, *et al.*, [39] stated that habit was the greatest and strongest predictor of behaviour intention to use in the context of mobile applications. This defined that the users of digital banking tend to use mobile application-based repeated, therefore they could automatically get used to use digital banking as mobile application-based.

Based on the calculating result of hypothesis test (H8a), H8a is accepted. This implies that to have intention to use digital banking, the users need to have trust that use digital banking would increase their performance in daily life. Based on the calculating result of hypothesis test (H8b), H8b is accepted. This implies that only with knowing that digital banking is easy to use will not have their intention to use digital banking, but the users need to believe and trust the digital banking product could be easy to be operate.

Based on the calculating result of hypothesis test (H8c), H8c is accepted. Thus, when trust added to the model, facilitating condition has a significant relationship toward behavioural intention to use. This implies that the users will not gain intention to use digital banking only if they already have the resources and help, however the users need to trust that the digital banking application-based will worked with resources that they already have.

Based on the calculating result of hypothesis test (H8d), H8d is accepted. This implies that trust toward the product, in this case digital banking, could lead people to have intention to use digital banking. Trust in this research could be interpret trust toward the company of each digital banking,

trust from the customer toward the product that it will work well and meet their expectation. It is proven based on questionnaire result that trust has influence toward performance expectancy, effort expectancy, and facilitating condition as customer acceptance's factors that could lead to behavioural intention to use digital banking in Indonesia. Trust also has direct influence toward behavioural intention to use digital banking in Indonesia.

Based on the calculation from PLS-SEM, from 11 hypotheses there are 5 hypothesis rejected and other 6 hypotheses are accepted. Those 6 hypothesis are hedonic motivation, habit, trust toward performance expectancy, trust toward effort expectancy, trust toward facilitating condition, and trust toward behavioural intention. From those hypotheses that accepted, trust toward performance expectancy, effort expectancy, and facilitating condition has the biggest t-Value.

Based on the questionnaire result regarding the open questions about what are disadvantage, advantage, and their suggestions to reach more customers, there are several strategies that could be implemented for new technology compete in digital banking market. After the products know their competitor and their target market, they should give what the customers need at the time. For example in this case, most of the customers needed banking platform that is easy to use and beneficial for them. Beneficial such as digital banking products provided discounts, free of fees, or improve the features.

Other than that, the products need to have the best marketing strategies to attract intention from people. The strategies could be use social media since almost everyone know use social media and *key opinion leader* tier which is is an expert whose opinion is valued in a specific industry or area of knowledge, and is listened to by a broader audience. KOLs are individuals who are trusted and respected specifically for this knowledge inject messaging. The last strategy is that the product has to gain trust from the people itself. Based on respondents' responses, trust is influenced people to use digital banking, beneficial, and ease for the respondents.

## V. CONCLUSION

It is proven based on questionnaire result that trust has influence toward performance expectancy, effort expectancy, and facilitating condition as customer acceptance's factors that could lead to behavioural intention to use digital banking in Indonesia. Trust also has direct influence toward behavioural intention to use digital banking in Indonesia. From the interview to 20 respondents also show most of respondents' responses describe that trust is influence users' initial reason to use digital banking. There are four indicators of trust in this research which are people believe that digital banking will be trustworthy, people need to be cautious with digital banking, that digital banking will work well, and the last one is digital banking will meet user's expectation.

The digital banking products could increase their features of the product because the indicators of performance

expectancy are about digital banking could become useful and achieve their productivity. This can be caused by people are already get used to use conventional bank and they did not have enough knowledge on maximize in use the product. The features could be such as unlimited transfer or withdrawal fees and provide more ATM, also provide tutorial or insight on knowledge about features and how to use the product so the customers could utilize the product more. For social influence meaning that in using the technology, customers are influenced by other people. The minus score could be caused by people that already use the digital banking try to influence other people but they have experienced various problems and therefore people follow in disbelief. This perhaps could be also caused by people are mostly not easily affected about using a new system or technology.

Based on behavioural intention R square value in this research which is 0.677317, meaning that BI is influenced by effort expectancy, facilitating condition, habit, hedonic motivation, performance expectancy, price value, social influence, and trust is 67.7% while the rest is influenced by other factors not examined in this research. Also, in this research the researcher only use questionnaire and interview method.

While in the future research, focus group discussion could be use to obtain input or information about problems that are more specific and allows researchers to gather information quickly and constructively from participants who have different backgrounds. This method could be used by researchers in qualitative research to explore data about perceptions, opinions, beliefs and attitudes towards a product, service, concept or idea, because it is relatively easier and faster than other qualitative data collection techniques.

The future research could involve the company of the bank itself and see the different perspective, not only from customer's perspective. Thus the results from both perspectives can be used as a comparison to match the data in the research. The results from both perspectives can also be a reference for companies to find out customer needs and customers can find out which products are suitable for their needs.

#### CONFLICT OF INTEREST

"The authors declare no conflict of interest"

#### AUTHOR CONTRIBUTIONS

Nurrani Kusumawati conceived the presented idea. Nurrani Kusumawati designed the model and the framework. Azzahra Rinaldi carried the implementation and calculation. Both Nurrani Kusumawati and Azzahra Rinaldi took the lead in analysing data and in writing the manuscript. Nurrani Kusumawati supervised the riset.

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