

Technology Acceptance Model and Government Support in The Use of Islamic Fintech in (MSMEs) Metro Cities

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Abstract

The purpose of this research is to find out how to accept Islamic fintech based on influencing factors. These factors are divided into internal and external factors. Internal factors consist of technology readiness, while external factors include government support in the acceptance of Islamic fintech in Micro, Small and Medium Enterprises (MSMEs) in Metro City. The respondents of this research are MSMEs in Metro City who have adopted fintech on their business activities. The data analysis method used in this research is a quantitative method using the Structural Equation Model (SEM). The type of data used is primary data obtained by distributing questionnaires assisted by the results of interviews with respondents. By using the Technology Acceptance Model, this research tries to analyze the model of factors that influence the application of fintech used by MSMEs in Metro City. The research results show that the external factors tested in this research can influence behavioral intentions through perceived benefits, perceived ease of use in implementing fintech in business activities carried out by MSMEs. Apart from these factors, there are also other factors such as government support provided in the form of training/capital assistance and expert assistance. Limitations in this research are the limitations of the research location and research variables used. This is caused by limited funds and time for collecting data in the field. Contributions of this research are expected to help MSMEs to maximize the application of fintech in business activities, as a consideration for local governments to provide more training and assistance for MSMEs in using fintech.

Keywords: Technology Acceptance Model, Islamic Fintech, Micro Small and Medium Enterprises

A. Introduction

Micro, Small, and Medium Enterprises or commonly called MSMEs have an important and strategic role in economic development in Indonesia (bi.go.id). This

important and strategic role is demonstrated by the ability of MSMEs to absorb large numbers of workers, thus reducing the unemployment rate in society. Apart from that, MSMEs also have strong resilience. This was proven during the monetary crisis in 1997 – 1998, when the national economic conditions were in ruins, MSMEs were able to survive in these conditions. Nowadays, it is felt that the use of information technology for MSMEs increases a wider market share so that the profits obtained are greater. In addition, currently Indonesia is entering the era of industrial revolution 4.0. One of the information technology innovations that can be used by MSMEs is the use of Islamic fintech or financial technology (kominfo.go.id). Islamic fintech is an innovation in financial services which is an innovation in the financial sector that has a touch of modern sharia-based technology. Financial transactions through Islamic fintech include payments, investments, borrowing money, transfers, financial plans and comparing financial products.

Islamic fintech with financial services such as crowd funding, mobile payments, and money transfer services is causing a revolution in start-up businesses, and/or MSMEs. By using Islamic fintech in the form of crowd funding, business people and MSMEs can obtain funds from all over the world easily. Islamic fintech also allows global or international money transfer activities. Payment services such as PayPal can automatically change currency exchange rates, so that those in America can buy goods from anywhere (Rizal, et al: 2018). Globally, the fintech industry continues to grow rapidly. This is proven by the emergence of startup companies in this field and the large global investment in them.

Islamic fintech is an integral part of the information technology (IT), innovation (technology centers, capital outlay, etc) and financial industry. Furthermore, derived from contracting the words finances and technology, the term Islamic fintech first arose in scientific literature in 1972 (Millan et al, 2019).

Figure 1. Mapping the Islamic Fintech Ecosystem



Source : State of Global Islamic Economy Report (2018)

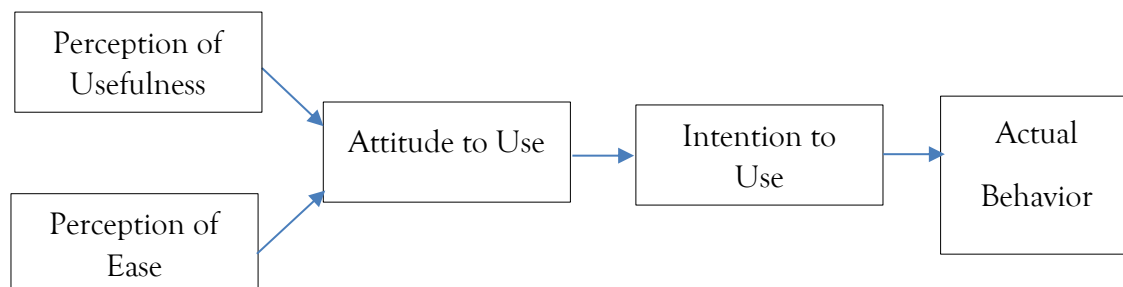
Several previous studies that have been conducted regarding the acceptance of fintech technology in MSMEs include: Romadhon and Fitri (2020), Kartiwi (2006); Aisyah, Sagoro, & Nugroho (2014); Astuti & Nasution (2014); Tambunan (2011); Butt, Tabassam, Chaundhry, & Nusair (2016); Walczuch, Lemmink, & Streukens (2007); and Consoli (2012). The results of different studies show that no one model is truly certain in explaining this understanding in all conditions and situations. In this research, the Technology Acceptance Model (TAM) developed by Davis (1986) is used as a theoretical basis for determining the influence of information technology adoption. The Technology Readiness Index (TRI) was developed by Parasuraman (2000) to measure how prepared MSMEs are to use technology, seen from four dimensions, namely: optimism, innovation, discomfort, and insecurity.

B. Literature Review

Technology Acceptance Model

The theory used in this research is the Technology Acceptance Model (TAM) which was first developed by Davis (1986) and is an adoption of the Theory of Reasoned Action (TRA) which was created specifically for modeling acceptance of use of information systems. The main aim of TAM is to provide a basis for exploring the influence of external factors on beliefs, attitudes and goals for using technology. TAM considers that individual beliefs, namely perceived usefulness and perceived ease of use (PE), are the main influences on technology acceptance behavior. TAM is the adoption of fixed components from the TRA model and applies these components as a special domain of computer and information technology (Swandini, 2019).

Figure 2. Technology Acceptance Model (TAM)



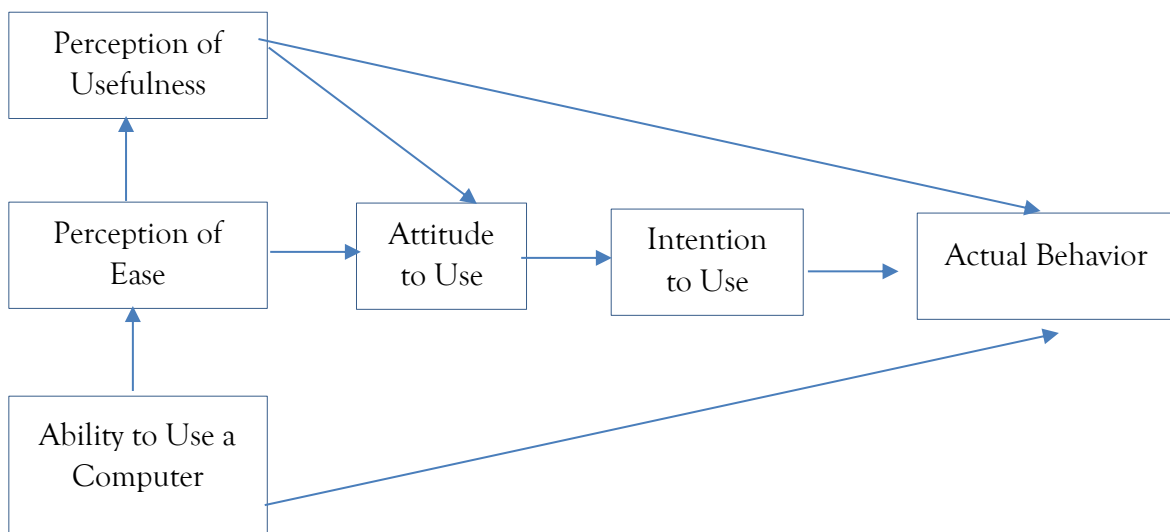
Source : Davis (1986)

In the Theory of Reasoned Action/ TRA (Fishbein & Ajzen, 1975) and the Theory of Planned Behavior/ TPB (Ajzen, 1985) TRA and TPB explain human behavioral intentions in adopting a particular action. However, in the TPB a new variable was added, namely "perceived behavioral control".

Technology Readiness. Measuring technology readiness uses TRI (Parasuraman, 2000) which consists of four dimensions, namely: optimism, innovativeness, discomfort, and insecurity. Optimism and innovativeness are contributory or supporting factors, thus someone who has an attitude of optimism and innovativeness will tend to accept new technology (Dewanti & Suprpto, 2015). An attitude of optimism and innovativeness will provide benefits and convenience for technology users. So it can be concluded that: technological readiness influences the perception of usefulness (H1) and technological readiness influences the perception of ease (H2).

Hwang & Yi (2002) then developed the TAM model by adding one variable, namely the ability to use computers independently (computer self-efficacy), including internet use which influences perceived ease of use and real usefulness (actual usage). The TAM model according to Hwang & Yi (2002) can be seen in the following picture:

Figure 3. TAM Model (Hwang & Yi, 2002)



Source : Hwang & Yi (2002)

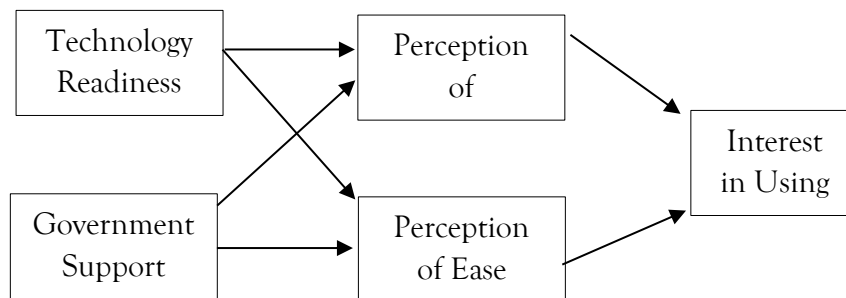
Government Support

Government support (DP) refers to Law No. 20 of 2008 concerning MSMEs, which includes the government's role as: facilitator, regulator and catalyst. Nugroho (2015) said that government (organization) support has an influence on MSMEs to adopt information technology. (Endraswari, 2006) also said that support from government institutions has a positive and significant effect on IT adoption by MSMEs. So it can be concluded that: government support influences perceptions of usefulness (H3) and government support influences perceptions of convenience (H4).

Technology acceptance uses the TAM model (Davis, 1986). TAM is a model for examining the influence of external factors on beliefs, attitudes and goals for using technology. With the perceived usefulness, a person's intensity in using a system will

increase. Meanwhile, perceived ease of use is defined as the extent to which a person believes that using technology will be free from effort (Noprianto, 2016). Perception of ease is closely related to confidence in making decisions. If someone believes that an information system is easy to use then he will use it, conversely if he feels that the information system is not easy to use then that person will not use it. So it can be concluded that: perceived usefulness influences interest in using (H5) and perceived ease influences interest in using (H6). The framework of thinking in this research is as follows:

Figure 4. Framework of Thinking



C. Research Methodology

The population in this research is MSMEs, samples were taken by purposive sampling. The data used in this research is prime data sourced from questionnaires, assisted by interviews and documentation as well as literature study. Data analysis technique using PLS measurements with SEM statistical methods. Data quality testing is carried out by conducting validity tests and reliability tests.

Measuring the structural model using the coefficient of determination or R^2 . The interpretation of R^2 is the same as the interpretation of regression, namely to assess the influence of the independent variable on the dependent variable. Meanwhile, Q^2 measures how well the observation values are produced by the model and also the estimated parameters. The Q^2 value > 0 indicates that the model has predictive relevance. The Q -square value has a value in the range $0 < Q^2 < 1$, where closer to 1 means the model is better (Ghozali, 2014).

The variables used in this research are as follows:

Table 1.
Research Variables

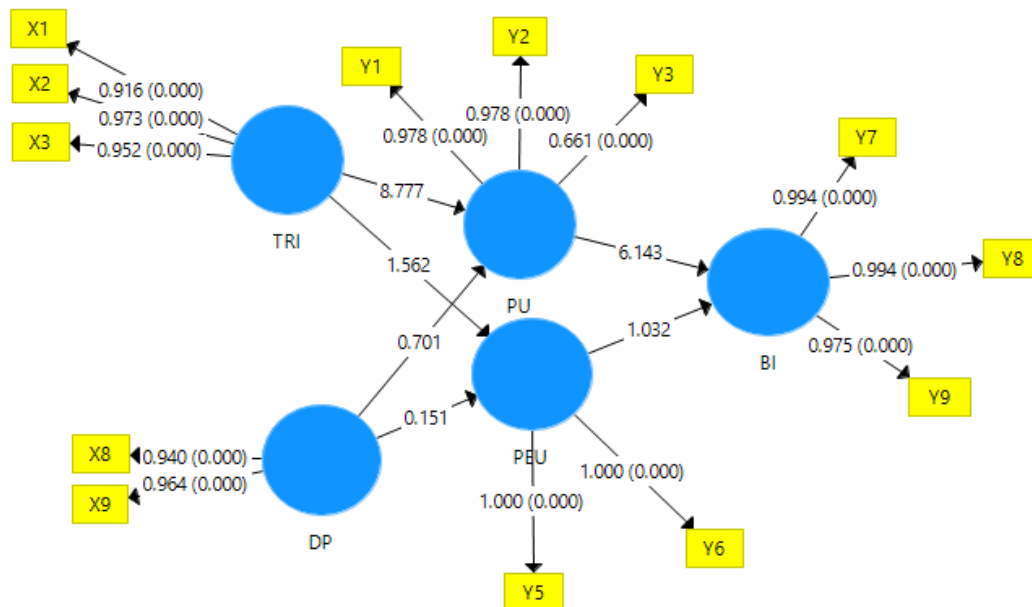
| Variables | Dimensions | Indicator |
|---|---|---|
| Technology readiness (X1) - Parasuraman & Colby (2004); Astuti & Nasution (2014); Butt, Tabbasam, Chaundry, & Nusair (2016) | 1. Optimism 2. Innovation 3. Inconvenience 4. Insecurity | <ul style="list-style-type: none"> • Technology provides control, is more useful and efficient • Be a pioneer in adopting new technology • Distrust in adopting new technology |

| | | |
|---|--|--|
| | | <ul style="list-style-type: none"> Insecurity about privacy when using technology |
| Government Support (X2) - Law no. 20 of 2008, Nugroho (2015), Hadiyati (2015) | <ol style="list-style-type: none"> Providing facilities and infrastructure Providing IT experts Hold training or outreach | <ul style="list-style-type: none"> There is assistance in procuring computers and internet network Providing expert assistance Providing training and education in the IT field |
| Acceptance of Islamic Fintech Technology (Y) | <ol style="list-style-type: none"> Perception of Usefulness Perceived Ease of Use Interest in Using | <ul style="list-style-type: none"> The decision to use or not The perception that using technology will be effortless Strong desire to use |

D. Results And Discussion

The number of respondents in this research was 50 MSMEs with a distribution of the MSME sector, namely fashion, culinary, and handicrafts in Metro City. Data model analysis was carried out using SmartPLS and the following results were obtained:

Figure 5. Model Analysis Results



In this research, the indicators X4, X5, X6, X7, and Y4 have loading factors below 0.6. Therefore, these five indicators must be removed from the model because they do not meet the required criteria, namely ≥ 0.7 . So we get the latest model where all indicator items meet the requirements. The results of the outer loading data validity test obtained results where all indicators met the requirements, namely > 0.7 . Likewise, with the

reliability test (Cronbach's Alpha), the following test results were obtained: TRI 0.852, DP (0.843), and TAM (0.865). The results of hypothesis testing are as follows:

Table 2.
Path Coefficients (Mean, STDEV, T-Value)

| | Original Sample (O) | Sample Mean (M) | Standard Deviation (STDEV) | T Stat. (O/STDEV) | P Value | Information | |
|---------|---------------------|-----------------|----------------------------|-------------------|---------|-------------|-----------|
| TRI→PU | 0.671 | 0.673 | 0.074 | 2,016 | 0.018 | Significant | Supported |
| TRI→PEU | 0.222 | 0.245 | 0.136 | 2,635 | 0.045 | Significant | Supported |
| D.P→PU | 0.145 | 0.148 | 0.060 | 2,752 | 0.031 | Significant | Supported |
| D.P→PEU | 0.140 | 0.108 | 0.092 | 2,153 | 0.026 | Significant | Supported |
| PU→BI | 0.713 | 0.687 | 0.115 | 2,175 | 0.028 | Significant | Supported |
| PEU→BI | 0.131 | 0.168 | 0.130 | 2,006 | 0.036 | Significant | Supported |

From the table above, it can be seen that the influence of technological readiness on perceived usefulness has a t-statistic of 2.106 and a p_value of 0.018, indicating that the technological readiness variable has a significant positive effect on the perceived usefulness variable so that H1 of this research is accepted. Meanwhile, the influence of technology readiness on perceived ease of use has a t-statistic of 2.635 and a p_value of 0.045, thus H2 of this research is accepted. This research also supports research conducted by Nuvriasari (2012); Son (2015); Kartiwi (2006); Yulimar (2006); and research by Gengatharen & Standing (2005).

The influence of government support on perceived usefulness has a t-statistic value of 2.752 with a p_value of 0.031. This shows that the government support variable has a positive and significant effect on perceived usefulness so that H3 in this research is supported. Meanwhile, the influence of government support on perceived ease of use has a t-statistic value of 2.153 and a p_value of 0.026 so that H4 in this study can be accepted.

The influence of perceived usefulness on interest in using Islamic fintech has a t-statistic value of 2.175 with a p_value of 0.028. This shows that the variable perceived usefulness has a positive and significant effect on interest in using e-commerce. Thus, H5 in this research can be accepted. Meanwhile, the influence of perceived ease of use on interest in using Islamic fintech has a t-statistic value of 2.006 with a p_value of 0.036 so that H6 in this study can be accepted. The results of this research also support several previous research results such as Aisyah, Sagoro, & Nugroho (2014); Eka, Handayani, & Zahroh (2010); Larasati & Santosa (2017); Luthfiadi & Dwanto (2013); Astuti & Nasution (2014); Sidharta & Sidh (2014); Butt, Tabassam, Chaundry, & Nusair (2016), and research by Sandberg, Wahlberg, & Pan (2009).

E. Conclusion

Based on the analysis and discussion conducted, it can be concluded that trust, usability, based on the research results as described above, the following conclusions can be drawn:

1. Technology readiness has a positive and significant effect on perceived usefulness and perceived ease of use. The better the technological readiness, the higher a person's confidence that Islamic fintech has benefits and is easy to use. The technological readiness of MSMEs to adopt Islamic fintech is seen from 4 dimensions, namely optimism, innovativeness, discomfort and insecurity.
2. Government support has a positive and significant effect on perceived usefulness and perceived ease of use. The greater the support provided by the government to MSMEs to adopt Islamic fintech, the higher the perception of benefits and ease of use will be. Government support can be provided in the form of regular training, providing expert assistance, as well as providing capital assistance as well as facilities and infrastructure for MSMEs to use Islamic fintech, and improving the quality of the internet network in each respective region.

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