Use of Fintech for Payment: Approach to Technology Acceptance Model Modified

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ABSTRACT

This study examined the effect of two main perceptions on TAM models along with web security perceptions of the attitudes and intention to use fintech. Web security perceptions are considered as additional variables are important in influencing attitudes and intention to use of fintech because users will use information systems. Sample was selected by the snowball method. Fintech usage questionnaire was developed using existing scales from prior TAM instruments and modified where appropriate. 147 participants completed the survey questionnaire measuring their responses to perceived usefulness, perceived ease of use, attitudes towards usage and behavioral intention to use. The results showed that the variable perception of the usefulness of a positive influence on the attitude of the use of fintech, perceived security web effect on the attitude of the use of fintech and attitudes towards usage influence intention to use of fintech. The perceived ease of use and the perceived ease of use are not significant effect on the perception of the use of fintech.

1. INTRODUCTION

One technology that is now rapidly developing is financial technology (Fintech) is the result of a combination of financial services and technology that ultimately changes the model businesses from conventional to moderate, which initially had to pay face to face and carrying a sum of cash, can now make long-distance transactions by doing payment can be made in seconds. New technology development focused on fintech applications (Kim, Park, Choi, & Yeon, 2015). Fintech is a digital innovation and technology-supported business model innovations in the financial sector (Philippon, 2016).

Fintech has penetrated throughout the world market. The rate of adoption in China and India reached 87%. In other countries, Fintech also showed a market interruption rapidly, as in Russia and South Africa reaching 82%. Australia, Canada, Hong Kong, Singapore, the United Kingdom, and the US reach 60% in 2019. Fintech industry shows prospects for rapid development due to dynamic aspects of innovation.

The level of user desire in receiving and utilizing Information Technology (IT) became a hot topic in research in the current Information Systems and Information Technology fields this. One approach that is most used in understanding which factors affect the acceptance of a technology is the Technology Acceptance Model (TAM) proposed by Davis in 1986. The TAM model is an adaptation of Theory of Reasoned Action (TRA) specifically designed and conceptualized about how the user accept and use new technology. It comes from a psychological theory approach to explain users that refer to beliefs, attitudes. The hallmark of the TAM
model is simple, but can predict the acceptance and use of technology. TAM model has two important variables in determining user acceptance of a technology namely: perceived usefulness and perceived ease of use. Perceived usefulness (PU) explains the extent to which a person or user believes that by using a particular system improve their work performance. Perceived ease of use (PEOU) explains the extent a person or user believes that using a particular system is free of physical effort and mentality (Davis, 1991: 477).

Various studies regarding the acceptance and adoption of a technology system who use the TAM approach have done a lot. TAM is designed for explain user acceptance of computer-based information systems such as adoption of Fintech, such as mobile banking payments (Wu & Wang, 2005; Zhong, et al, 2013), electronic tickets (Mallat, et al., 2009), and e-commerce (Smith, et al., 2014)

In addition to referring to research conducted by Larasati (2014), several studies previously the reference in this study was also conducted by Dilla et al. (2014) also examined what perceptions influenced attitudes and related intentions with the successful implementation of the rail ticket system in Surabaya.

This study examines the effect of two main perceptions on the TAM model along with web security perception of the attitude and intention in using Fintech. Web security perception considered an additional variable that is important in influencing attitudes and intentions use of Fintech because system users will use information systems. Based on background analysis above, the formulation of the problem in this study are as follows: (a). Does the perception of usefulness affect the attitudes towards usage Fintech on shopping center customers in a shopping payment transaction? (b). Is the perception of ease usage affects the attitudes towards usage Fintech in shopping center customers in a shopping payment transaction? (c). Is the perception of web security influential to the attitudes towards usage Fintech to shopping center customers in transactions groceries payment? (d) Does the attitudes towards usage Fintech influence intention shopping center customers in shopping center payment transactions?

2. LITERATURE REVIEW

Information technology is the result of human engineering as a combination of technology computers and telecommunications through certain ways of providing and delivering information from the sender to the recipient using a better way in order decision making (Rahmadanti, 2013: 14). Technology-based accounting information system is a system that can help to create, change, save, communicating and disseminating information regarding accounting system. This technology-based accounting information can spread information related with accounting more quickly and economically. The customer is one of the users who is greatly facilitated and benefited with this Fintech service. This can be seen when customers have to make payment transactions. Payment for groceries at the shopping center is currently wrong one can be done using Fintech facilities, in addition it can be done manually via cash payment.

This study uses the context of information technology acceptance, namely Fintech with TAM model by adding perceived web security variables. Five variables will be tested, namely perceived usefulness, perceived ease of use, perception web security, attitude and intention in using Fintech by shopping center customers in making a shopping payment transaction.

3. THEORETICAL FRAMEWORK AND HYPOTHESES

Influence of Perception of Use on Attitudes towards usage Fintech

The benefits of a technology will be limited if the ability to run the technology it is also limited so the benefits that can be felt by each individual will certainly be also different depending on how much they are able to operate and utilize that technology. Perceived usefulness explains the extent of a person or users believe that using a particular system will improve performance their work (Davis, 1989: 477). Davis defines perceived of usefulness based on “useful”, a word that means it can be used profitably or can be used as a useful destination. Perceived usefulness pays attention to the overall impact of that expected from the use of the system on job performance (process and results).
Perceived usefulness at Fintech will further influence attitude towards the use of the Fintech. So, if someone feels that trust using Fintech services is useful for improving their work performance, then that person will use it or vice versa, if someone feels not trusting that use Fintech service is useful then that person will not use it. Some research shows that perceived usefulness has a positive effect on attitude the use of Fintech, including research conducted by Nasri and Charfeddine (2012), Larasati (2014), and Dilla and Setiawan (2014).

H1: Perceived usefulness positive influence on the attitudes towards usage of Fintech.

Effects of Attitudes Towards the Intention to Use Fintech

Attitude is defined by Davis et al. (1989) as positive or negative feelings from someone if you have to do the behavior that will be determined. Individual attitude which support the use of information system technology will automatically encourage the use and use of information system technology (Hamzah, 2009). Other researchers states that the attitude factor as one aspect that affects behavior individually (Yuadi, 2012). A person's attitude consists of cognitive elements or perspective, affective, and components related to behavior.

Based on Davis et al., (1989: 986), the relationship of attitude to intention (behavioral intention) restated in TAM implies that all are equal, human form the intention to conduct behaviors (behavior) in the direction that has positive effect.

Some studies show that attitude positive effect on intention (behavioral intention) to use of information technology, including research conducted by Tjini (2012), Nasri and Charfeddine (2012), Larasati (2014), and Dilla and Setiawan (2014).

H4: Attitude has a positive effect on behavioral intention to use Fintech.

4. RESEARCH METHOD

This research data source uses primary data, namely research data sources obtained directly from the original source (not through an intermediary medium) specifically collected by researchers to answer research questions. Primary data obtained by researchers by giving
questionnaires to shopping center customers. This data has properties up to date or data is original or new.

**Population and Sample**
The study population is all shopping center customers. Samples selected with convenience, conducted by researchers by distributing questionnaires in a shopping center accept payment by Fintech. The researcher distributes the questionnaire directly to the respondents and Facebook when filling out the questionnaire the respondents had no difficulty, the researcher gave a brief description of the research and procedures for filling out the questionnaire.

Regarding the response rate of the return of inventory, the researchers distributed and take directly the questionnaire that was filled out at that time. Time period of deployment and filling out the research data questionnaire is one month.

**Variable Definition and Measurement**
This study has five variables, namely perception of usefulness, perception of ease usage, web security perceptions, usage attitude, and intention in Fintech's use in shopping payment transactions by shopping center customers.

Perceived Usefulness. Usability perception explains the extent someone or user believes that using a particular system will improve their work performance (Davis, 1991: 477). Indicator variable perceived usefulness as follows: a. Faster activity completion. b. Ease of finishing task. c. Useful in use. d. Advantages in use.

Perceived Ease of Use. Perceived ease of use describes the extent to which a person or user believes in using certain systems will be free from physical and mental effort (Davis, 1991: 477). Variable indicator perceived ease of use as follows: a. Easy to use. b. Its applications are easy and understandable. c. Skills in use. d. Easy to use.

Perceived Web Security. This web security perception developed as to what extent someone believes that the web is safe for transmit sensitive information (Salisbury et al., 2001: 167). Perceived variable indicator Web Security as follows: a. a sense of security to share sensitive information. b. Which means safe to share sensitive information. c. a feeling of security exists to share information personal. d. a safe means for exchanging information.

Attitude. Attitude is defined as a positive or negative feeling from someone if behavior must be determined (Davis et al., 1989: 477). Variable indicator attitude as follows: a. Good idea. b. Comfort when using. c. Deep desire use. d. Wise use.

Intention (Intention). Intention is defined as the desire to conduct behavior, where behavioral intention is a prefix of a person before engaging in real behavior certain (Davis et al., 1989: 477) Indicators of intention variables as follows: a. Use Fintech regularly. b. always keep using Fintech. c. Future use of Fintech.

5. **DISCUSSION**

Respondents in this study are shopping center customers in Jember City. Respondents are customers who make purchases and payments. Researcher obtain data using survey methods through distributing questionnaires to shopping center customers. Researchers successfully distributed 300 questionnaires directly to shopping center customers within 30 days (1 September - 1 October 2019).

Sampling in this research is in the form of conventional techniques. Respondents are people the researchers met at the shopping center. The sample subject is no limited so researchers have the freedom to choose the fastest and cheapest samples. The number of questionnaires that can be processed is 150 questionnaires.

**Hypothesis testing**
Hypothesis testing is an evaluation of the parameters that show a causal relationship or the effect of one latent variable on another latent variable. Testing hypothesis using AMOS software. The conclusion of a relationship is done by looking at the value critical ratio (CR) and probability (p) which are the results of the estimated output regression weights. If the value of \( CR \geq 1.96 \) and \( p \leq 0.05 \) then it can be interpreted that the relationship between significant latent variables or hypotheses can be accepted.

**Influence of Perceived Usefulness on Attitudes towards usage Fintech**
The results of hypothesis testing H-1 in this study explain that perception of usefulness has a significant influence on the attitudes
towards usage Fintech by customers of shopping center for payment transactions. The results of hypothesis H-1 are in line with the results from several studies previously conducted by Nasri and Charfeddine (2012), Larasati (2014), and Dilla and Setiawan (2014).

Based on this it can be concluded that the usability has a influence significant towards the attitudes towards usage Fintech shopping center customers as a means to make a shopping payment transaction. If they can directly feel the usefulness of Fintech compared to when they have to make payments purchases in cash, they will have positive feelings about using Fintech. If they cannot directly feel the usefulness of Fintech for the transaction shopping center payments, then they will not have positive feelings towards the service.

**Effect of Perceived Ease of Use on the Attitudes Towards Usage Fintech**

The results of testing the hypothesis H-2 in this study explain that the perception of usefulness does not have a significant effect on the attitudes towards usage Fintech by shopping center customers for groceries payment transactions. Under these conditions, H-2 is not supported. The results of the H-2 hypothesis are in line with the results of several previous studies has been done by Tjini (2012).

This insignificant result occurred due to several factors. First, characteristics of respondents for the largest age are 20-30 years. They are a group customers who tend to have a lot of time to do shopping activities like withdrawing money at an ATM, and carrying cash, especially coupled with strategic location of the banks that work with shopping centers that are located very close and easy to reach, so that the ease of use of Fintech services is felt not so much when compared to workers. Unlike the workers or business people who tend not to have a lot of time to do their shopping activities, especially for a businessman who has high mobility so they feel very need services that have high benefits without reducing their time to do it manually.

**Effect of Perceived Ease of Use on Perception of Fintech Perceived Usefulness**

The Technology Acceptance Model hypothesizes perceived ease of use has a significant direct effect on perceived usefulness. This hypothesis is based on a description of when there are two systems that carry out the same function role, so users are likely to find one of the two systems which is easier to use and which more useful. Given that some part of the overall work of the user use a similar system, if the user becomes more productive in parts the work through ease of use, then then the user will become more overall productive too. Makes a system easier to use make the system more useful. So in essence, ease of use affects its usefulness but this does not apply otherwise.

The results of the H-3 hypothesis in this study explain that perceived ease of use does not have a significant effect on perceived usefulness of Fintech shopping center customers for shopping payment transactions. Based on these then H-2 is not supported.

This insignificant result occurred because the facilities were not properly utilized Fintech. Some respondents did not know that the shopping center could not provide Fintech service. They do not know the convenience of the Fintech facility compared to when they must use cash. Lack of information obtained by shopping center customers regarding shopping purchases with Fintech can be one the cause.

**The Influence of Perceived Web Security on The Attitudes Towards Usage Fintech**

Results of testing the hypothesis H-4 in this study explained that the perceived security web has a significant influence on the attitudes towards usage Fintech by shopping center customers for groceries payment transactions. The results of the H-3 hypothesis are in line with the results from several studies previously conducted by Nasri and Charfeddine (2012), and Larasati (2014).

Based on this it can be concluded that perceived security has an influence which is significant towards the attitudes towards usage Fintech users as shopping center customers a means to make groceries payment transactions. If they have taste trust and security when using Fintech they will have feelings positive or will use it as a means to make payment transactions groceries, or vice versa, if they don't have a sense of trust and a sense of security at the moment use Fintech then they won't have positive feelings or they won't use it as a means to make a shopping payment transaction.

**Effects of Attitudes on Intention to Use Fintech**

The results of testing the hypothesis H-5 in this study explains that the attitudes towards
usage has a significant influence on the intention in using Fintech by shopping center customers for groceries payment transactions. The results of hypothesis H-5 are in line with the results from several studies previously conducted by Tjini (2012), Nasri and Charfeddine (2012), Larasati (2014), and Dilla and Setiawan (2014).

Based on this it can be concluded that the attitudes towards usage has an influence which is significant towards the intention in using Fintech as shopping center customers a means to make groceries payment transactions. Supporting individual attitudes the use of Fintech will automatically encourage the use Fintech for shopping payment transactions. According to Larasati research (2014: 92), attitude is the factor that has the most significant influence on his adoption intention Fintech. The more information a customer gets about Fintech, the more customers are also able to evaluate Fintech services as one of its facilities used to make a shopping transaction.

Fintech services provide benefits for all parties, where for the users this service that is shopping center customers get the ease of doing shopping transactions more easily, quickly, and safely without having to carry and pay money cash. For the shopping center, Fintech makes the shopping center more quickly and accurately receive shopping payment information. The many advantages possessed by the service. Fintech is expected to be able to shape the positive attitude of its shopping center customers then it will affect their intention in utilizing Fintech services as a means groceries payment transaction.

6. CONCLUSION, IMPLICATION, SUGGESTION, AND LIMITATIONS

Conclusion

Based on the results of the study several conclusions can be made as follows:

1. The variable of perceived usefulness has a positive and significant effect on attitudes towards usage Fintech. Based on the results of the analysis, the hypothesis states that the perceived usefulness and security significantly influence the attitudes towards usage Fintech accepted.

2. The variable perceived web security has a positive effect on attitudes towards usage Fintech as a means of shopping payment transactions. Based on the results of the analysis, the hypothesis which states that perceived security influence the attitudes towards usage Fintech accepted.

3. The attitudes towards usage has a positive and significant effect on behavioral intention to use Fintech. Based on the results of the analysis, the hypothesis which states that the attitude is influential towards the intention in using Fintech accepted.

4. The perceived ease of use and the perceived ease of doing this service that is Fintech as a means of shopping payment transactions. Supporting individual attitudes the use of Fintech will automatically encourage the use Fintech for shopping payment transactions. According to Larasati research (2014: 92), attitude is the factor that has the most significant influence on his adoption intention Fintech. The more information a customer gets about Fintech, the more customers are also able to evaluate Fintech services as one of its facilities used to make a shopping transaction.

Fintech services provide benefits for all parties, where for the users this service that is shopping center customers get the ease of doing shopping transactions more easily, quickly, and safely without having to carry and pay money cash. For the shopping center, Fintech makes the shopping center more quickly and accurately receive shopping payment information. The many advantages possessed by the service. Fintech is expected to be able to shape the positive attitude of its shopping center customers then it will affect their intention in utilizing Fintech services as a means groceries payment transaction.

Suggestion

This research does not focus on Fintech services, where it can be known that each Fintech operators certainly have their own characteristics in providing Fintech services to its customers. It is recommended for further research to be more focused research on the characteristics of one type of Fintech service only.

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