Exploring Consumer Decision-making Processes Regarding the Adoption of Mobile Payments: A Qualitative Study

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ABSTRACT

Objective – The main objective of this study is to gain deeper understanding on the decision-making process of how and why consumers are adopting mobile payment in Indonesia.

Methodology/Technique – The study was a qualitative study that included an experiment to the research design. A total of six young people were voluntarily participated in the study. Our finding provides explanation of salient factors that might drive or hinder the adoption in five different stages of innovation-diffusion process.

Findings – Overall, our finding indicated that the attractiveness of rewards was an intriguing factor that greatly influences consumer decision whether to use mobile payment or not.

Novelty – The uniqueness of our study lies on the use of innovative approaches to address the mobile payment adoption issues from different perspective than prior literatures.

Type of Paper: Empirical.

Keywords: Consumers' Decision-Making; Financial Technology; Innovation-Decision Process; Mobile Payment Adoption; Technology Adoption.

JEL Classification: M15, M31.

1. Introduction

Mobile payment is one of the most innovative services that enabled consumers to use their phones as wallets in various transactions (Dahlberg, Mallat, Ondrus, & Zmijewska, 2008). Billions of dollars have been invested in the development of mobile payment facilities by a number of companies worldwide with a significant profit yield (Yang, Lu, Gupta, Cao, & Zhang, 2012). Paypal (Wolfe, 2007) and Alipay (To & Lai, 2014) are two examples of successful mobile payment services that have generated tremendous profits.

Some countries, such as Suica in Japan, have very high adoption rates of mobile payment services (Amoroso and Magnier-Watanabe, 2012). However, despite the advantages offered and the successful use of mobile payment services worldwide, its uptake is somewhat slower in developing countries compared to in developed countries (Ewe & Yap, 2011). For example, in Indonesia, developing countries, consumers show a lack of familiarity and willingness to use mobile payment services (Mastercard, 2012). As a consequence, only 1% of total transactions in Indonesia are made by using mobile payment services (APJII and UI, 2015). Traditional

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methods such as cash and card payments, therefore, remain the most popular payment methods among Indonesians.

In line with this phenomenon, research on the adoption of mobile payment options has increased in recent years (Dennehy & Sammon, 2015). The existing literature is dominated by quantitative studies and only a few qualitative studies have been conducted by researchers such as Mallat (2007), Shuhaiber and Lehman (2013) and Zhao and Kurnia (2014). Despite many studies being conducted continuously for the past few years, almost all of them have focused on essentially the same topics and have produced similar findings, therefore, failing to propose innovative investigations. (Dahlberg, Guo & Ondrus, 2015). Hence, there is a need for innovation in the study of the adoption of mobile payment services.

The main objective of this study is to investigate the decision-making processes regarded how and why consumers adopt mobile payment services in Indonesia. Unlike other prior qualitative studies, this study will also include the use of an experiment. The results will reveal the salient factors influencing consumers' decision-making processes when adopting mobile payment services in five different stages of innovation-diffusion processes (Rogers, 2003). By doing so, this study will theoretically contribute to the present understanding of the adoption of mobile payment services, particularly in developing countries, and expand the diversity of existing literature in the mobile payment area. The study may also provide practical guidance for mobile payment providers in developing countries in general and mobile payment providers in Indonesia in particular.

An overview of previous qualitative studies on the adoption of mobile payment services as well as mobile banking services will be followed by the research methodology. Next, the findings of this study will be presented. The study concludes with a discussion of the implications of the findings. Finally, the conclusion will highlight limitations and suggestions for future research.

2. Literature Review

This study adopts a wider scope in the search of literature by examining both the adoption of mobile payment services as well as other forms of mobile banking. In this study, the literature examined is limited to qualitative studies researching the consumers' perspective, rather than examining those studies that focus on the retailer's perspective, such as those conducted by Petrova and Wang (2013) and Thoi (2015).

Mallat (2007) had carried out a qualitative study exploring consumer adoption of mobile payments in Helsinki, Finland by conducting six different focus-group discussions. The results of that study conclude that several adoption factors including relative advantage, compatibility, complexity, costs, network externality, trust, and perceived security risks all affect consumers when choosing whether or not to use mobile payment services. The results also described contributing factors that could drive or hinder each influencing factor. In addition, the results indicate that the effect of relative advantage is dynamic depending on the situation.

Ewe and Yap (2011) conducted a study aimed at creating a deeper understanding of the adoption of mobile banking among Malaysians through the use of focus group discussions. Similar to Mallat's (2017) findings, this study suggests that banks should consider the importance of relative advantage, complexity, perceived risk, network externalities, awareness, and knowledge.

Shuhaiber and Lehman (2013) also conducted studies involving four focus-group discussions in four different UAE main cities, exploring customer trust in the adoption of mobile payments services in B2C transactions. The study concludes that customers' trust in B2C mobile payment is influenced by the customers' characteristics, mobile-device characteristics, perceived risk, environmental factors, and provider characteristics.

Zhao and Kurnia (2014) explore consumer adoption of mobile payment in China. 18 participants from different cities in China were interviewed through online chatting tools. The findings indicate that there are several reasons why participants use mobile payments including the user's characteristics, system quality, service quality, cost, usefulness, social influences, trust, user's satisfaction, and user's needs.

Ahmed, Almotairi, Ullah, and Alam (2014) conducted a qualitative study on the adoption of mobile banking in Saudi Arabia using the TAM model as their theoretical underpinning. In order to collect data, two focus-group discussions were conducted with different groups of people. The finding suggest that customers prefer to use m-banking products which are easy to use which gives them an advantage over other forms of payment. The results also conclude that consumers are also influenced by their own awareness and knowledge, risk, cost, and past experience.

3. Methodology

In this study, a natural experimentation was conducted before the interviews with participants. The experiment enabled the researchers to capture the behavioral changes in consumers' decision-making process. Thus, the findings provide a deep understanding on consumer behaviour towards the adoption of mobile payment options. This approach provides solid theoretical foundation to facilitate an understanding of the adoption of mobile payment options which may practically help managers and marketers to understand the important influential factors when making decisions regarding the use of mobile payment services.

The scenario of the experiment is based on the diffusion-innovation process (Rogers, 2003) that consists of five stages: knowledge, persuasion, decision, implementation, and confirmation. During the two-week experimentation, participants were required to complete several tasks. First, participants were required to collect information related to various mobile payment products (Knowledge stage). A list of mobile payment providers was given to the participants. Second, participants were required to choose two mobile payment services that they would like to experiment (Persuasion and Decision stages). Finally, using the incentives given, participants were free to have transactions using those two preferred mobile payment products (Implementation stage). Participants were encouraged to conduct experiments with the mobile payments in several scenarios.

In order to capture the data, in-depth interviews were conducted. This was an appropriate method for this study as many open-ended questions were asked and relatively few people were involved in the study (Guion, Diehl, & McDonald, 2001). The use of in-depth interviews also allowed each participant to spend more time actively sharing their thoughts on how and why they decided to adopt particular mobile payments while also avoiding distractions or other dominating factors (Boyce & Neale, 2006).

A total of six participants, who had never used any form of mobile payment previously, were voluntary recruited between the first week and second week of June 2016. A \$40 gift was offered to each participant as an incentive. Two out of six participants were girls and the participants were aged between 25 and 30. Most of the participants were already familiar with either online banking or mobile banking. Typical transactions were conducted using either online or mobile banking including the payment of monthly bills, such as electricity and internet-cable, transfers to other account, e-commerce transactions, and payments for train and air travel tickets.

Each participant was interviewed individually at the end of August 2016. The time and place of the interviews were chosen by the individual participant, to ensure the comfort of the participants. Each interview lasted for around 1 to 1.5 hours. With the permission of the participants, the interviews were audio-recorded to ensure that all of the important points were captured. The questions were open-ended in nature in order to stimulate the participants to express various thoughts. Examples of questions asked include: "Why did you choose these mobile payment products?" and "What are some of the difficulties you faced when using the mobile payment?". The interview started with the introduction of the topic and its objectives. The rights and the responsibilities of the respondents were also communicated at the beginning. In addition, in the last week of January 2017, each participant was contacted again for another interview, in order to capture additional insight to their post-purchase behaviour regarding the adoption of mobile payment options.

The results of the interviews were then transcribed into a written format. The contents of the transcripts were analysed and similar lines were coded based on specific words, themes, or issues. (Braun & Clarke, 2006). This process was repeated to ensure that the coding was correct and consistent. It is possible that some

of the revisions obtained during the January 2017 interviews will be applied to the final findings. It is also possible that some of the excerpts have been misplaced. Therefore, the analysis and the development of the theoretical underpinning for the adoption of mobile payment services can be made more effective (Glaser & Strauss, 2009).

4. Results

4.1 Knowledge Stage

As the participants searched information through different websites, the quality of the information is considered by them as a very important factor in their decision making process. They noted that the information displayed in a website must be informative, attractive, and convincing. They also mentioned that they did not like a website that uses too many words to explain something. They preferred pictures and videos. In addition, they also found that some websites displayed outdated information, especially old promotions no longer in effect.

“[...] It was very interesting. I could easily find its network. In addition, the videos were very helpful” (Man 3)

“[...] Most promotions displayed were already expired” (Man 1)

The study found that participants' decisions were influenced by others. Half of the participants asked either family members or friends regarding their previous experiences using mobile payments. They also used social media to look for information. As a result, they found information such as news articles or reviews that may have influenced their decision.

“[...] My sister used it some time ago and she told me that she had a bad experience. She convinced me not to use a mobile wallet” (Man 3)

“[...] I heard news that a group of people has successfully hacked the security of x wallet and stole the accounts database. It appears that the database is sold On the Internet” (Man 3)

4.2 Persuasion Stage

In this stage, the participants evaluated each of the mobile payment products based on specific criteria. Overall, all participants agreed that the most appealing factor of mobile payments was attractiveness of rewards offered. By using mobile payments, the participants noted that they could access certain benefits such as discounts, cashback, coupons, or points.

“The rewards offered become the most appealing factor to me. I could buy a cinema ticket or food from particular merchants with special prices” (Man 2)

Furthermore, the attractiveness of rewards is influenced not only by how big the discount is but by many other factors such as compatibility with lifestyle, the terms and conditions, and availability of the merchants.

“[...] Although they offered big discounts, I'm just not interested in it” (Girl 1)

“[...] The discounts only apply to limited products” (Girl 2)

“[...] The promotions offered were really interesting, but they are not available in the city where I live. Thus, it is useless” (Man 3)

4.3 Decision Stage

After gathering information on each of the mobile payment options, all of the participants were required to choose two mobile payments products. In the decision stage, the findings showed how the participants chose their preferred mobile payments. Participants not only compared the benefits offered by mobile payment services but also the benefits between mobile payments and other available methods. The attractiveness of rewards then became the main concern. Moreover, the rewards were considered as more attractive when it met the lifestyle or the needs of the participants, offered simple terms and conditions, and was available in their

neighbourhood. The study found that most of the participants made similar decisions when choosing the mobile payments for use during the implementation stage.

4.4 Implementation Stage

The implementation stage involved the use of the chosen mobile payment options during a two-week experimentation. In this stage, the findings indicate that infrastructure reliability played an important part in the adoption process. During registration, two participants continuously failed to register and this experiences lead to the rejection of the related mobile payment products. Some participants also experienced failure during transactions due to network unavailability. A participant also complained of the inconsistency between the information provided and the reality. This incident might greatly have influenced their decision.

“[...] I am done with it. I have tried a couple of times to use my mobile payment account, but I keep failing” (Man 2).

“[...] I ordered some food through the app and intended to pay with mobile payment, but I keep getting an error and the screen shows nothing” (Man 1)

At this point, the consistency of information is also important. One of the participants came to a restaurant that was included in the list of merchants that accept the mobile payment and found out later that they don't accept the mobile payment.

“[...] I bought some food in a restaurant that was mentioned in the list of mobile payment locations on the website. When I was about to pay, I found out that they don't accept mobile payments” (Man 3)

Participants further noted that the problem lies with uneducated employees who lacked the knowledge to handle the transaction using a mobile payment. As a result, the transactions become more time consuming than they should be and this is contrary to the advantages of mobile payment which make transactions faster and more convenient.

“[...] Just when I told the cashier that I will pay with my mobile wallet, she told me that the scanner is broken, so I needed to pay with cash. I still insisted to only pay with mobile wallet since I did not bring enough cash. Finally, a senior employee came and helped us. He tried to scan the mobile wallet and it worked like a charm” (Man 1)

“[...] The cashier looked confused, trying over and over and over but she could not enter the discount properly because it could only be used for a specific product. When I was ready to pay, the cashier even asked me how to do it” (Man 4)

4.5 Confirmation Stage

In the interviews, all participants agreed to continue to use mobile payments. Six months later, further interviews were conducted which sought to capture the participants' adoption of mobile payment. Overall, the findings indicate that the use of mobile payment is situational. In other words, mobile payments were treated as being complementary to cash payments, debit, and credit cards. All of the participants stated that they only used it when it was possible and in situations where the use of mobile payment offered rewards such as discounts or special prices compared to other methods. Our findings also indicated that participants considered the top-up cost in their decision.

“[...] I deposited some cash in my account and it will come in handy in some situations” (Man 3)

“[...] It is not possible because I don't have enough in my account and it will take time to top-up. So, I decided to use other methods to pay” (Man 1)

“[...] I think the top-up cost is very high It is only worth using it when the mobile payment offers rewards” (Girl 2)

The participant were asked to express their opinion about “why people do not adopt mobile payment?”. Most of the participants agreed that there is low awareness and knowledge of mobile payments that are

available. The findings also suggest that mobile payment is not as convenient as other payment methods due to network externalities issues.

“[...] I think they don’t put enough effort in raising the awareness of the existence of mobile payment. Take a case of McD for example. You can get a 20% discount which is very appealing, but the promotional material is too small that you will hardly notice it” (Girl 2)

“[...] It is not like cash or debit where you can use it in almost any merchants without thinking. In contrast, I need to find which merchants are accepting mobile payment. Moreover, you can’t take back the money you store in” (Girl 1)

5. Discussion and Implication

The aim of the research is to gain a deeper understanding of the decision-making process of consumers in adopting mobile payment services. Overall, the findings indicate that consumers have different consideration at different stages that may influence their decision-making. Although some of the factors are similar with previous studies (Mallat, 2007; Ewe & Yap, 2011), this study investigated these factors from a different perspective. The results also provide new findings, such as the importance of rewards and infrastructure quality, as well as providing a new perspectives on the development of a theoretical foundation in investigating the adoption of mobile payment behavior that that of existing literature.

The findings revealed salient factors that may influence consumers in adopting mobile payments in each stage of adoption. In the knowledge stage, the study found that there is a lack of awareness and knowledge of mobile payment options. This finding is consistent with prior studies (Ewe & Yap, 2011; Ahmed et al., 2014). In addition, consumers appeared to use various communication channels to actively search information including websites, social media, as well as their friends and family. Thus, the findings suggest the importance of information quality. Moreover, perceived risk appeared to influence individuals’ decisions, such as the risk of accounts being hacked or stolen. This finding is also consistent with prior literature (Mallat, 2007).

Second, in the persuasion stage, the findings suggest that participants were very concerned with the benefits being offered for using mobile payment. Rewards were considered the most attractive factor. This represents a departure from prior studies (Mallat, 2007; Ewe & Yap, 2011) which show that the benefits of using mobile payment were focused on its efficiency. However, it must be noted that the attractiveness of rewards was perceived differently by each individual. Compatibility, complexity of terms and condition, and rewards availability were identified to influence the attractiveness of rewards. These findings are considered as new discoveries. Therefore, the findings suggested a need for further investigation of the influence of the attractiveness of rewards on consumers’ intention to use mobile payment methods.

Third, in the decision stage, the findings show that participants will compare the value of using mobile payment and other payment methods (e.g. cash, debit, credit). In this study, the value was associated with the total amount of the transaction. In the experiment, the study shows that participants chose mobile payment methods that provide rewards that are appealing to them, therefore providing greater value to the individual consumer.

Next, in the implementation stage, participants proceeded to use mobile payments. In this state, the findings suggest that system quality and service quality can potentially create bad experiences that might lead to rejection of the mobile payment method. Finally, the findings indicate that the participants used mobile wallet in addition to cash, debit cards, and credit cards. When participants were attracted by the rewards and where it was practically possible, they would use the mobile wallet. The findings also suggest the importance of network externalities that could increase the usefulness and convenience of mobile payment. Otherwise, the current behaviour will not change.

To increase the adoption and use of mobile payment, the most effective strategy is to offer rewards to consumers. Thus, marketers should focus on developing appealing rewards. In the case of young people, marketers should consider the needs and the lifestyle of these age groups. The findings suggest that marketers should expand their network by teaming up with cinemas, restaurants, conveniences stores, public transport

services, and educational institutions. Marketers should also make the terms and conditions of the rewards as simple as possible and make the duration of the rewards program as long as possible.

Our findings also suggest that marketers may increase the adoption of mobile payments by strengthening the awareness and knowledge of those services. For example, a marketer may create a small registration booth in the merchant where the rewards are offered. As a result, consumers will be able to instantly register on the spot and receive the rewards at the same time. In addition, the findings also suggest that marketers should increase the quality of information available. Marketers should create more visual presentations rather than text presentation on their websites, mobile apps, instant massaging, and social networks as consumer prefer videos and images. Marketers should also emphasize the security features of their system as consumers may be influenced by the potential risks such as the possibility of their account being hacked and stolen.

The findings indicate that mobile payment providers should strengthen the quality of their systems as the failure of these system might hinder the adoption of their services. It is also suggested that employees should be educated in using mobile payment and in addressing various issues that may arise during mobile payment transactions to avoid unpleasant outcomes for consumers.

6. Conclusion

In conclusion, this study provides a rich insight into the consumer decision-making behavior when adopting mobile payment methods in Indonesia. In contrast to existing literature, this study included an experiment in the research design which revealed the salient factors that may affect consumers' decision making in five different stages of the innovation diffusion process.

However, this study is not without limitations. First, while the findings provide a deeper understanding of the adoption of mobile payment, the findings are not able to be generalized due to the limited number of participants. Second, all the participants fall into one age group, which does not account for the different results that may result from examining different age groups.

It is suggested that future research should follow the present study by conducting quantitative validation tests based on the present findings in the case of developing countries, especially Indonesia. Researchers should further investigate the influence of the attractiveness of rewards to consumers' intention to use mobile payment. In addition, future research should adopt different methods and perspectives in order to deepen the understanding of the adoption of mobile payment by consumers.

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