

# From Physical to Digital

*by* Universitas Internasional Semen Indonesia

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# From Physical to Digital : Consumer Adoption Process to E-Wallet

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## ABSTRACT

The primary objective of this research is to understand about the consumer adoption behavior of mobile wallet. Practically, this research will be useful for the mobile wallet provider who would like to understand the process which experienced by the user of mobile payment. It is also helpful for individuals such as a students to improve knowledge of mobile wallet which can possible to lead further research. The supporting theoretical framework is sourced from Diffusion Innovation book written by Everett Rogers (3rd edition) from which he presented the Innovation-Decision Process model. By using qualitative method using in depth-interview, some of informants are contacted by phone who live in Surabaya, Gresik, Jakarta. The findings of the research show that in each step of the innovation-decision process model contain several critical factors that most of the informant have the same feeling of it and of course it could be used as a future strategy to expand mobile payment's provider market share by implementing some of insight that has been revealed in this research.

**Keywords-** mobile payment, innovation-decision process model, adoption process behavior.

## 1. INTRODUCTION

There is a new phenomenon in Indonesia in the last two years, a customer becomes less panicked when he realizes he doesn't carry a wallet when he wants to make a payment transaction, the customer casually takes out a cell phone from his pocket and opens an online application platform. With just a few steps, the customer finally completes the payment.

One of the interesting features that make e-wallet attract the customer is their cash back, a discount that makes cash transactions become less attractive compared to cashless transactions. This phenomenon, concluded by researchers as a condition that was deliberately created to change consumer behavior in Indonesia to "force" must have an e- wallet

The focus of researchers in this study is from various factors that have been described, researchers want to take a deeper picture related to the motives and behaviors that arise when consumers decide to switch to using e-wallets from various professions.

This research is a form of qualitative development from previous quantitative research conducted by Alaeddin [1] which examines the changing conditions of consumer behavior in conducting mobile wallet transactions in Malaysia.

## 2. LITERATURE REVIEW

### 2.1. Digital Wallet

Digital money or what is often known as E-Money is now widely used by the public at large, especially in big cities to make payment transactions more practical. No wonder the government is also now increasingly promoting the use of money in the electronic space. It globally. David Chaum is the figure behind the term digital money or DigiCash in 1983.

But at that time, the use of the payment method called DigiCash was still not well socialized to the general public so that its use was not as popular as it is today. In addition, technology at that time was not very developed, although computers and the internet only began to develop and were discovered in those years. Then, along with developments in 1994, electronic payments began.

Some countries have also started to know the method of payment with electronic money, but in Indonesia, the use of electronic money popular in 2007 after the new method was applied by one of the private banks in Indonesia. Electronic payment now is being adopted by many Indonesians through permission from Bank Indonesia in its regulations written in Number 11/12 / PBI / 2009.

### **2.2. Electronic Wallet (E-wallet)**

Doan [7] in his research on consumer adoption in mobile wallets explained that a system is called mobile wallet when smart phone functions are similar to wallets, where there are digital coupons, digital money, digital cards, and digital receipts. Mobile wallet service providers require the user to install an application from an online store (in this case known as Play Store for Android or App Store for iOS), and after that the user can use the application to make online and offline payments.

In the future, Mobile Wallet is believed to be able to continue to be developed into a payment solution that is easy and safe for consumers around the world, of course with the support of the latest technology that can connect smartphones with physical devices such as NFC (Near Field Speech), soundwaves, and QR Codes, cloud-based solutions. Manikandan [8], in their study said that there are 4 types of E-wallets available including: (1) Open Wallet, in which there are features that allow users to make payment transactions, cash withdrawals and transfers within and between banks. (2) Semi-Open Wallet, in which the user is permitted to make transactions only with merchants registered with the service provider (3) Closed Wallet, this type is very popular to be used in E-Commerce where a certain amount of money will be held until transaction activity between two parties, i.e., seller and buyer completed. (4) Semi-closed Wallet, in this type of service providers allow users to conduct transactions with registered merchants and perform several other financial services, but users cannot withdraw cash in the semi-closed wallet.

### **2.3. E-Wallet Development in Indonesia**

According to a publication conducted by KPMG 2017 [17], Indonesia is a mobile-first Economy country which means that smart phone ownership is growing rapidly to double digits. One reason is because 605 populations in Indonesia is dominated by young people under the age of 40 years and has the characteristics of savvy digital natives.

Some examples of the above phenomena make Indonesia seen as a mobile first economy country which is the target of investors to invest their capital, especially in the start-up sector and its development is in the financial technology sector whose niche market is still very broad because it targets 180 million Indonesians who do not know or have accounts at the bank but they certainly use smart phone

Here are some start-up company players who have become market leaders in the digital payment industry today [13]

- 1) GO-PAY: One of financial technology products created by children of the nation which were initially successful in online transportation, then ventured into various features of food ordering services to various services that support the lifestyle needs of people in Southeast Asia. After successfully building an ecosystem of various applications that it has, GO-JEK launched GO-PAY which was originally as a means to facilitate payment services on the GO-JEK application.

- 2) OVO : In contrast to GO-PAY, the focus of OVO's strategy itself is how to grow consumer loyalty to shop at merchants in the mall and then spread to all buying and selling transactions outside shopping malls, so the approach and education of OVO is to empower merchants with various OVO features.

### **2.4. Shifts in Consumer Behavior towards Mobile Wallet**

Cisco [4] has also said that between 2016 and 2021, the number of internet users will increase by 4 billion and will soon be 6 billion, 75% of the 8.5 million people will have smart phone and internet access [17] At the same time, consumers will also be educated and develop because consumers will perceive technology as a factor that improves the quality of one's life [17] so that the phenomenon of technology adoption will grow very fast especially among young people who have highly connected characteristics. Around 56% of millennial use two or more electronic devices, such as smart phones and laptops.

Currently, consumers have a high bargaining power because consumers can have a variety of options for shopping behavior, consumers can choose to shop via smart phone or offline. Not only online shopping has increased, consumers today also will be given a lot of options for shopping on a type of product or service compared to when consumers have not been online, the choice of products for them to buy at that time was more limited.

In today's digital environment, consumers consistently move from one channel to another, from online to offline, and vice versa. There is a context proposed by Kotler and Keller [16], where the consumer purchasing scenario is divided into two, including show rooming and web rooming.

The show rooming scenario is a customer journey starts by visiting offline stores but purchasing decisions are made online because consumers will buy goods at more affordable prices. Then, in a web rooming scenario, consumers begin their journey by learning a product from online advertising or social media and after it feels appropriate, consumers will make purchases in the store.

Considered some changes in customer behavior in current customer journey, it is also important for a marketer to determine the strategy of payment channels because this stage is the final stage in the customer journey, which of course is a determinant of whether or not a consumer's journey must be adapted to the current digital conditions.

The mobile payment platform provider must have advantages that can distinguish it from the others. One of the relevant factors is speed, ergonomics, comfort, and safety. According to Beutin & Dagmar [3], one criterion that is no less important for mobile payment providers is to provide incentives together with other services, this is believed to help speed up the adoption process for some mobile payments, one example is that providers can add discounts and loyalty program at several merchants.

### 2.5. The Process of Consumer Adoption of Mobile Wallet

The concept of adoption, according to Eveland [10] in his research explained that in the concept of innovation literature, the term adoption is one of the oldest and most widely used and developed. Adoption can refer to a process, an event, or a situation - sometimes together, adoption is very full of positive values. Zenobia [25] groups 3 types of adoption decisions based on a book written by Rogers [20] entitled diffusion of Innovation, including optional adoption decisions, collective adoption decisions, and authority adoption decisions.

Innovation decision process is one of the concepts used to study consumer behavior in this research is the concept of innovation decision making process, which is a process where an individual or decision maker goes through the first stage of an innovation that is getting knowledge of an innovation to form an attitude towards the innovation, then into the decision stage to adopt or reject these innovations, then implement and use these new ideas and confirm the decisions that have been taken [20].

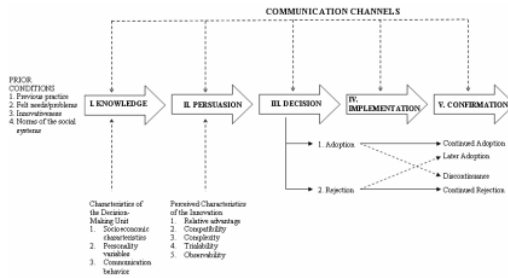


Fig 1. The Innovation Adaption Process Model

From the picture above, there are 5 stages according to the concept described by Roger [21] :

- 1) Knowledge, the existence of an innovation is known by an individual until the individual has a basic understanding of the function of the innovation.
- 2) Persuasion, likes or dislikes of an individual towards an innovation.
- 3) Decision, a stage where an individual performs actions or activities that lead to the use or rejection of the innovation
- 4) Implementation, a condition where an innovation begins to be used by an individual
- 5) Confirmation is a condition where individuals need reinforcement from the innovations that have been used. At this stage, an individual can also return to the previous stage if there is conflicting conflict with the innovation that has been adopted.

### 3. METHODS

This research was conducted using interviews with informants in several major cities in Java with a variety of professions. The age range of informants is dominated by Millennials (born between 1980-1995).

The approach used in this research is descriptive qualitative with a theoretical foundation of phenomenology. Data collection methods used in this study are in-depth interviews and observations.

### 4. RESEARCH DISCUSSION

#### 4.1. Factors that Influence the Consumer Adoption Process on Mobile Payment

Most of the informants in this study, are individuals who have been aware of the existence of a mobile wallet and are still users today, meaning that the process of several determinant factors found in this study is in line with what has been done by Mallat [18], namely:

*"... especially now there is a transfer feature to the bank where the fee is only 2,500, and there is no monthly admin fee" - Mrs. T, 24, Private Employee*

*"It's not complicated, there's no need to be confused, there's no change if we become a seller, payments become fast and if we become merchants, we also benefit from minimizing employee fraud" - Mr.X, 29, Entrepreneur*

Researchers found that there are several determinant factors that contribute to the adoption process of consumer behavior towards mobile wallet and appear in the informants in this study, among others: Relative advantage (substituting cash, increasing the variety of payment instruments, speeding up time), Complexity (ease of use), Cost (admin fees), External Network (collaboration with various merchants), Perceived Security Risk (error transaction, protection)

#### 4.2. Innovation Adaption Process – Knowledge Stage

- 1) Maximize the Application Ecosystem : At this stage, some informants said that most of them knew about this mobile wallet because previously the informant had used the start-up application and then over time this mobile wallet feature was added by the platform provider, so because it was embedded it IS to support the use of startup applications and They start using the mobile wallet itself.

*"Since I knew that there was GO-JEK in my town then I install the application. After that I start to be more familiar with "GO-PAY" facility, Mrs. T, 29 years old, Private Employee*

Such a situation is indeed created by several startup giants who deliberately maximize the ecosystem in their application by creating the mobile wallet, especially at the end of 2018 yesterday, one of the financial technology unicorns GO-PAY launched a new feature that integrates GO-PAY payments for transactions in offline merchants by utilizing QR Code.

2) Integrated Marketing Communication (IMC), The Key Success of Mobile Wallet's Growth : Almost all financial technology's giants in Indonesia, utilizing the IMC to get impact response awareness from consumers, no doubt initially OVO's effort to hook users is to provide attractive promos or deals.

In addition, other IMC activities that were also raised by informants in this study were, there were various heavy promotions at points of sale (POS) locations, especially culinary merchants scattered in various malls in big cities Collaboration was also raised by informants as important in the knowledge stage, as did OVO with Tokopedia and Grab being a quantum leap for mobile wallet companies to get the attention of consumers in a quick time.

*"The first time I knew, when I wanted to pay at the cashier there was an OVO or GO-PAY billboard, and it was repeated over and over in almost every restaurant in the mall," - Mr. X, 29 years old, entrepreneur*

*".... suddenly OVO is collaborate with Tokped, if using OVO, the cashback is super amazing, and the cashback is in the form of OVO points," - Mrs. T, 24 years old, Private employee*

#### **4.3. Innovation Adaption Process – Persuasion Stage**

1) Acceptance of Mobile Wallet : In this stage the researchers found attitudes raised after consumers received exposure to various mass media. To analyze what attitudes arise in the consumer, the researcher uses the Cognitive-Affective-Conative (CAC Model) [22].

In the affective component stage, the informant is known to have positive feelings about the existence of a mobile wallet that has begun to emerge in Indonesia because it is considered to facilitate the lives of the informants

*"... if all of these accounts will simplify my life, especially now that there is a bank transfer feature where the fee is only 2,500, and there is no monthly admin fee" - Mrs. T, 24 years old, Private Employee*  
*Then for the cognitive component, some informants know that with the use of a mobile wallet the benefits gained outweigh the disadvantages.*

*"A lot of positives. Some of the positive things are like being safer from crime, and running out fast also because the money is digital hehe." - Mrs. A, 29 years old, Surabaya*

#### **4.4. Innovation Adaption Process – Decision Stage**

1) Eager to learn more : At this stage there are two possible activities that will occur, namely adoption and rejection. The adoption stage occurs if the consumer decides to install the mobile wallet while the rejection stage is the stage where the consumer does not decide to use the mobile wallet.

In this study, almost no informants were found in the rejection stage, this is because all informants were smartphone users and were well educated about digital payments and all financial transactions in the current digital era were almost supported by payments using mobile wallet.

*"The first time I installed it and it immediately matched, hehe" - Mrs. A, 29 years old, Surabaya*

2) Reference Model : Researchers also found that this decision stage was strongly influenced by the ecosystem that was previously built by the mobile wallet provider and also the influence of the reference model also influencing such as office friends and relatives.

*"If you know, it's been quite a long time I know them from the adverts and promo materials for the mobile wallet in the malls. But know the details after being introduced to colleagues in the office" - Mr.M, 28, Government Employee*

#### **4.5. Innovation Adaption Process – Implementation Stage**

Time Spent Learning : At this stage of implementation, several informants said that they did not find it difficult to use the mobile wallet application because all the informants in this study were from Y generations so they were very familiar with the technology available on their smartphones.

*"After installing, pay directly at the cashier," Mr.X, 29 years old, entrepreneur*

The average informant said that it did not take long to learn about the application, but the challenge for some consumers was for the top-up process, which was confusing and some were confused. Some mobile wallet providers also provide options for top ups through offline merchants or online motorcycle taxi drivers.

*"The memorization process is about a week or two, the more frequent the make, the more quickly memorized" - Mr.M, 28 years, Government Employee*

For the informants, it was also found that the more informants conducting transactions using mobile wallets the more it made the informants more quickly learn about the use of mobile wallets.

1) Use of Innovation : According to Rogers (1983) [20], the implementation phase will occur where an

individual starts using an innovation and starts to look for technical information on the use of the innovation [20] Researchers found that conditions at this stage informants tend to start trying to do transactions at offline merchants or e-commerce by utilizing promos offered by the mobile wallet provider.

*"I couldn't, so I asked when I was in the cashier. rather difficult but it is clear after it can be easy "- Mr. X, 29 years old, entrepreneur*

Rogers [20] also said that some consumers who have used the innovation become part of an activity in their lives or can be said to use innovation on an ongoing basis, then the process of adopting individual innovations at the implementation stage will end here.

#### **4.6. Innovation Adaption Process - Confirmation Stage**

1) Is it good for our shopping behavior ? : At this stage of implementation, several informants said that they did not find it difficult to use the mobile wallet application because all the informants in this study were from Y and Z generations so they were very familiar with the technology available on their smartphones.

*"After installing, pay directly at the cashier, " Mr.X, 29 years old, entrepreneur*

**2**  
This stage is the last stage in the innovation decision process model, at this stage researchers explore some information about evaluations from individuals when they have used the innovation. Individual evaluations are of course also influenced by support from mobile wallet providers, such as customer service and the lack of errors that occur in the application.

Researchers found that so far in several brands of mobile wallet known unknown errors that have been fatal in the process of adoption of innovation, but some informants also worried about loss control when shopping due to the many cashbacks offered by mobile wallet providers.

*"Make it easier, but a little wasteful haha", - Mrs. T, 24 years old, Private Employee*

*"If GO-PAY directly matches, right from the start. But OVO used to have a trial-uninstall because of poor service "- Mrs. T, 30 years old, Entrepreneur*

## **5. CONCLUSION**

The presence of a mobile wallet in the midst of the community is seen as something that can change some people's behavior including the way they conduct transactions and payments. Just like other innovative products, the acceptance of a mobile wallet as part of a

lifestyle for urban communities also requires a process and time. In this case the researcher traces the process of what happened using Roger grounded theory [20] regarding the innovation process model.

It was found that in the early stages of the knowledge stage, the probability of informants to find out about mobile wallets was influenced by what the mobile wallet ecosystem itself was. Researchers are of the opinion that different conditions might arise if the mobile wallet provider is introduced to the community as a "single fighter" without the ecosystem covering it, then the possibility of using a mobile wallet in the community will run a little slow. So, some informants are considered to be very smooth in the process of knowing about the mobile wallet, because the informant had previously used the parent application of the provider, then the mobile wallet feature is a value-added member of the parent application that is accustomed to being used by the informant, so that it can be a complement to one to each other. In addition, at the knowledge stage, the attack on various integrated marketing communication activities is also felt to be a vehicle for these mobile wallet providers to create the curiosity until finally the informant feels "wants to find out more" about a new innovation.

In the second stage, innovations that have been introduced to society, will tend to produce attitudes towards consumers. According to Schiffman [22], attitude can be seen from its three forming components, namely cognitive, affective, and conative. In this research, the attitude shown by informants on mobile wallet innovation tends to be positive and well received by informants so there is a big probability to continue to the next stage.

The third stage, namely the decision stage, is the stage of consumer decision. In Kotler's theory [16] it is known that the decision making process starts from the introduction of problems, finding information, evaluating alternatives, purchasing decisions and post-purchase behavior. Each of these processes is decisive at this stage, but researchers find a common pattern that is in each decision-making process, the role of the reference model holds meaning here, meaning that the mobile wallet provider has a positive word of mouth and gets a positive review in the environment around the informant, then That provider will be chosen for further study by the informant.

The fourth stage is the stage where the community has begun to implement the use of the mobile wallet; researchers found that there are two behaviors that occur at this stage, namely time-spent learning and use of innovation, some informants need different time to learn about a new innovation. In the learning process, there are a variety of behaviors that arise, one of which is unique is that if the innovation is considered difficult to implement, the worst possibility will arise early exit intention toward the innovation.

And for the last stage, the confirmation stage is the stage where the informant has a tendency to evaluate the use of a mobile wallet and there is a behavior found that, the informant also evaluates the comparison of the financial conditions felt before and after using the mobile wallet. Because this is an investment an adjustment is needed for some informants so that their financial management does not

have a negative impact after they adopt this mobile wallet innovation.

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