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E-MONEY OR E-WALLET? A STUDY OF UNIVERSITY STUDENTS' PREFERENCE IN CHOOSING CASHLESS PAYMENT SYSTEMS

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Abstract. *Digital technology exists to make human life much easier in so many ways. The way human pays for things even now adapt the digital technology. The shift in the payment system applies to almost all countries in the world and that includes Indonesia. E-money and e-wallet are two payment products that are deserved to be highlighted. These two are developing rapidly in the country. In Indonesia, term e-money is defined as an electronic payment that is card based. E-wallet is a means of payment that is based on server. Although the growth of electronic payment is very high, the impact of those products to Indonesian economy is still low. This is reflected by its low contribution to Indonesian GDP. One of the reason is because the issuers do not fully understand about what consumers really want and need. For this reason, university students' preferences towards two different cashless payment systems, e-money and e-wallet, were studied. The factors affecting payment choice that were tested here were speed, convenience, security, merchant acceptance and digital lifestyle. Count statistics, independent t-test and binary logistic regression were done to reach the main objectives. The number of respondents were 857 respondents*.

Keywords: *Payment; E-money; E-wallet; Indonesia; University; Students; Preferences*

INTRODUCTION

Digital technology is no longer an odd word for us, especially in this era. It sneaked into our lives and suddenly became part of our daily life. We cannot deny the fact that the world we live in now has created a strong bond with digital. Not to mention that almost every single thing we use now are the adoption of it. "Digital is changing the way we communicate, the way we buy things, the way business interacts, the way we talk" (Kare-Silver 2011:1). Since the discovery of the internet in early 1960s, everything just changed even more. "The internet is a growing part of our lives and there is no turning back" (Weber 2004:6). It goes the same way as digital technology. Now all things just seem to involve digital and internet. Financial transactions, such as payment, is included in it. As a result, a lot of payments are digital-based nowadays. Based on Bank Indonesia, Bank Negara Malaysia, and European Central Bank, electronic money (e-money*)* is defined as a payment instrument that contains monetary value that is paid in advance by the user of the e-money issuer. Many countries such as Indonesia uses the term e-money for storing the money or data in card form. E-wallet itself is defined as a payment instrument with microprocessor whose memory is credited with purchasing power stored in a float account that has previously been deposited in a specialized company. "Each time a payment is made, the float account is debited" (Sahut, 2008). In other words, e-wallet is the term used as a payment method that is server based.

Although the growth of electronic payment has significantly increase over the years, the digital economic penetration in Indonesia is still in the early stage. This is reflected on the fact that digital economy only contributes around 8% to Indonesian GDP according to the data served by the Indonesia Ministry of Finance. One of the problem that causes that to happen is inadequacy of each electronic payment development. The issuers of the products do not really understand what consumers needs and wants. The inability to understand the market well makes the products become not interesting for the consumers. Therefore, the utilization of the products is not maximized yet. The objective of this paper is to study university students' preferences over e-money and e-wallet, analysing the characteristics differences in choosing different payment systems and the underlying reason behind their preferences. University students studied here are undergraduate students. This research is based on the assumption that the choice between e-money and e-wallet is applicable only for transactions that accept both modes of payment. This is a quantitative research using questionnaire as its method to answer all the research questions. Count statistics, independent t-test and binary logistics regression were performed in this research.

From this study, it is found that e-wallet is a more preferable payment method compared to e-money. Then, students who are in DKI Jakarta prefer e-wallet to e-money more than those in West Java area. Students in science faculty prefer e-wallet then e-money more than those who are in social faculty. There is no difference in digital lifestyle index of those who prefer e-money and e-wallet. Security, convenience, digital lifestyle and merchant acceptance have no significant impact on payment choice. Speed on the other hand has a significant impact on university students' payment choice.

LITERATURE REVIEW

E-money in Indonesia
As a part of electronic payment system, electronic money is growing rapidly nowadays. Based on Survey of Electronic Money Developments by Bank for International Settlements (2001), electronic money products are defined as stored value or prepaid products in which a record of the funds or value available to the consumer is stored on a device in the consumer's possession. Electronic money, in a physical sense, is nothing more than a collection of computer bits recorded on storage device (Santosh, Rajshekar and Robert, 2004). In Indonesia, the term e-money is known as electronic payment in form of a card. The maximum amount of money inside e-money is IDR 5,000,000. E-money platforms examples specifically in Indonesia such as Mandiri e-money, BCA Flazz Card, BNI TapCash, BRIzzi BRI, etc. There are several research regarding e-money. As an example is a journal entitled Consumers' Intention to Use e-Money in Indonesia Based on Unified Theory of Acceptance and Use of Technology (UTAUT), the utilization of e-money itself is not maximized. This happens because of the lack of customer intention of using e-money products.

E-wallet in Indonesia
Electronic wallet is defined as a secured system can be trusted to protect someone's secret keys and to perform necessary operations (payment) (N. Asokan, Phillipe, Michael S. and Michael W., 1997). In the country, the term e-wallet is familiar with the term of electronic payment that is server based. The maximum amount of money that can be stored in this payment platform is IDR10,000,000/account. E-wallet platforms examples in Indonesia such as T-cash Telkomsel, Gopay, OVO, XL Tunai, etc. There are previous research regarding e-wallet. A journal entitled Analysis of Trust and Risk Affect on the Acceptance of Go-Pay found that those two factors give significant impact on their acceptance towards e-wallet.

Digital Lifestyle Index
This research creates the very first digital lifestyle index. In this study, the digital savviness of each respondent are being examined through questionnaires regarding their lifestyle and later transformed into an index. Even though this digital lifestyle index is still categorized as new, author refers to a journal for making the index itself. "In each case the highest score was attributed to the most favorable conditions, e.g., a lack of disease and sick leave, the highest capabilities" (Kaleta et al., 2006). In this case, the highest score was attributed to represent digital lifestyle the most.

Preference Model
Although there are some research regarding e-money and e-wallet, there are few to none research that is studying the preferences and underlying factors behind the choice of e-money and e-wallet. Preferences also have a strong correlation with people's choices. According to 2017 Survey of Consumer Payment Choice (SCPC), there are two types of factors those affect people's payment choice; supply side factors and demand side factors. In this paper, the factors those were analyzed are the demand side factors such as security, convenience, speed and merchant acceptance. Those are the chosen factors since the factors are the significant ones for over the years in the annual survey of consumer payment choice. Other than that, digital lifestyle was also believed to affect people's payment choice over e-money and e-wallet.

METHODOLOGY

"Research design is made as a framework that is used to guide and direct research to a desired objective" (Aaker, Kumar et al., 2001). One of the most important decision in research design is the research approach since it will determine on how the information will be gathered. In order to reach the objective of the research, a quantitative research using questionnaire was done. The study itself is considered as exploratory because this explored the preferences as well as factors affecting university students' payment choice. Exploratory research studies what has not previously been studied. The objective of this type of research is to define new knowledge, insights and understanding in relation with the topic. In this study, researcher also uses descriptive research. "The goal of descriptive research is to describe a phenomenon and its characteristics" (Nasaji, 2015). This is used to provide the perceptions as well as views of the respondents regarding the topic studied. Target population of the study is undergraduate students in Indonesia with total of 7.5 million people. Nonprobability sampling – convenience sampling technique was used in this research. According to Slovin Formula, the minimum number of sample is 400 people. The statistical method used to analyze the data were count statistics, independent t-test (one-tailed) and binary logistic regression with the help of SPSS version 25. Count statistics was used to see university students' preferences of e-money and e-wallet, domicile as well as faculty characteristics difference. Independent t-test was used to examine the digital lifestyle index difference of those who prefer e-money and e-wallet. Lastly, binary logistic regression was performed to test security, convenience, speed, merchant acceptance and digital lifestyle impact to payment choice.

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FINDINGS AND ARGUMENT

Demographic

The first part of the analysis is demographic. There are 857 respondents' data that were analyzed in this study. The majority of the respondents are between 17-23 years old with the total of 823 respondents or around 97% of them. Then, those who are below 17 years old with the frequency of 10 respondents or 1.2%. Then, respondents who are in the range of 24-25 years old are 7 people or 0.8% of the total respondents. Lastly, those who are more than 25 years old are 3 people or 0.3% of the total respondents. The next demographic analysis is gender. It is found that the majority of respondents are female with the percentage of 53.1%. On the other hand, male respondents are 47% of total respondents. Then, author divided the domicile into 10 areas. The majority of the respondents are from West Java area or as big as 72.3%. It is followed by DKI Jakarta by 22.2%, East Java by 2.3%, South Sumatera, Central Java, and Central Sumatera by 0.9%. It is found that only four people from North Sumatera area. Lastly, there is only one person each from Kalimantan and Sulawesi. Author found that the majority of respondents have monthly income in between Rp2,000,000-4,000,000. The next one is in between Rp1,000,000-1,999,999 with the percentage of 30%. The third place is for the range of >Rp4,000,000 or 19% of the total respondents. Lastly, there is only 11% of the respondents who have monthly income below Rp1,000,000. The last part of demographic analysis is income source. The majority of the respondents got their monthly income from their parents. Around 9% of them got their income from working. Then those who got their income from business and scholarship are 4% each.

Payment Preference

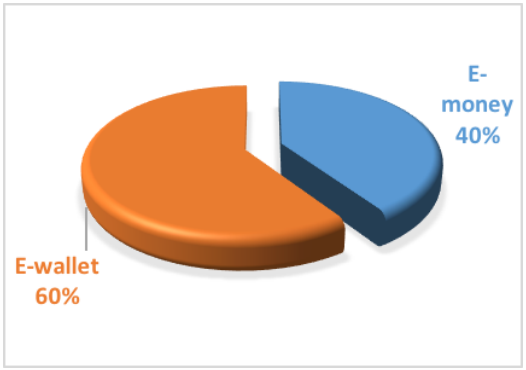

Figure 1. University students' payment method preference

To analyze the payment preference of university students, author conducted count statistics. From the above figure, it can be seen that the majority of respondents prefer e-wallet more than e-money with the ratio of 3:2. This supports the study by KPMG retail that found the growth of e-payment in Indonesia will be driven by e-wallet. Author also studies the payment preference of university students for specific items. In conclusion, e-wallet is more preferred for paying food and beverages, clothing and for paying transportation mode. On the other hand, e-money is more preferred for paying stationery.

Characteristics Difference

Author conducted both count statistics and independent t-test to see university students' characteristics difference in choosing between e-money and e-wallet. There are three kinds of university students' characteristics those were analyzed here. Domicile, faculty and digital lifestyle index are the aspects of characteristics studied. The aim of this analysis is to see whether there are any differences between the preference of two areas and two different faculties as well as digital lifestyle index difference between two groups of preference. First, it is found that university students in DKI Jakarta prefer e-wallet to e-money more than those who are in West Java area. This finding can be explained by the fact that DKI Jakarta is the capital city of Indonesia in which the technology development start from the city. Therefore, people in DKI Jakarta tend to choose the most updated payment system that exist in the country, in this case e-wallet. The second analysis is regarding faculty. It is found that students in science faculty prefer e-wallet to e-money more than those who are in social faculty. This finding can be explained by the fact that science students tend to understand technology more than social students. Lastly is regarding the digital lifestyle index difference between those who choose e-money and e-wallet. Author conducted independent t-test to see get the further analysis. It is found that digital index of those who prefer e-wallet is smaller equal to those who prefer e-money.

Analysis of the Factors

To analyze the factors behind university students' payment choice, author conducted a binary logistic regression. There are five independent variables with one dependent variable. The independent variables are security, convenience, speed, merchant acceptance and digital lifestyle. On the other hand, the dependent variable is university students' payment choice. Performing

binary logistic regression means there are several steps that had to be done. First, the model itself is already fit to be tested using the method. Then the R-squared of the model is 1.4%.

Security has a positive coefficient value. This means that the higher the perception of the security, that person tends to choose e-wallet. The odds ratio value on this variable is 1.203. It can be concluded that if there is an increase of one point in security, the probability for the respondent to choose e-wallet is 1.203 times before the increase of the variable. Although, this statement is not significant since its sig. is above 0.05 (sig. = 0.259). Then, convenience also has a positive coefficient value. From this, it can be inferred that the higher perception of convenience, he or she tends to choose e-wallet. The odds ratio for this variable is 1.266. This means that if there is an increase of one point in convenience, the probability to choose e-wallet is 1.266 times than before. Although, this statement is also not significant since the significance is 0.215 which is bigger than 0.05. Speed has a significant relationship with undergraduate students' payment choice. This is shown from its sig. that is 0.026 which is below 0.05. Speed has a negative coefficient. The higher the perception of speed, respondent tends to choose e-money. The odds ratio for this variable is 0.657. This means, if there is an increase of one point in speed, the probability for the respondent to choose e-wallet is 0.607 times than before the increase. The coefficient of this variable is negative. This means, the higher the perception of merchant acceptance, that person tend to choose e-money. The odds ratio for this variable is 0.820. If there is an increase of one point in merchant acceptance, the probability for the respondent to choose e-wallet is 0.820 times than before the increase. Although, this statement is not significant since the sig. is 0.267 and is above 0.05. The coefficient of this variable is positive. This means that the higher its digital lifestyle score, that person tend to choose e-wallet. The odds ratio for the variable is 1.072. If there is an increase of one point in digital lifestyle index, the probability for the respondent to choose e-wallet is 1.072 times before the increase situation. Although, this statement is not significant since the sig. is above 0.05.

From the analysis, it can be seen that speed is the most significant variable affecting university students' payment choice. The more the perception regarding speed, he or she will tend to choose e-money. This is contrary with prior findings where e-wallet is the chosen payment method for university students. It is believed that there exists another factors those are not in the research variable that is relevant with current situation. As we can see, e-wallet issuers now give many discounts and promotions to its users. University students with its limitations are sensitive to this kind of discount and promotion in which e-money do not give. Therefore, there is a probability that this factor is one of the significant factor that could explain the phenomenon.

Even though the R-squared value of the preference model in this study is quite small, this finding could lead to several important information. First of all, this can be a guide for issuers to not waste their resources in product characteristics development, but instead to other issues such as marketing strategy. Other than that, even though the model itself project a low R-squared value, but there is still one statistically significant predictor. In this case, speed, still represent the mean change in the response for one unit of change in the predictor in the model constant. This type of information is definitely valuable since the issuers can know what is the important thing in the product characteristics from the perspective of consumers.

CONCLUSIONS

This research is based on the assumption that the choice between e-money and e-wallet is applicable only for transactions that accept both modes of payment. The research findings are as follow: First, it is found that e-wallet is a more preferred payment method for university students compared to e-money. To be exact, e-wallet is more preferable for paying food and beverages, clothes and entertainment. Then, university students in both DKI Jakarta and West Java prefer e-wallet than e-money. Students in DKI Jakarta prefer e-wallet to e-money more than students who live in West Java. Other than that, both social and science students also choose e-wallet as their preferred payment method. Students in science faculty prefer e-wallet to e-money more than students in social faculty. It is also found that digital index of those who prefer e-wallet is smaller equal to those who prefer e-money. Another finding is speed has most significant impact for university students' in Indonesia in choosing between e-money and e-wallet.

Author recommends e-wallet issuers to gain more merchant collaboration in F&B sectors, clothing and transportation mode as those are sectors in which paying with e-wallet is more preferable. It is recommended for e-wallet issuers to make paying with their products faster. Other than that, author recommends to strengthen the marketing strategy by giving discounts, promotions and many more. There is a probability that university students are not the largest market for e-money products. There are several recommendations from the author. First, e-money issuers may target customers in another age range. Then, it is recommended to understand the behavior in that market and create e-money products those will fulfill their needs. Another recommendation is to improve e-money products based on the analysis. It is suggested for e-money issuers to reach more collaboration with parking management companies such as book stores. Author also recommends e-money issuers to maintain its competitive advantage in speed and highlight this characteristic of e-money. E-money issuers also suggested to create a better marketing strategy by giving discounts and promotions to compete with e-wallet products.

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