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OFFLINE PAYMENT VS ONLINE PAYMENT – CONSUMER INFLUENCING FACTORS IN UNIVERSITY STUDENTS

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Abstract.Almost everything becomes digital after the emergence of industrial 4.0, which resulted in the emergence of financial technology. Financial technology in payment products in this journal are e-money and e-wallet that can shift user behavior in using payment products. User starts to use e-payment besides cash. This paper aims to analyze user preferences in using payment method, especially in online and offline payment among university students in Indonesia because they tend to follow the trend of technological development. This paper also analyze the factors that influencing user in choosing certain payment method and the products that is preferred more by the respondents.

Keywords: Financial technology, Online payment, Offline payment, User preference, User behavior

INTRODUCTION

Recently, industrial 4.0 is developing rapidly in every aspects of human life. The use of internet in this era is also increasingly widespread and public. Internet usage with supporting of sophisticated technology has made it all integrated into a system that may cause shifting in human behavior become more practical lifestyle. One example the emerge because of the situation is financial technology or known more as "fintech". Financial technology is an innovation in financial sector that involved technology and enable the business models that can make a revolution towards the existing firms of how they creating and delivering their goods and services, address privacy, regulate and law enforcement challenges, provide new opportunities for entrepreneurship, and inclusive growth (Dhar & M. Stein, 2017). Financial technology becoming a booming trend everywhere, including Indonesia. Many businessman, entrepreneur, and IT developer took opportunities to create a new business or startup by utilizing the financial technology system. Until August 2018, there were sixty four financial technology startup that have registered in OJK (*Otoritas Jasa Keuangan*). This sixty four financial technology startup are moving in different fields, there are payment, cryptocurrency and blockchain, crowdfunding, peer to peer lending, POS system, accounting, also personal finance and wealth management. Most financial startup in Indonesia focusing on payment products. Using financial technology product in payment, the user can easily make payment in the gadget by top-up the money to the application through ATM, bank, internet banking, and mobile banking. The users of financial technology products is mainly among productive people, that is from 15 years old to 64 years old, especially for young people and students.

In this research will be focused more on online payment and offline payment. These two payment methods are also related with financial technology. Briefly, these two payment methods can be distinguished based on the presence of an internet connection to process the transaction. Based on that, these two payment methods have different characteristics. The emergence of new types of payment modes could makes one's preference shifting especially from offline payment. For this reason, the research objective is to find out user preferences for these two payment methods, user digital lifestyle in using certain payment methods, and the preferred products from the two payment methods comparing with the condition that digital trends and high penetration rate in Indonesia, which is estimated 145 million internet users in year 2020. Scope of this research will be university students in Indonesia since they are more vulnerable to technological changes and development. The method use for analysis is descriptive analysis on the demographics, scoring method for analysing digital lifetyle and preferred payment instruments and method, and logistic regression for analysing the variables that affecting user in choosing certain payment method. Overview of the results that there are four variables that are significant towards choosing payment method, the preferred payment method is still offline payment, that is cash.

LITERATURE REVIEW

The literature used in this research will related with offline and online payment, also the preference factor that influence a certain person in using those two payment methods. Previously,knowing that payment system is transfers of one form of product, service, or financial asset in a proportion that have been agreed by all parties involved before (Kenton, 2018).

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Offline payment can be define as the payment method that is not using internet connection, however use traditional gateway in making payment activitie (BigCommerce) (Chargebee) (InvestingAnswers). Offline payment can be in the form of cash, debit card, credit card using electronic data capture (EDC) machine, e-money, and postal order. In this research, the offline payment instrument more focused on cash, debit card, credit card with EDC machine, and e-money. Meanwhile, online payment is an arrangement of monetary exchange amongst purchasers and vendors on online conditions or using the internet server that is helped by a digital financial instrument that supported by a bank, a mediator, or by a lawful associate (Burhan UI Islam Khan, 2017). Online payment can be in the form of credit card that using internet connection (through card number and card verification value or CVV code), mobile payment, e-wallet, virtual credit cards, smart and loyalty cards, stored value card payment, and e-cash. In this research, the online payment instrument more focused on e-wallet and credit card payment with verification of CVV code.

Financial technology is also related to these two payment methods. In offline payment method, e-money is a financial technology product, whereas in online payment method, e-wallet is a financial technology product. In the use of these two payment methods, there must be factors or things that affect user preferences. Payment system itself has sixteen characterictics according to research from Jacques Holst et al. (2015). The characteristics are context, control, convenience, social doctrines, risk, expenditure, sensory perception, time, equipment, spending, credit, trust, access, amount, loyalty, and cancellation. Eric W. K. See-To et al. (2014) find that trust and convenience particularly examine that electronic payment can be a potential factors that affect online transactions. Consumer attitude towards a payment technology was found to be influential on users' intent to use that payment technology for a purchase of a given magnitude, whether it is online and offline payment, also adjusting to the level of income. Meanwhile, Joanna Stavins (2018) in the research find that discounts and surcharges can impact consumer preferences for the payment method used.

Syed Md. Faisal Ali Khan and Amal Mohammed Sheikh Damanhouri (2017) state that there are seven factors associated with the behavioral pattern of payment which includes ease of use, usefulness, security and privacy, exchange and refunds, cost and surcharges, mobility, and confidence. Qing Yang et al. (2015) find that there are risk factors that affect the use of online payments in China. Muhamad Sade bin Mohamad Amin et al. (2017) about factors influence utilization of internet payment system in Malaysia that are performance expectancy, effort expectancy, and social influence. Those three factors are proven to have a strong effect on the actual use of the system by Malaysian general public. According to the research Emrah Oney et al. (2017) perceived security and perceived trust have a positive and significant effect on the electronic payment systems and when users perceive the electronic payment system secure and trustworthy, they are more willing to complete their transaction electronically. Burhan UI Islam Khan (2017) in their research about study of online payment finds that usage of online payment is increasing. Change in the behavior of customers showing a transition from the traditional to an advanced online mode of payment is apparent in retailing and banking, and with nearly all available mobile devices.

Several finding about the factors in offline payment also shows that education and income are the largest factors explaining consumer payment preferences in the use of cash using the data from Diary of Consumer Payments Choice. Cash also still the most used payment instrument in US (O'Brien, 2014). Besides, transaction characteristics have a strong impact on the probability of a transaction being paid by cash, check, or bank card. There is also specialization effect of the use of payment instruments according to the type of good, spending place, and contact (David Bounie, 2006).

Since the increasing of online payment instrument that facilitate payment transactions, there is also possibility of switching attitude and intention from users of payment instruments. According to Alaeddin O. et al. (2018), there are two critical factors affecting the intention to switch from the traditional way of payment to the digital. Both perceived usefulness and perceived ease of use found to be significant factors to create attitude toward switching to mobile digital wallet. The independent variables used to be analyze in this research taken based on previous research. There ten independent variables to be analyzed in this research such as convenience, intention to use, spending level, social influence, cancellation, payment supporting infrastructure or equipment, discount and surcharges, risk, security and privacy, and trust.

METHODOLOGY

The data and information collection in this research using both primary and secondary data. The secondary data sourced from previous research and journal, the aim is to strengthen primary data and as source to determining independent variables. Meanwhile the primary data use questionnaire to assess the respondents. The questionnaire itself consists of four sections. The first section of the questionnaire is related to the demographic aspects of the respondents, the second section deals with the digital lifestyle of the respondents, the third section relation to the use of online and offline payment methods, and the fourth section about the variables affecting choosing payment method. In the fourth section, author use Likert scale ranging from 1 to 5 in the measurement of each factors. The scale 1 imply that bigger tendency of respondents to use offline payment, 2 imply that

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big tendency of respondents to use offline payment, 3 imply that the respondents is neutral toward offline and online payment, 4 imply that big tendency of respondents to use online payment, 5 imply that bigger tendency of respondents to use online payment. The sampling method used in this research is convenience sampling. According to the Slovin's formula with error 5% the minimum number of respondents needed in this research are 400. The data collected in four weeks.

The data collected will be analysed quantitative. After the questionnaire is constructed, the questionnaire will be spread to certain respondents in order to pilot test. The purpose of pilot test is as preliminary test before spread widely and to ensure that the respondents are understands the whole part of respondent. Result from the pilot test will be used for testing reliability and validity. The purpose of reliability test is to check internal consistency of the questionnaire especially in the Likert scale. If the value of Cronbach Alpha is above 0.7 or the value of r table is lower than Cronbach Alpha, it can be said that it is reliable. Meanwhile validity is to check whether there is variation in outcome measurement. Value of validity test can be obtained by comparing R Pearson correlation value in table with the calculation result in SPSS. An item can be said valid if R value in the SPSS is higher than R value in the table. After the questionnaire is reliable and valid, the author can collect more data. The next methodology is descriptive analysis. Descriptive analysis used to describe the demographic aspect of respondent using table or chart. Then related with descriptive analysis, digital lifestyle analysis is done. Digital analysis can be measured by giving a score based on their daily activities. The higher the score indicates the higher digital index of a person. The digital index obtained will be one of the independent variable that can affect respondent in choosing certain payment method. The same method to analysing preferred payment instrument and method (by scoring). The last step of analysis is using logistic regression to determine group membership according to independent variables. Logistic regression does not require classical assumption such as normality, heteroscedasticity, and linearity.

FINDINGS AND ARGUMENT

Table 1. Respondents Demographic

Variable	Categories	Frequency	Percentage
Age	<18	21	2.26%
	18-22	867	93.22%
	22-26	38	4.09%
	>26	4	0.43%
Gender	Male	389	41.83%
	Female	541	58.17%
Education level	D3	9	0.97%
	D4	7	0.75%
	S1	892	95.91%
	S2	7	0.75%
	S3	1	0.11%
	Other	14	1.51%
Domicile	Jabodetabek	105	11.29%
	Bandung	625	67.20%
	Surabaya	17	1.83%
	Semarang	11	1.18%
	Medan	84	9.03%
	Yogyakarta	32	3.44%
	Palembang	14	1.51%
	Malang	8	0.86%
	Other	34	3.66%
Income	<1.000.000	233	25.05%
	1.000.001 – 2.000.000	404	43.44%
	2.000.001 – 3.000.000	193	20.75%
	3.000.001 – 4.000.000	49	5.27%
	4.000.001 – 5.000.000	28	3.01%
	>5.000.000	23	2.48%

Source : Primary data

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The Cronbach Alpha value of the reliability test is 0.722 indicates that the questionnaire is quite consistent. Meanwhile for the validity test, it is known that the value of R Pearson correlation of all of the tested item are greater than R value in the table. For the reliability and validity test using data from 45 respondents as a result of pilot test. The questionnaire tested is known to be valid and reliable, so that the author can done further analysis. Table 1 above exhibit demographic data of respondents. Total respondents to be analyzed in this research are 930. There are five variables in the demographic aspect. The first is age variable which are divided into 4 categories. Mostly respondents in range age 18 to 22 years, that is 93.22% from total respondents, meanwhile in other categories there were still few respondents. This age also means the majority of respondents who are taking undergraduate education level, that is 95.91% from total respondents, meanwhile in other categories there were still few respondents. Gender of respondents majorly is female with percentage of 58.17%, followed by male 41.83%. Most of respondents living in Bandung, that is 67.20% from total respondents, then followed by Jabodetabek, with percentage 11.29%, the monthly income of the undergraduated students in the range of Rp1.000.001,00 to Rp2.000.000,00 then followed by income range below Rp1.000.000,00 and Rp2.000.001,00 to Rp3.000.000,00. The most of sources of income still come from parents.

Scoring analysis is used to determine digital savviness index preferred payment instruments and method used by respondents. The higher the score, the higher the tendency of respondents preference and the higher the digital savviness. In the lifestyle section of the questionnaire, there are 11 questions that used to assess respondent digital lifetyle. The 11 questions will be grouped into three smaller groups that are expense, communication, and transportation. Expense consist of expenditure in entertainment and internet, place to buy food and beverages, place to buy clothes, and place to buy books. For communication consist of the time spend on internet services, place to access internet, way to communicate with friends, and online activities. The last for transportation is daily mode of transportation. Each choice of answers of lifestyle questions will be given score and weight then the digital lifestyle index can be determined. According to the analysis result, the average of digital savviness index of the respondents is 3.217. It means that respondents are quite comfortable with digital lifetyle. The digital savviness index then will be additional independent variable that will be tested whether it can be significant variable in affecting to choose certain payment method or not.

Table 2. Score of Payment Instrument Method

Offline Payment Instrument	**Score**
Cash	3.278
Debit card	1.471
Credit card (EDC)	1.054
E-money	1.172
Online Payment Instrument	**Score**
Credit card (CVV verification)	1.082
E-wallet	2.531
Payment Method	**Score**
Offline payment	2.261
Online payment	1.890

Source : Primary data

The method used to analyze respondents preferred payment method and instrument not much different from the analysis of the digital savviness index. Preferred payment instrument and method measured based on expenditure and frequency of use on each payment instrument. According to the analysis result, the score of cash is the highest among other offline payment instruments. This indicates that cash is still preferred by respondents. This may happen because cash is still used in every condition. For online payment, the preferred payment instrument is e-wallet. As for the preferred payment method, author assigns weights to each payment instrument in each method. Based on the analysis, the score of offline payment method is 2.261, higher than online payment method. Overall, respondents which are university students are still prefer offline payment method especially cash. Logistic regression analysis is done to test the independent variables towards binary dependent variable whether there independent variables can affect significantly on choosing payment method between offline and online payment. The results of logistic regression can be seen from the Sig value from the SPSS results. If Sig value below 0.05, it indicates that the variable has significant effect on choosing payment method. The B coefficient is the result of natural logarithmic function of odds ratio. Positive coefficient B indicates a positive relationship between the independent variable and dependent variable of code 1 (in this research code 1 is online payment method), meanwhile the negative coefficient B indicates a negative relationship between the independent variable and dependent variable of code 1, but a positive relationship to the dependent variable of code 0 (in this research code 1 is offline payment method). In this term, there are 4 independent variables that affect significantly on choosing payment method that are convenience, spending, discount and surcharges, and digital savviness index.

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CONCLUSIONS

From analysis and findings of this research, it can be concluded into 3 points. The value of the respondent's digital savviness index was quite high with an average of 3.217. The first point, although the value of digital index is quite high, respondents still tend to prefer offline payment rather than online payment. Second point, preferred payment instrument in offline payment is cash, and preferred payment instrument in online payment is e-wallet. In choosing payment method, there are 4 variables which affects significantly, there are convenience, spending, discount and surcharges, and digital savviness index. Contribution of this research also can be in the form of recommendation towards online payment service provider. The recommendation for this study is that if online payment to be more preferred, it is better for the provider company to improve features such as convenience in online payment methods and also can add some added value of the payment method. And for further research, the demographic can be wider range from the domicile and age. The more variety of respondents demographic can provide more varied and different results. Further research, can also compare more specific instrument payment method using predetermined factors and elaborate about switching factor to other method. The index of online payment methods can be low because the comparison between instruments in each payment method is not the same so it can affect the results of the assessment.

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