DIFFERENCES OF INDIVIDUAL DEMOGRAPHIC CHARACTERISTICS TOWARDS E-WALLET PAYMENT IN RESTAURANTS

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ABSTRACT

Manuscript type: Research paper.

Research Aims: This study aims to understand the influence of individual differences to customers’ intention to use e-wallet as a method of payment at café or snack bar, fast food restaurant, and food court.

Design/methodology/approach: A total of 481 valid online questionnaires were collected from DKI Jakarta, Banten and West Java respondents who have paid with e-wallet in restaurants within the last 12 months. SPSS Analysis through ANOVA with Dunnet’s C post hoc analysis was used to analyse the differences between groups.

Research Findings: Individual differences such as gender, income and education have significant influence in customers’ intention to use e-wallet as a method of payment in restaurants. However, unlike previous studies, age does not have a significant impact on e-wallet adoption at restaurants. This study also demonstrated that type of restaurant makes significant influence for customers’ intention to use e-wallet.

Originality: There has been a study about individual differences that influence adoption of NFC for payment in the US. However, this is the first study in Indonesia to understand how individual differences significantly influence e-wallet adoption for payment methods in restaurants.

Practitioner Implication: This study provides insight for restaurants and e-wallet providers about consumer behaviour and develop marketing plans.

Research limitation/Implications: This study was limited to some restaurant types and only towards respondents who have used e-wallet in restaurants within the last 12 months. Further research could be conducted in other types of restaurants and non-digital savvy respondents.

Keywords: Country-of-origin, Origin Effect, Purchase Intentions
INTRODUCTION

Indonesia is a big population country with a total about 269 million people (Central Bureau of Statistics, 2020). This fact brings Indonesia into the fourth-largest smartphone market in the world. Indonesia smartphone users were estimated to grow into 81.87 million users in 2020 and align with that there will be 33 percent growth of people in Indonesia who access the internet from their smartphones by 2020 (Muller, 2020).

Technology is developing very fast and makes many changes in the world including digital technology, such as e-commerce and digital payment. As people become more familiar with digital technology, they are also going online for other services such as financial technology (fintech) and entertainment services. Fintech has become one of start-up businesses with digital technology, especially money transfer and payments service, such as mobile payments (PricewaterhouseCoopers, 2019). Acceptance of mobile payment services are increasing especially in emerging markets. Rate of consumers making mobile payments in stores is growing in Indonesia from 38% in 2018 to 47% of consumers in 2019 (Ernst & Young, 2019).

Central Bank of Indonesia Regulation no. 11/12/PBI/2009 about electronic money (e-money) states that e-money, or we are more familiar with e-wallet, is issued based on pre-deposit money from the customer to e-wallet providers and the value of money is stored electronically in a media such as server or chip. There are two types of e-wallet in Indonesia: server-based such as Go-Pay, Ovo, Shopee Pay, Dana, Link Aja, etc and chip-based such as Flazz by BCA, e-money by Mandiri, Brizzi by BRI, etc.

Report of the Central Bank of Indonesia in March 2020 shows e-wallet transactions in Indonesia are growing at a very fast rate of about 145% (year on year) with total value transactions is IDR 15.18 trillion. Although this value is a total value for both e-wallet types and for both in stores and online transactions, the data shows e-wallet is growing rapidly and will play an important role in Indonesia’s economy (Central Bank of Indonesia, 2020).

Nowadays, eating out has become part of regular social activities among Indonesians whereby they meet friends, families, colleagues, and business partners to build relationships. This trend is predicted to continue at growth rate by 30% in the short and medium term. Other lifestyle changes were supporting the growth of Indonesia’s restaurant and food franchise businesses as well. There is a trend among workers in big cities to work long hours either due to obligation or simply to avoid traffic jams that leads into a new habit of eating out. As a result, Indonesia’s middle-class are eating less in their homes and eating out more. This trend has been confirmed through a research by Nielsen that showed 9% of global citizens eat out at least once a day and in Indonesia the rate is 11%, higher than globally (Global Business Guide Indonesia, 2017).

The Growth of fintech in Indonesia recently is supporting growth of the restaurant industry because they are doing lots of promotion in collaboration with restaurant merchants and giving incentives for customers. As of March 2020, there are 48 registered e-wallet providers in Bank Indonesia (Central Bank of Indonesia, 2020). Another research also found that increasing awareness of modern technology has made the technology plays an important influence in restaurants’ business (Kapoor & Vij, 2018).

Previous study from (Esfahani & Ozturk, 2019) stated that individual differences and past experiences could explain customers’ intention to use Near Field Communication (NFC) technology as a method of payment in restaurants in the USA. NFC just started its popularity in the USA, especially in restaurants due to it providing ease, security, quicker process and data analytics for the restaurants. Customers can directly pay without waiting time for either card authorization or for money changes when paying in cash (Cobanoglu, Yang, Shatskikh, & Agarwal, 2015).

Previous study classified gender, age, income, education and past experiences as individual differences that affect the adoption of NFC technology as a method of payment (Esfahani & Ozturk, 2019). Besides that, there are few studies that have been conducted to test customers’ adoption behaviour and whether individual differences affect the adoption of e-wallet. As growing of restaurant industry and fast growing of e-wallet in Indonesia, we find that it is important to identify the relationship between individual differences of customers and their in-
tention to use e-wallet as method of payment in restaurants in Indonesia.

**LITERATURE REVIEW**

*Restaurant customers’ differences in relation to e-wallet adoption as methods of payment*

**2.1.1. Gender**

Under certain context, gender will significantly influence in determining the intention of accepting new technology, study found male is more technologically adopted compared to women. Specific on internet payment, males to be found more likely to adopt internet payment systems in respect of greater usefulness, and women are prone to perceived risk in adopting internet payment (Goswami & Dutta, 2016). Therefore, the research is proposed to conduct the study on the direct effect of gender on adopting e-wallet when visiting restaurant criteria:

**H1.** Males are more likely to use e-wallet as a method of payment in restaurants compared to females.

**2.1.2. Age**

Age becomes an important part of the demographic component in understanding when it comes to deciding on technology adoption. A Study by Schroer divides generations into 4 categories i.e.: baby boomers (>53 years old), generation X (43 – 53 years old), generation Y (25 – 42 years old), and generation Z (<25 years old) (Schroer, 2004). Different generations have different levels of technology adoption. Research shows generation Y or millennials considered as a generation who coexist with technology and highly adapted to technology (Berkup, 2014) and another research by (Aluri & Palakurthi, 2011) showed younger people are prone to adopt new technology. The latest generation is Generation-Z and they tend to spend more through online as ease, perception of lower prices, varieties and time efficiency which will impact on how payment technology is adopted. This study also found spending on food/beverage became second priority after clothing. Both generations Y and Z played an important part in today’s technology adoption (Simangunsong, 2018). Looking at the previous studies which strongly show younger generations are highly engaged with technology, therefore we would like to ascertain that younger generations are more likely to adopt mobile payment when performing transactions in different restaurant criteria.

**H2.** Younger customers have a better adoption level to use e-wallet as method payment in restaurants compared to the older generation.

**2.1.3. Education**

Prior findings showed that highly educated people were faster to adopt new technologies compared to lower education (Wozniak, 1987). Hence finding from (Riddell & Song, 2011) better education has positive correlation in enhancing technology adoption and diffusion. Both of these are important in promoting technology advancement. Study by (Astuti & Nasution, 2014) also find that people with higher education level are willing to adopt new technologies as they have the ability to analyse and judge on positive and negative effects. Research conducted by (Abu-Shanab, 2011) had shown that education has significant moderation effects with behavioural intention in internet banking adoption. While higher education level was found to have higher intention to adopt internet banking. With higher education levels are better both in accepting and adopting new technology, therefore we would like to affirm if higher education has positive correlation when adopting mobile payment as a transaction method especially in the selected provinces.

**H3.** Higher education level customers have better adoption level to use e-wallet as a method of payment in restaurants than those with a low education level.

**2.1.4. Income**

There were studies showing that income level becomes a factor that influences the adoption of fintech services. A study about adoption of internet banking confirmed that high income and financial assets are more likely to adopt internet banking (Kim, Widdows, & Yilmazer, 2005). While mobile payment behaviour was strongly related to financial characteristics, those who are likely to adopt mobile payment have higher than average income levels (Garrett, Rodermund, Anderson, Berkowitz, & Robb, 2014). A research’s survey of 1,000 urban consumers in 25 Indonesian cities in
found that consumers categorized as middle income, are those who earn more than IDR 60 billion ($4,400) a year, had an adoption rate of cashless payment system for more than 46 per cent. The cashless payment systems in this study include ATM transfers, debit card, internet banking, mobile payments, etc (Nikkei Asian Review, 2017). Based on previous finding, we would like to study if there is positive correlation effect between income level and e-wallet adoption while using at different type of restaurants:

**H4.** Customers with a high-income level are more likely to use e-wallet as a method of payment in restaurants than those with low-income levels.

**Restaurants**

A restaurant can be defined as a place where people gather and eat cooked meals. Based on the service type, restaurants can be categorized as full-service and limited-service categories (Canziani, Almanza, Frash Jr., McKeig, & Sullivan-Reid, 2016). Full-service restaurant is a restaurant that prepares meals and serves them to be consumed at premises whereas payment is made after eating. On the other hand, a limited-service restaurant is a type of restaurant that provides meals and payment is made before eating.

This research will be focused on limited service category restaurants based on the menu/dining styles and limited only for these three types of restaurants which are easily found in Indonesia:

a. Café/snack bar: provide non-alcoholic drinks and snack foods for consumption at premises or take out, such as Starbucks, Kopi Kenangan, Cha Time, Tous le Jour, Kopi Kenangan, Martabak Orins, Bread Talk, Monami, etc.

b. Fast-food: provide affordable meals in considerable quantity with standardized process, for consumption on the premises or takeout, such as: McDonalds, KFC, Pizza Hut, Bakmi GM, Es Teler 77, Hisana, etc.

c. Cafeteria: serve foods for immediate consumption using cafeteria style or buffet serving equipment. In Indonesia, this type is more similar to food courts, such as Eat&Eat, Urban Kitchen, Food Print, etc.

In relation to significant growth of e-wallet users in Indonesia, several restaurants provide their customers with flexibility of payment through e-wallet, which allow payments by scanning QR codes or through the mobile apps. Research conducted by (Cobanoglu, Yang, Shatskikh, & Agarwal, 2015) showed that compatibility with lifestyle had the greatest impact on consumers’ intention to use e-wallet in restaurants. Based on this finding, we would like to study whether customers’ intention to use e-wallet as a method of payment will be different in different types of restaurants.

**H5.** The intention to use e-wallet as a method of payment will be different from different types of restaurants.

**METHODOLOGY**

**3.1. Conceptual Framework**

The conceptual framework used e-wallet adoption as a payment method in restaurants as a dependent variable. E-wallet adoption as a payment method in restaurants was determined based on likert scale from respondents. Difference of individual demographic characteristics (gender, age, education, and income) and types of restaurants as independent variables. Based on the research model that has been built (Figure 1), there are 5 hypotheses that will be tested.

Figure 1. Research Model

This research used data from 481 respondents. Some criteria are applied to determine the suitable respondent. The first criteria is respondent experience in using e-wallet as a payment method within the last 12 months. Second, the
respondent must live in DKI Jakarta, Banten and West Java provinces.

This research methodology design referred to previous research from (Esfahani & Ozturk, 2019) with some modifications to fill the research objective.

3.2. Instrument

An online survey through a google form was used to collect data from respondents. Questionnaire had five segments. First segment consisted of identifying respondent experiences in using e-wallet as a method of payment at restaurants in the past 12 months and knowing the type of e-wallet that they often use. This research focused on server-based e-wallet (i.e. GoPay, OVO, Dana, LinkAja, etc). Second until fourth segment consisted of e-wallet adoption in three types of restaurants (café/snack bar, fast food and food court) by using a seven-point likert scale with three questions about preference from the respondents (intend to use, most probably to use, and plan to use) to identify likelihood to use e-wallet as the method of payment adopted from (Esfahani & Ozturk, 2019). The last segment addressed the demographic characteristics of respondents such as location, gender, education, age and income.

3.3 Data Collection and Data Analysis

A google form link of the questionnaire was shared through WhatsApp and e-mail. There were 727 questionnaires collected within 2 weeks. A total of 481 questionnaires passed the data screening. Exclusion criteria implemented to the 206 questionnaires which did not use e-wallet payment in the past 12 months and 40 respondents did not meet the criteria for income and domicile out of DKI Jakarta, Banten and West Java Provinces.

Data was analysed using SPSS with ANOVA to identify if there is a significant difference in intention to use e-wallet in 3 types of restaurants (café/snack bar, fast food, and food court) based on individual differences including gender, age, education, and income. Dunnett’s C post hoc analysis was conducted because of the rejection of Levene’s test null hypothesis and having non-equal group sizes for variable gender, education, income, and restaurant types. Dunnett’s C post hoc analysis is a pairwise comparison test based on the Studentized range which is appropriate when the variances are unequal (IBM, 2020).

RESULTS & DISCUSSION

This research was analysed using data from 481 respondents with majority of respondents were female (54%), millennial respondents with age between 25-42 years old (40%), holding bachelor’s degree (42%), and earning income between 5-25 million per month (43%) (Table 1). A confirmatory factor analysis (CFA) was first employed to confirm the factor structure in the current study is only one which is for intention to use e-wallet as a method of payment in restaurants. Only one component was extracted from the 3 questions used in this study.

Table 1. Respondents Characteristics & Type of Restaurants

| Variable         | N  | (%) |
|------------------|----|-----|
| Gender           |    |     |
| Male             | 219| 46  |
| Female           | 262| 54  |
| Total            | 481| 100 |
| Age              |    |     |
| <25 years old (Gen Z) | 126| 26  |
| 25-42 years old (Gen Y) | 194| 40  |
| 43-53 years old (Gen X) | 161| 33  |
| Total            | 481| 100 |
| Education        |    |     |
| Up to Diploma    | 150| 31  |
| Bachelor’s Degree| 200| 42  |
| Graduate Degree  | 131| 27  |
| Total            | 481| 100 |
| Income           |    |     |
| <5 mio           | 125| 26  |
| 5-25 mio         | 207| 43  |
| >25 mio          | 149| 31  |
| Total            | 481| 100 |
| Type of Restaurant |   |    |
| Café/Snack Bar  | 172| 36  |
| Fast food        | 147| 31  |
| Food court       | 162| 34  |
| Total            | 481| 100 |

The results suggested good model fit with KMO = 0.759 and p<0.001. Reliability test from this data showed Cronbach’s alpha coefficient 0.926, which passes the minimum score of 0.7 (Nunnaly, 1978).

ANOVA results for individual differences variables demonstrated that at the alpha level 0.05, Hypothesis 1, 3 and 4 are supported, but Hypothesis 2 is rejected. This means that there is no significant difference between generation
X, Y, and Z in their adoption to use e-wallet as a method of payment in restaurants (Table 2).

Similar to prior studies, the results indicated that male participants (M = 5.80, SD = 1.06) have higher levels of intention to use e-wallet as a method of payment in restaurants compared to female participants (M = 5.51, SD = 1.07). In other study, female tend to choose clothing as a spending priority rather than food (Simangunsong, 2018). This factor can be a trigger that make women have less intention to use e-wallet for payment in restaurant.

From post hoc Dunnett’s C analysis, we also find participants who hold Graduate degree (M = 5.93, SD = 1.26) have more intention to use of e-wallet as method of payment in restaurants compared to the group with education level until Diploma (M = 5.41, SD = 0.98) and Bachelor’s degree (M = 5.62, SD = 0.96) (Table 2).

Table 2. Overall scores on e-wallet adoption

| Variable      | Group 1 | Group 2 | Mean Differences |
|---------------|---------|---------|------------------|
| Gender        | Male    | Female  | 0.29**           |
| Age           | Gen Y   | Gen X   |                  |
| Education     | Up to Diploma | Bachelor’s Degree | 0.52*          |
| Income        | >25 mio | <5 mio  | 0.65**           |
| Type of        | Cafe/ Snack Bar | Fast Food | -0.31*          |
| Restaurant    | Cafe/ Snack Bar | Food court | 0.29*          |

Notes: Acceptance scores are coded on a seven-point Likert scale ranging from 1 = strongly disagree to 7 = strongly agree. *Significant at α level of 0.05; **significant at α level of 0.01

CONCLUSIONS

The findings of the research further confirmed males are better in adopting e-wallet as payment methods. In the context of buying food through online or offline, the result aligns with the research that showed males have a positive attitude toward purchasing food through online and offline (Wang, Somogyi, & Charlebois, 2020). While females are more concerned with security risk, such as data theft or security breaches (Jianakoplos &
Bernasek, 1998) so the results show females are lower in e-wallet adoption level. In order to promote more females to adopt e-wallet payment, security improvement strategies should be deployed such as double validation during transactions and providers need to be concerned over their database security as well so the data can be kept secure.

Contrary with the previous studies which show younger generations are highly engaged with technology, this study demonstrated that there are no significant differences among generations to adopt e-wallet as a method of payment in restaurants. This could be because most of generation X and Y participants in this survey have a high level of education and live in the big cities where smartphone penetration is high. This aligns with a study which showed that a high educational level and a high income will overcome barriers to adopt technology in older generations (Tacken, Marcellini, Mollenkopf, Ruoppila, & Széman, 2005).

Previous studies showed strong positive correlation between technology adoption with education (Riddell & Song, 2011). Our results proved that the Graduate degree is showing the highest adoption level among groups. It is also aligned with research by (Abu-Shanab, 2011) higher education has higher intention to adopt e-wallet. Hence better education means better income (Tacken, Marcellini, Mollenkopf, Ruoppila, & Széman, 2005) and our finding proved that the highest income level in this study with income >25 million per month shows the highest adoption rate. Both of the individual differences were proved to have direct correlation in e-wallet adoption. Providers can provide more e-wallet payment methods in major cities, as cities have more educated populations and generally income is higher.

On the restaurant type, as described by the research (Canziani, Almanza, Frash Jr., Mckeig, & Sullivan-Reid, 2016) on characteristics of fast food restaurant: providing economical foods in quantity and served by standarized method so the food can be consumed quickly or either for takeout. With this type of quick service restaurant, e-wallet are well aligned with its fast and convenient payment process so the consumers are more willing to use e-wallet when buying food at fast-food restaurants. Therefore, the adoption level is better for fast-food restaurants while café/snack bars come in second.

The findings of the research indicate that individual differences such as gender, income, and level of education significantly affect the intention to use e-wallet as a method of payment in restaurants. This research also affirms the previous finding that individual differences have positive correlation toward the intention to adopt mobile payment.

From this finding, e-wallet providers and restaurants can define their target market in respect to individual differences along with type of restaurants so combining both variables will enable the e-wallet adoption at faster and higher rate. Especially when mobile payment is part of the inevitable payment method in today’s digital environment, and lifestyle has become part of the intention of consumers to use e-wallet as payment methods (Cobanoglu, Yang, Shatskikh, & Agarwal, 2015). As this study indicated that people with high income and high level of education will have more intention to use e-wallet in restaurants, a potential marketing strategy could be targeting office employees and executives especially who often eating out at fast food restaurants or love to buy coffee or snacks at café/snack bar that nowadays become a trend. Given this fact, restaurants can collaborate with e-wallet providers to give the customers discounts, cashbacks, gifts, or buy one get one promotion in order to boost their sales while promoting the e-wallet providers existence.

As types of restaurants play an influential role in e-wallet adoption, restaurants can see this as an opportunity to do promotion in partnership with e-wallet providers. Therefore, restaurants’ and e-wallets’ marketers can collaborate to create a campaign or promotion activities to encourage their customers to try out the e-wallet so they can go through their first experience in using e-wallet for payment at restaurants. Both institutions can collaborate to create promotions to increase use of e-wallet that impact revenue increment of both restaurants and e-wallet providers.

Further research could be conducted to respondents who have not experienced with e-wallet as a method of payment and in other types of restaurants, such as full services restaurants or street vendors which we can find in many places in Indonesia.
Future study can also use other different method statistics analysis such as multiple regression to forecast the adoption of e-wallet payment and to study deeply on how the independent variables influence e-wallet adoption. This study is limited to respondents who have used e-wallet as a method of payment in restaurants within the last 12 months and these results may not be generalizable to other segments of the service industry.

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