CUSTOMERS USING DIGITAL WALLET PLATFORMS AS A METHOD OF PAYMENT IN WEST JAKARTA

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Abstract

One form of electronic payment is the e-wallet. In Indonesia, many e-wallet products are available from both the public and private sectors. DANA is an e-wallet program that has previously received authorization from the Bank of Indonesia as a supplier of an e-wallet platform and as a digital financial institution. In 2018, DANA was introduced, and in its first four months, it attracted a million members. This study aimed to identify the variables that influence West Jakarta's adoption of DANA as an alternative payment method. Data were collected via a Google form online survey. Social networking sites like Instagram, Line, and internet discussion boards shared the link. DANA subscribers who reside in West Jakarta made up the respondents. In roughly two months, the data were gathered. This study included 187 respondents using SPSS as a tool for data filtering and multiple regression analysis. The findings suggested that perceived usefulness, perceived credibility, and subjective norm are the main factors influencing whether or not DANA will be accepted. All of these criteria significantly influenced users' decisions to utilize DANA.

Keywords: Dana Application; Perceived Credibility; Perceived Usefulness; Subjective norm

INTRODUCTION

There has been increasing in the use of technology for the last five years and the internet in households by 57.33% [1]. The country survey showed an increase in mobile phone users to 92 million users in 2022 [2]. E-wallet is an electronic money storage application. E-wallet consists of various applications such as DANA, OVO, Go-Pay, etc. E-wallet applications can be used to pay for various things such as games, music, parking, transportation tickets, and buying paid applications[3].

The use of e-wallet does seem to be commonly used by everyone. Based on the Daily Social survey (2022), only 58.14% of Indonesians use Fintech. This number did not develop well from the previous survey in 2022 which reached 60.96% of users. However, it turns out that there is still great potential and opportunity for the e-wallet market.

According to Sikri et al. (2019), under the following circumstances, using an e-wallet can replace using cash transactions need to be made possible through e-wallets so that heavy bulky cash is not needed, in addition, e-wallets must boost security, lower the danger of theft, and provide payment anonymity. This will speed up payments by reducing the amount of work users must perform on transaction computations [4]. DANA as a provider of e-wallet and e-money services as well as a digital financial institution, DANA is a digital wallet application that has been given approval by Bank Indonesia. DANA is special in that the account verification process can be sped up because the application is linked to the civil registration and population parties. The DANA application can be used to pay bills and shop at various merchants, and is even connected to ATM Bersama and BPJS Kesehatan. Therefore, it can be said that the DANA application is different and more flexible.

LITERATURE REVIEW

A study approach called TAM (Technology Acceptance Model) is used to examine and comprehend the elements that affect how the general public perceives the use of information technology [5]. Here the Author explored about customer decisions in choosing the DANA e-wallet application. The analytical model the Author will use is the Technology Acceptance Model, subjective norm and perceived credibility.[5]

[5][6] expressed that the main purpose of TAM is to establish a foundation for exploring the influence of external factors, including beliefs, attitudes (personalization), and goals of technology users. The two main variables of TAM are perceived usefulness and perceived ease of use. Perceived credibility is a factor that reflects the security and privacy of users. Perceived credibility is a behavior in which a person believes that their transactions and information privacy are securely maintained, affecting their acceptance of a technological system [7]. Perceived credibility needs to be added because it has been empirically proven to affect user approval [7].

Subjective norm comes from the theory of reasoned action. This theory proposes that behavioral intention is a function of attitudes and subjective norms towards behavior. This means that a person's intention to behave is predicted by his attitude towards his behavior and how he thinks others will judge him if he performs that behavior. A person's attitude combined with his subjective norms will form his behavioral intentions/intentions [8].

[9] highlighted the link between risk and trust in decision-making. Moreover, when society know how to utilize the internet to make an online purchase of a good and service [10]. Additionally, choosing to use an electronic wallet depends on whether you want to make traditional or online payments for the product [11]. Continuously, the choice to make an online purchase can be examined as a change in attitude and behavior toward online shopping based on customers' acceptance of technology [12].

The results of this analysis are expected to contribute to knowledge about consumer decisions in choosing and using the DANA application. Based on the theory and the results of previous research, this research framework focuses on the variables Perceived Usefulness, Perceived Credibility and Subjective Norm. Assuming these variables will affect the decision variables for the use of DANA with the following framework and hypotheses:

Perceived Usefulness

Perceived Usefulness variable has an important effect on the use of NFC mobile payments as a means of payment [13]. Perceived usefulness is the most influential factors in the acceptance of e-wallet by generation Y in India [14].

H1: Perceived Usefulness factor has a significant impact on the decision to use DANA

Perceived Credibility

Perceived Credibility factor has a significant effect on consumer interest in using mobile payments in Malaysia [15].

H2: Perceived Credibility factor has a significant effect on the decision to use DANA.

Subjective Norm

The subjective Norm (SN) factor significantly affects the interest in using mobile payment [16].

H3: Subjective Norm (SN) factor significantly affects the decision to use DANA.

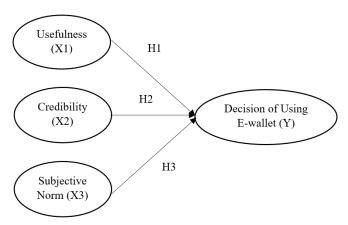


Figure 1. Framework for Thinking

RESEARCH METHODS

Based on the problems that have been stated previously, this research is included in the type of quantitative research. To find out the relationship between Perceived Usefulness (X1), Perceived Credibility (X2), Subjective Norm (X3), and interest in using the DANA application in West Jakarta (Y). A positivist research methodology, quantitative research, is utilized to analyze the sample and research population. In general, sampling is randomly chosen, research tools are employed for data collecting, and quantitative or measurable methods canused for data analysis to testting established hypotheses. [17]

[18] claims that the term "population" refers to a generalization made up of things and people with predetermined attributes and characteristics intended to be investigated and the results derived by researchers. Consequently, it is possible to refer to the population as the overall research topic. Due to the large number of residents in West Jakarta, the authors conducted research based on samples. The sampling technique used is purposive sampling. This technique determines the sample with several considerations. This study takes into account the level of DANA decision-making. Therefore, the sample that becomes a data source for this research is people who have used DANA and live in West Jakarta.

This research data will be obtained by distributing online questionnaires through Google Form. The distribution will be done through social media, campus forums, and office environments. This questionnaire is intended for people who have used DANA. To ensure that the questionnaire filler will meet the criteria, the authors add questions about the respondent's domicile and whether they have ever used DANA. This questionnaire question uses a Likert scale of 1 to 5. The Likert scale assesses an individual's or group's attitudes, beliefs, and perceptions on social issues [18]. Using the following scale: Strongly Disagree (SD): one (1), Disagree (D), Neutral (N), Agree (A), and Strongly Agree (SA): two (2), Disagree (D), Four (4), and Strongly Agree (A): five (5). (SA).

RESULTS AND DISCUSSION

Demographics of Respondents

Demographics of the respondents is described in this study; the data of respondents who respond to each statement item that has been given and filled in via the google form as the objectivity of the research on "Perceived Usefulness, Perceived Credibility and Subjective Norm on the Decision to Use"

There are respondent profile descriptions, namely: gender, age, occupation, and monthly expenses, in detail, so it is easier to describe quantitatively. The identity obtained by researchers was 187 respondents.

Table 1. Gender

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Gender	Percentage	
Female	56.10%	
Male	43.90%	
Total	100%	

Source: Results of data processing

Based on table one, it displayed that female respondents are more dominant in using DANA with a percentage value of (56.1%).

Table 2. Respondents Age

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Age	Percentage	
< 20 years old	30.50%	
20 - 30 years old	66.80%	
31-40 years old	1.40%	
> 40 years old	1.30%	
Total	100%	

Source: Results of data process

Table 2, it presents that the first position of the age of most of the respondents is in the age of 20 - 30 years, which in general are millennial generations (66.8%). Next, the second position at the age of <20 years at 30.5%, then advanced at the age of 31-40 years and the last one above 40 years.

Table 3. Participants Occupation

Occupation	Percentage	
Civil Servant	1.70%	
Businessman	3.60%	
Private Employee	21.40%	
College Student	73.30%	
Total	100%	

Source: Results of data processing

Based on table 3, states that the highest number of respondents are a college students, with a percentage level of 73.3%. Moreover, in the second position is the private sector (21.4%) and then the businessman and the last one is the civil servant.

Table 4. Participants Monthly Expenses

Monthly Expenses	Percentage
< Rp. 1.000.000	39.00%
Rp. 1.000.000 - Rp. 2.000.000	28.90%
Rp. 2.000.000 - Rp. 3.000.000	16.00%
> Rp. 3.000.000	13.00%
Total	100%

Source: Results of data processing

Drew on table 4, it is shown that the largest expenditure is in Rp. 0 - Rp. 1,000,000, with a percentage level of (39%). Then in the second position, there is an expenditure of Rp. 1,000,000 - Rp. 2,000,000, with a percentage (28.9%). And the next position is spending Rp 2,000,000 - Rp. 3,000,000, with a percentage (16%) and on expenses greater than Rp 3,000,000 with a percentage value (16%).

Validity Test

The following output based of the calculation of validity test using SPSS

Table 5. Validity Testing Table Perceived Usefulness

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Indicator	Corrected Item-Total Correlation	Results
U1	0.450	Valid
U2	0.457	Valid
U3	0.589	Valid

Source: Results of data processing

Table 6. Validity Testing Table Perceived Credibility

Indicator	Corrected Item-Total Correlation	Results
C1	0.689	Valid
C2	0.689	Valid

Source: Results of data processing

Table 7. Validity Testing Table Subjective Norm

Indicator	Corrected Item-Total Correlation	Results	
SN1	0.505	Valid	
SN2	0.505	Valid	

Source: Results of data processing

Table 8. Validity Testing Table Decision of Using DANA

Indicator	Corrected Item-Total Correlation	Results
DOU1	0.471	Valid
DOU2	0.430	Valid
DOU3	0.235	Valid
DOU4	0.517	Valid
DOU5	0.373	Valid

Source: Results of data processing

Based on the data presented in tables 5, 6, 7, 8 can be explained that each indicator of variables can be declared as valid, because it is greater than r-table 0.159 (>0.159) [19].

Reliability Test

The reliability test can be seen from the Cronbach Alpha if the value is greater than 0.6 (>0.6), it will be declared reliable.

Table 9. Reliability Test Results

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Variable	Cronbach's Alpha	Results

Perceived Usefulness	0.657	Reliable
Perceived Credibility	0.815	Reliable
Subjective Norm	0.67	Reliable
Decision of Use	0.638	Reliable

Source: Results of data processing

Table 9 showed the Cronbach Alpha value for the variables Perceives Usefulness, Perceived Credibility, Subjective Norm and Decision to Use DANA is more significant than 0.6 (> 0.6). The instrument of the four variables is declared reliable and classified as high-very high [20].

Classical Assumption Test Multicollinearity Test

The multicollinearity test aims to determine the regression model whether there is a correlation or relationship between the independent variables, in this test it can be seen from the Coefficients table in the Collinearity Statistics column. Multicollinearity is seen from the value of the variance inflation factor (VIF) less than 10 (<10) and the tolerance value is more significant than 0.10 (>0.10), in general, multicollinearity will occur if the VIF value is more significant than 10 (>10) and acceptance range is below than 0.10 (<0.10). [21], [22]

Table 10. Multicollinearity Test Results

Model	Standard Coefficients	VIF	Sig.	Results
Usefulness	0.170	1.591	0.045	Reliable
Credibility	0.261	1.580	0.002	Reliable
Subjective Norm	0.387	1.014	0.000	Reliable

Source: Results of data processing

Based on Table 10 the results of the multicollinearity test of the independent variables with the VIF value as follows: Perceived Usefulness variable (X1) gets a VIF value of 1.591 < 10, Perceived Credibility (X2) variable gets a VIF value of 1,580 < 10, Subjective Norm variable (X3) gets a VIF value of 1.014 < 10. The results of the multicollinearity test showed no symptoms of multicollinearity. With this, the results of the regression test model are feasible and reasonable to use.

Hypothesis Test

Simultaneous Significance Test (Statistical Test F)

The simultaneous significance test to see the significant results or whether or not there is an effect of the independent variable with the dependent, as can be observed from the sig value, which is below 0.05 (<0.05) and from the calculated f result which is greater than the f table in the Anova table.

Table 11. F Statistical Test Analysis Results

Model	F	Sig
Decision of Use	20.125	.000b

Source: Results of data processing.

Table 11 shows a significant 0.000 smaller than 0.05 (<0.05) and result from F count, which has a value of 20.125 while f table is 2.43 therefore, f count > f table; therefore, Ho is

rejected and Ha is accepted. From F test, it can be concluded that the sig and f table values of each independent variable, Perceived Usefulness (X1), Perceived Credibility (X2), and Subjective Norm (X3), have a simultaneous impact on the dependent variable in the choice to employ DANA in West Jakarta.

Individual Parameter Significance Test (Test Statistical t)

The individual parameter significant test to see the results of the presence or absence of a relationship between both of the independent variable and the dependent variable seen in the table coefficients of the sig value smaller than 0.05 (<0.05) and the comparison between the T count value which must be more prominent and T table in order to be significant between the independent and dependent variables.

Table 12. Statistical T Test Result

Model	t-value	Sig	Result
Perceived Usefulness - Decision of Using	2.021	0.045	Significant
Perceived Credibility - Decision of Using	3.117	0.002	Significant
Subjective Norm - Decision of Using	4.728	0.000	Significant

Source: Results of data processing

Table 12 presents the T count value of the independent variable: perceived usefulness shows a value of 2.021, perceived credibility has a value of 3.117 and subjective norms has a value of 4.728. All of the three variables results are larger than T-table, with the value of T table at a level significant at 1,655.

The sig value on perceived usefulness is 0.045, perceived credibility is 0.002, and the subjective norm is 0.000. The three independent variables have a value less than 0.05 (<0.05) or Ho is rejected and Ha is accepted. Therefore, it can be concluded that there is significantly impact of the independent variables perceived ease of use, perceived usefulness, perceived credibility, and subjective norm on the dependent variable on the decision to use DANA in West Jakarta.

Discussion of Research Results

The perceived Usefulness variable significantly impacts the decision to use DANA in West Jakarta. A prior study conducted by [13] stated that perceived usefulness significantly influences the use of NFC mobile payments as a means of payment in Korea. Likewise, according to [23], the decision to use Mobile Suica in Japan has been influenced by perceived usefulness, so Mobile Suica successfully penetrates the market in Japan.

The perceived credibility component in West Jakarta positively impacts the decision to use the DANA platform. This study result aligns with some scholars' results; there was a favorable influence of perceived credibility on consumer interest in using mobile payments in Malaysia [24].

The subjective norm variable positively influences the decision to use DANA in West Jakarta. This pilot study has the same result with prior research that trust and influence from the closest people favorably affect interest in using mobile payments [16]. In addition, other research mentioned that social influence influences the decision to use Mobile Suica in Japan so Mobile Suica has succeeded in penetrating the market in Japan [23].

CONCLUSION

This research uses a method of collecting data in a survey, namely distributing a google

form questionnaire. DANA is an electronic wallet (e-wallet) service that provides convenience in conducting financial transactions via smartphones. The population in this study were users of DANA in West Jakarta; the sample size in this study was determined to be as many as 187 respondents. Purposive sampling was used to conduct the sampling for this investigation. The test uses SPSS version 26.

Based on the results of this study, the variables of perceived usefulness perceived credibility, and subjective norm on the decision to use the DANA application in West Jakarta all significantly impacted the decision to use the DANA application. Variable of usefulness means that users feel an increase in performance or that their work is completed faster when using the DANA payment system. Next, a variable of credibility positively affects the decision to use a digital wallet, meaning that users feel that their privacy is maintained and safe in using DANA. Lastly, the subjective norm significantly impacts the decision to use the DANA application in West Jakarta. It means that users feel the influence of people surrounding them encourages them to use DANA.

Suggestions for further research include improving the ease of use of the DANA application by updating the layout of the application to be simpler, cooperating with other banks to reach more users, and partnering with more merchants to increase the intensity of DANA usage.

REFERENCES

- [1] BPS Indonesia, "Keadaan Ketenagakerjaan Indonesia Agustus 2019," *Badan Pus. Stat.*, vol. XXiI, no. 91, pp. 1–20, 2021.
- [2] "Countries with the most Instagram users 2022," *Statista Research Department*, 2022. https://www.statista.com/statistics/578364/countries-with-most-instagram-users/.
- [3] Statista, "FinTech Digital Market Outlook," *Statista*, 2022. https://www.statista.com/outlook/dmo/fintech/indonesia.
- [4] A. Sikri, S. Dalal, N. . Singh, and D. Le, "Mapping of e-Wallets With Features," *Cyber Secur. Parallel Distrib. Comput.*, no. March, pp. 245–261, 2019, doi: 10.1002/9781119488330.ch16.
- [5] F. D. Davis, "Davis 1989.pdf," *Information Technology*. 1989, doi: 10.2307/249008.
- [6] F. D. Davis, "Perceived usefulness, perceived ease of use, and user acceptance of information technology," *MIS Q. Manag. Inf. Syst.*, vol. 13, no. 3, pp. 319–339, 1989, doi: 10.2307/249008.
- [7] Y. S. Wang, Y. M. Wang, H. H. Lin, and T. I. Tang, "Determinants of user acceptance of Internet banking: An empirical study," 2003, doi: 10.1108/09564230310500192.
- [8] Y. J. Lim, A. Osman, S. N. Salahuddin, A. R. Romle, and S. Abdullah, "Factors Influencing Online Shopping Behavior: The Mediating Role of Purchase Intention," *Procedia Econ. Financ.*, vol. 35, no. October 2015, pp. 401–410, 2016, doi: 10.1016/s2212-5671(16)00050-2.
- [9] T. K. Das and B. S. Teng, "The risk-based view of trust: A conceptual framework," *J. Bus. Psychol.*, vol. 19, no. 1, pp. 85–116, 2004, doi:

10.1023/B:JOBU.0000040274.23551.1b.

- [10] M. Pilík, "Selected factors influencing customers' behaviour in e-commerce on B2C markets in the Czech Republic," 7th Eur. Conf. Inf. Manag. Eval. ECIME 2013, pp. 121–128, 2013.
- [11] P. Verma and S. Jain, "Skills Augmenting Online Shopping Behavior: A Study of Need for Cognition Positive Segment," *Bus. Perspect. Res.*, vol. 3, no. 2, pp. 126–145, 2015, doi: 10.1177/2278533715578556.
- [12] W. Y. Wu and C. C. Ke, "An online shopping behavior model integrating personality traits, perceived risk, and technology acceptance," *Soc. Behav. Pers.*, vol. 43, no. 1, pp. 85–98, 2015, doi: 10.2224/sbp.2015.43.1.85.
- [13] S. Shin and W. J. Lee, "The effects of technology readiness and technology acceptance on NFC mobile payment services in Korea," *J. Appl. Bus. Res.*, vol. 30, no. 6, pp. 1615–1626, 2014.
- [14] J. Trivedi, "Factors Determining the Acceptance of E-Wallet," J. Appl. Mark. Manag., 2016.
- [15] Y. P. Mun, H. Khalid, and D. Nadarajah, "Millennials' Perception on Mobile Payment Services in Malaysia," 2017, doi: 10.1016/j.procs.2017.12.170.
- [16] A. W. Yan, K. Md-Nor, E. Abu-Shanab, and J. Sutanonpaiboon, "Factors that affect mobile telephone users to use mobile payment solution," *Int. J. Econ. Manag.*, 2009.
- [17] Sugiyono., Metode Penelitian Bisnis (pendekatan Kuantitatif, Kualitatif, dan R&D). Bandung: Alfabeta, 2013.
- [18] Sugiyono, Metode Penelitian Kuantitatif, Kualitatif, dan R&D. Bandung: Alfabeta, 2018.
- [19] I. Ghozali, *Aplikasi Analisi Multivariate dengan Program IBM SPSS 25*. Semarang: Badan Penerbit Universitas Diponegoro, 2018.
- [20] J. F. Hair, W. C. Black, B. J. Babin, and R. E. Anderson, *Multivariate data analysis*, Eight Edit. Boston: Cengage, 2019.
- [21] K. G. Jöreskog, U. H. Olsson, and F. Y. Wallentin, Springer Series in Statistics Multivariate Analysis with LISREL. 2016.
- [22] J. F. Hair, M. Sarstedt, L. Hopkins, and V. G. Kuppelwieser, "Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research," *Eur. Bus. Rev.*, vol. 26, no. 2, pp. 106–121, 2014, doi: 10.1108/EBR-10-2013-0128.
- [23] D. L. Amoroso and R. Magnier-Watanabe, "Building a research model for mobile wallet consumer adoption: The case of mobile Suica in Japan," *J. Theor. Appl. Electron. Commer. Res.*, 2012, doi: 10.4067/S0718-18762012000100008.
- [24] Y. Pooi, H. Khalid, and D. Nadarajah, "ScienceDirect ScienceDirect Millennials' Perception on Mobile Payment Services in Malaysia," *Procedia Comput. Sci.*, vol. 124, pp. 397–404, 2018, doi: 10.1016/j.procs.2017.12.170.