

# The Influence of E-Service Quality and Perceived Ease of Use on Customer Satisfaction of DANA in Medan

Nabawi Putri Marisa Nasution

Master Program of Management Science, Postgraduate School, Universitas Sumatera Utara,  
Jl. Prof. TM Hanafiah Kampus USU, Medan, Indonesia

Keywords: E-Service Quality, Perceived Ease of Use, Customer Satisfaction.

Abstract: The purpose of this study was to determine how the effect of e-service quality and perceived ease of use on customer satisfaction for DANA users in Medan. The type of research used is quantitative research with a sampling technique that is non-probability sampling, with a total of 140 respondents. The data collection method in this study is a survey method using a questionnaire distributed to respondents online via google form. The data analysis technique in this study uses multiple linear regression analysis which is processed using SPSS 26. The results of this study indicate that the e-service quality variable has a positive and significant effect on customer satisfaction, the perceived ease of use variable also has a positive and significant effect on customer satisfaction. Simultaneously, e-service quality and perceived ease of use have a positive and significant effect on customer satisfaction with DANA users in Medan.

## 1 INTRODUCTION

Current technological developments aim to facilitate human life in daily activities so that it can be done anywhere and anytime, one of which is in terms of transactions. The rapid use of smart phones among the public has encouraged companies to launch electronic money in the form of mobile phone applications, so that companies providing financial services provide digital wallets.

The emergence of e-money and digital wallets is the answer to the need for payments that can be processed quickly because in general money stored in digital wallets can be accessed quickly, safely, and cheaply. According to a survey by the Indonesian Internet Service Providers Association (APJII, 2020) the use of electronic money transactions in Indonesia has experienced very rapid growth, amounting to 196.7 million people. The use of non-cash payments has been supported by Bank Indonesia by launching the National Non-Cash Movement (GNNT) on August 14, 2014.

Jumlah Uang Elektronik Beredar

Periode	Tahun 2017	Tahun 2018	Tahun 2019	Tahun 2020	Tahun 2021
Jumlah Instrumen	90,003,848	167,205,578	292,299,320	432,281,380	575,323,419

Figure 1: Amount of Electronic Money in circulation in 2017-2021.

On the BI website above, it can be seen that the number of electronic money transactions has increased significantly every year. In 2020, electronic money in circulation increased drastically, from a total nominal value of 292 trillion in 2019 to 432 trillion and increased again in 2021 to 575 trillion. This shows that the use of electronic money in Indonesia continues to grow.

In Indonesia, there are already many companies engaged in electronic money services, users are presented with various choices and benefits provided. One of them is DANA, which is an electronic wallet (e-wallet) service that acts as a means of payment.

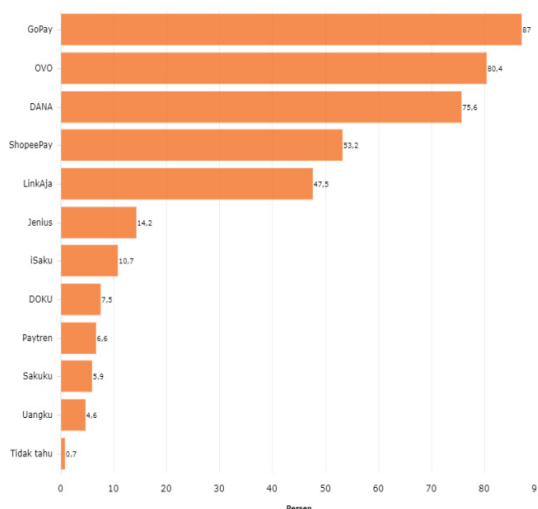


Figure 2: Digital Wallet Users in Indonesia in 2021.

Based on databoks.katadata.co.id in 2021 above, the first rank of the most popular electronic money service is occupied by Go-Pay with 87% of users, then in the second place there is OVO with 80.4% users while DANA is ranked second. the third is 75.6% of users. In contrast to GO-Pay which is an integration of the GO-Jek application, DANA is a stand-alone application organized by PT Espay Debit Indonesia Koe. Although DANA has started to become one of the e-payment applications that dominates the current market, DANA must continue to pay attention and improve the quality of its services to maintain its existence in the midst of today's intense competition for e-wallet services.

The quality of electronic services is different from the quality of conventional services. This is because there is a need for considerations related to the technological aspects used in service quality on e-wallet. Parasuraman et al (2005) define e-service quality as the extent to which a website facilitates efficient and effective shopping, purchasing, and delivery.

DANA is inseparable from several complaints felt by its users, both complaints about transactions that have not been successful, problems in replenishing balances, problems with decreasing balances but not arriving at the destination account to customer care that takes a long time in responding and handling user complaints and unilateral account freezing by FUND. DANA needs to address any user complaints in order to create satisfaction so that users continue to use their services.

Competition in digital wallets is not only the quality of service but also the ease of use of the digital wallet itself. DANA application users have difficulty

accessing the application (error) when they want to use the e-wallet, transfers using a QR code experience delays and users find it difficult to upgrade to premium DANA.

In the Technology Acceptance Model (TAM) theory, the effectiveness of electronic money can be seen from the level of attitude of its users. According to Davis (1989) one of the factors that can influence interest in using technology is the user's perception of a technology that is easy to understand and use (perceived ease of use). Wibowo (2006) states that the perception of the ease of use of a technology is defined as a measure by which a person believes that the technology can be easily understood and used. This is very helpful for increasing the use of payment applications which are often considered difficult even though there are many enthusiasts.

By providing quality e-service and perceived ease of use. A good service will have an impact on satisfaction, because service quality has an important role to measure customer satisfaction with the services provided by the company.

By providing quality e-service and perceived ease of use good will have an impact on satisfaction. According to Tiwari (2017) customer satisfaction is a very important parameter to maintain in terms of online services, because it is very difficult to manage and retain loyal customers with the services provided.

## 2 LITERATURE REVIEW

### 2.1 E-Service Quality

Basically, e-service quality is a development of service quality theory which is carried out to evaluate a service provided on the internet network. According to Zeithaml, et al. (2002), e-service quality is considered as the extent to which a website (website) facilitates the shopping, purchasing, and delivery of goods and services effectively and efficiently. According to Santos (2003) e-service quality as a comprehensive evaluation and assessment of customers regarding an advantage and quality delivered via the internet. In the field of marketing, the topic that is most often studied is e-service quality, this is due to the close relationship that occurs between costs, satisfaction, retention and loyalty (Gounaris et al., 2010).

According to Parasuraman (2005) e-service quality has 7 dimensions, namely:

1. Efficiency, ease of use and speed in accessing the site so that customers can find the desired product.

2. Fulfillment, guarantee the fulfillment of the promised service.
3. System availability, technical functions that are implemented in providing services that can function properly.
4. Privacy, maintaining the confidentiality of consumer data related to personal information, such as identity and purchase or payment transactions.
5. Responsiveness, the ability to quickly handle a problem that customers complain about.
6. Compensation, a liability if a problem occurs which includes refunds that do not reach their destination.
7. Contact, the availability of online customer service information includes: telephone number and email.

In the research of Puriwat & Tripopsakul (2017), it is stated that e-service quality has a significant influence on consumer satisfaction using mobile banking applications. By providing maximum e-service quality from the company, it will create a feeling of customer satisfaction and lead to a desire to continue the relationship as loyal customers make purchases and use products or services repeatedly even though there are many alternative choices. So customer satisfaction describes how the quality of e-service quality is acceptable and provides benefits to users.

## 2.2 Perceived Ease of Use

The Technology Acceptance Model (TAM) was first introduced by Davis (1989) which is a theory that explains the perception of technology users. TAM is commonly used to understand the relationship between humans and technology acceptance through perceived usefulness and perceived ease of use. Perceived ease of use is defined as the extent to which a person believes that using a particular system will be free from effort (Davis, 1989). Individuals who believe that the system is easy to use, the individual will use it, and vice versa if the individual believes that the system is not easy to use, the individual will not use it (Jogiyanto, 2007). In addition, the system that is used more often indicates that the system is easier to understand, easier to operate and easier to use.

The aspects used for perceived ease of use (in Chawla & Joshi, 2019) are as follows:

1. Easy to learn, namely a technology that is easy to learn is a sign that the technology is easy to use.

2. Easy to understand, namely a technology that is easy to understand then the technology is considered easy to use,

3. Effortless, ie a technology can be done in a succinct manner, then the technology is considered easy to use.

4. Easy to use, i.e. if a technology is easy to use, then individuals will feel increased trust in the technology.

Har and Eze (2011) in their research give the result that the perception of convenience has a positive effect on repurchase intention. These results indicate that the better the perception of convenience, the more positive the repurchase interest will be. Technology that is easy to use (perceived ease of use) affects customer satisfaction because with the ease with which users feel, there will be a sense of satisfaction after using it..

## 2.3 Customer Satisfaction

According to Kotler & Keller (2016) consumer satisfaction is the level of one's feelings, both satisfied and disappointed with the performance of a product or service compared to customer expectations. In terms of mobile commerce, customer satisfaction is the post-purchase evaluation of customers and affective responses or feelings for the overall product or service experience in a mobile commerce environment (Lin & Wang, 2006). Customer satisfaction or dissatisfaction as a response to the evaluation of the perceived discrepancy between initial expectations before purchase and the actual performance of the product perceived after use (Tse and Wilton, 1988).

Customer satisfaction is obtained when the performance of the product or service received is in accordance with customer expectations. If the perceived benefits are not in line with expectations, the customer will be dissatisfied. If the benefits obtained match or even exceed expectations, the customer will be very satisfied and happy. Very dissatisfied customers can turn into "terrorists" for service providers by spreading negative word of mouth in abundance (Lovelock & Wirtz, 2018).

According to Kotler's theory (in Suwardi, 2011), the key to retaining customers is customer satisfaction. Indicators of consumer satisfaction can be seen from: (1) Re-purchase, buying back goods/services to the company. (2) Creating Word-of-Mouth, customers will say good things about the company to others. (3) Creating a brand image, customers will pay less attention to competing products. (4) Creating purchasing decisions on the

same company, buying other products from the same company.

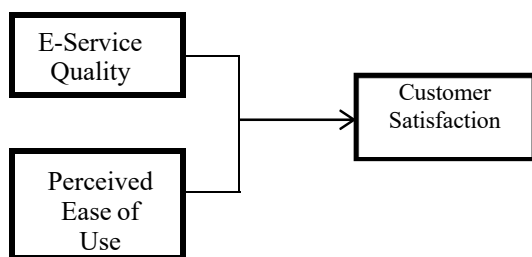


Figure 3: Conceptual Framework.

### 2.4 Research Hypothesis

- H1: E-Service Quality and Perceived Ease of Use have a positive and significant effect on Customer Satisfaction of DANA in Medan
- H2: E-Service Quality has a positive and significant effect on Customer Satisfaction of DANA in Medan
- H3: Perceived Ease of Use has a positive and significant effect on Customer Satisfaction of DANA in Medan

## 3 RESEARCH METHODS

This research uses quantitative methods. The population in this study were users of the DANA application in Medan whose number was unknown, so that the determination of the number of samples was carried out with a minimum sample size of five times the number of questionnaire statement items (Hair et al., 2006). The sampling technique used purposive sampling method, then the sample of this study was taken by some criteria with the number of respondents as much as 140 respondents.

The data collection method uses a survey method with questionnaires distributed to respondents online through the help of google form. The data analysis technique in this study used multiple linear regression analysis which was processed using SPSS 26.

## 4 RESULTS AND DISCUSSION

### 4.1 Characteristics of Respondents

Based on the respondent's data that has been collected from distributing questionnaires, the following is the data generated from the research on each numerical value that has been used including: Gender, Age,

Income, Occupation, and Transactions for 3 months. Respondents' descriptive data are as follows.

Based on Table 1 regarding the characteristics of the respondents below, it can be seen that DANA users are dominated by female respondents with a total of 92 people and 48 male respondents. In this study, the most dominant users occurred at the age of 26-35 years as many as 89 people and over the age of 46 years only as many as 6 people. Users with an income of IDR 1,000,000 – IDR 5,000,000 are the most dominant respondents with 88 people and income above 10,000,000 only 6 respondents. DANA users are also dominated by private employees with 66 respondents and only 9 respondents with Entrepreneurial jobs.

Table 1: Characteristics of Respondents.

Characteristics	Information	Amount
Gender	Woman	92
	Man	48
Age	16 – 25 years	33
	26 – 35 years old	89
	36 – 45 years	12
	> 46	6
Income	< 1,000,000	18
	1,000,001 - 5,000,000	88
	5,000,001 - 10,000,001	28
	> 10,000,000	6
Profession	Student/Student	28
	Government Employees	7
	Private employees	66
	Entrepreneur	9
	Other	30
Transactions for the last 3 months	< 5 times	16
	5 - 10 times	80
	> 10 times	44

### 4.2 Multiple Linear Regression Analysis

Multiple linear regression analysis was conducted to analyze the effect of e-service quality and perceived ease of use on customer satisfaction in the DANA application in the city of Medan.

Based on Table 3 below, it can be seen that the regression equation is as follows:  
 $Y = 0.225 + 0.277 X1 + 0.453 X2.$

Table 2: Multiple Linear Regression Analysis.

	B	Sig.
Constant	0.225	0.921
E_Sequal	0.277	0.000
PEU	0.453	0.000

a. = constant value of 0.225 which means that if the independent variables of e-service quality (X1) and perceived ease of use (X2) are constant (zero or no effect), then the dependent variable of customer satisfaction

(Y) is 0.225. This means that if e-service quality (X1) and perceived ease of use (X2) have no effect, then the customer satisfaction variable (Y) will still exist because of the influence of other factors.

b1 = 0.277, the regression coefficient of e- service quality (X1) is 0.277, which means that if the e-service quality variable (X1) is increased, customer satisfaction will also increase by 0.277.

b2 = 0.453, the regression coefficient of perceived ease of use (X2) is 0.453, which means that if the perceived ease of use (X2) variable is increased, customer satisfaction will also increase by 0.453.

Table 3: R Square.

R Square	Adjusted R Square
0.542	0.536

Based on Table 2 above, it is known that R Square is 0.542. This shows that the independent variables in the model (e-service quality and perceived ease of use) explain the variation in customer satisfaction by 54.2% and 45.8% is explained by other factors or variables outside the model.

Table 4: F test (simultaneous test).

	df	f	Sig.
Regression	2	81.128	0.000
Residual	137		
Total	139		

Based on Table 4 above, it is known that the significance value is 0.000 < 0.05. The calculated F value > F table, which is 81.128 > 3.06. Therefore, it can be interpreted that the variables of e-service quality (X1) and perceived ease of use (X2)

simultaneously have a significant effect on customer satisfaction DANA (Y) which means H1 in this study is accepted.

Table 5: t test (partial test).

	t	Sig.
E_Sequal	5.230	0.000
PEU	5.880	0.000

Based on the t-test in the table above, it is known that the value of Sig. of e-service quality (X1) is 0.000 < 0.05 and the value of t count is 5.230 > t table is 1.655. These results indicate that there is a positive and significant effect of e- service quality on customer satisfaction. So it can be concluded that H2 is accepted because there is an influence of the e-service quality variable (X1) on the customer satisfaction variable (Y).

In the perceived ease of use (X2), it can be seen that the value of Sig. 0.000 < 0.05 and the value of t count is 5.880 > t table 1.655. These results indicate that there is a positive and significant effect of perceived ease of use on customer satisfaction. So it can be concluded that H3 is accepted because there is an influence of the perceived ease of use (X2) variable on the customer satisfaction variable (Y).

### 4.3 Effect of E-Service Quality on Customer Satisfaction

The results of the multiple linear regression analysis in this study found that e-service quality has a positive and significant effect on customer satisfaction variables. The results of this study are in line with Putri & Novi (2021) which show that there is a positive and significant effect of e- service quality on consumer satisfaction, that the better the e-service quality on ShopeePay, the higher consumer satisfaction will be. Fitriana et al (2020) also show that e-service quality has a positive and significant effect on e-satisfaction. This explains that online transactions in the DANA application are more practical because they can be done anywhere and anytime.

DANA as a digital wallet service has been able to facilitate user needs such as making it easier to change payment methods using cash to using e-money. The quality of service in efficiency and fulfillment shows that the DANA application is easy to use, both for payments, transfers and storing funds even during account activation. In addition, there are various kinds of services provided by DANA, such

as: free admin fees when transferring to a bank account, 24-hour system availability, and customer care that can be contacted via numbers, e-mail and even WhatsApp, making users satisfied with the number of contacts that can be reached. contacted if there is a complaint.

Words like “is”, “or”, “then”, etc. should not be capitalized unless they are the first word of the subtitle

#### 4.4 The Effect of Perceived Ease of Use on Customer Satisfaction

Furthermore, the results of this study indicate that there is a positive and significant effect of perceived ease of use on customer satisfaction. This is in line with the research of Wiwoho (2018) which says that perceived ease of use has a significant effect on customer satisfaction. Users feel that it is easy to pay with OVO on Grab, which can increase user satisfaction. Anugrah (2020) also shows the results of the same study that ease of use has a significant influence on customer satisfaction.

The ease of using the DANA application in transactions creates a sense of satisfaction from its users. DANA has also begun to be used as payment at food outlets and clothing stores using a QR code. By only using a QR code, payments can be made quickly and safely. The steps and instructions for transferring or making payments that are presented are quite easy to do, making customers feel that there is no need for excessive effort when using the DANA application. In addition, although DANA has many features in its application, users do not find it difficult to use these features. So it can be said that the perceived ease makes DANA users feel satisfied.

## 5 CONCLUSIONS

From the results of the analysis of the discussion above, regarding the effect of e-service quality and perceived ease of use on DANA customer satisfaction, the following conclusions can be drawn:

1. E-service quality has a positive and significant influence on customer satisfaction DANA customer satisfaction.
2. Perceived ease of use has a positive and significant influence on customer satisfaction and customer satisfaction DANA.
3. E-service quality and perceived ease of use have a positive and significant effect simultaneously on DANA's customer satisfaction.

In service quality, speed in responding and handling customer complaints is the main thing because customers feel cared for by their problems. Then in the use of the e-wallet application, convenience is a very important factor and is needed to increase DANA customer satisfaction so that they continue to transact using the application.

## REFERENCES

- Akhmadi, D., D., & Martini, E. (2020). The Effect of E-Service Quality on Ovo Application Customer Satisfaction and Loyalty. *Journal of Management Partners* Vol. 4 No.5, 708- 720.
- Anugrah, TF (2020). Effect of Promotion and Ease of Use on Customer Satisfaction and Loyalty on OVO Application Users. *Quantitative Economics and Management Studies (QEMS)* Vol. 1 No. 2.
- Charisma, L., & Suprapti, N., W., S.,. (2020). The Effect of Utilitarian Value and Perceived Ease of Use on Satisfaction to Increase Purchase Intention. *E-Journal of Management*, Vol. 9, No. 6, 2147-2166.
- Chawla, D., & Joshi, H. . (2019). Consumer Attitude and Intention to Adopt Mobile Wallet in India – An Empirical Study. *International Journal of Bank Marketing*, 1590-1618.
- Davis, F. (1989). Perceived Usefulness, Perceived Ease of Use, And User Acceptance Of Information. *Management Information Systems Research Center* 13(3), 319-340.
- Fitriana, I., Sugiono A., Adisty, D. (2020). Effect of E-Service Quality and E-Trust on E- Satisfaction. *Journal of Competitive Business*, Vol 1, No 4, 172-178.
- Gounaris, S., Dimitriadis, S., & Stathakopoulos, V. (2010). An Examination of The Effects of Service Quality and Satisfaction on Customers' Behavioral Intentions in E-Shopping. *Journal of Services Marketing* 24(2), 142–156.
- Hair, Jr., JF, Anderson, RE, Tatham, RL, & Black, WC (2006). *Multivariate Data Analysis*. 6th Edition. New Jersey: Prentice-Hall International, Inc.
- Indriastuti, M., & Wicaksono, R. (2014). Influencers E-Money In Banking Sector . *South East Asia Journal of Contemporary Business, Economics and Law*.
- Jogiyanto. (2007). *Behavioral Information System (Revised Edition)*. Yogyakarta: Andi.
- Kotler, P., & Keller, KL (2016). *Marketing Management*. Pearson Education.
- Kumala, C., D., Paranata, W., J., and Thio, S. (2020). The Influence of Perceived Usefulness, Perceived Ease of Use, Trust, And Security On Interest in Using GoPay In Generation X In Surabaya. *Journal of Hospitality Management*, Vol. 6, No. 1, 19–29.
- Lin, HH, & Wang, YS (2006). An Examination of The Determinants of Customer Loyalty in Mobile Commerce Contexts. *Information and Management*.
- Lovelock, CH, & Wirtz, J. . (2018). *Essentials of Service Marketing*. New Jersey: Pearson Education.

- Lupiyoadi, R. (2013). *Service Marketing Management: Competency Based* (3rd ed.). Jakarta, Indonesia: Salemba Empat.
- Parasuraman, Zeithaml, & Malhotra. (2005). ES-QUAL: A multiple-item scale for assessing electronics. *Journal of Service Research* 7(3), 213–233.
- Puriwat, W., and Tripopsakul, S. . (2017). The Impact of E-Service Quality on Customer Satisfaction and Loyalty in Mobile Banking Usage: Case Study of Thailand. *Polish Journal of Management Studies*, 183-193.
- Putri, SF A & Marlina, N. (2021). Effect of E-Service Quality and E-Trust on Consumer Satisfaction. *Economic Forum*, 23(3), 463-474.
- Santos, J. (2003). E-Service Quality: A Model of Virtual Service Quality Dimensions. *Managing Service Quality: An International Journal* Vol. 13 No. 3, 233-246.
- Suardi. (2011). Towards Customer Satisfaction Through Quality Service Creation. *Various Journals of Humanities Development*.
- Tiwari P., Tiwari KS and Singh PT (2017). Measuring The Effect of E-Service Quality In Online Banking. *Prestige International Journal of Management & IT-Sanchayan*, 43-52.
- Tse, David K. And Peter C Wilton. (1988). Models of Customer Satisfaction Formation: An Extension. *Journal of Marketing Research* Vol. 25, 204-212.
- Wibowo, A. (2006). Study of Information System User Behavior with Technology Acceptance Model (TAM) Approach. *ResearchGate*.
- Wiwoho, G. (2018). The Effect of Perceived Usefulness and Perceived Ease Of Use on Customer Satisfaction and Repurchase Intention of Ovo Application Users. *Journal of Business Focus*, Vol.17, No.01, 53-61.
- Zeithaml, VA, Parasuraman, A., & Malhotra, A. (2002). Service Quality Delivery Through Web Sites: A Critical Review of Extant Knowledge. *Journal of The Academy of Marketing Science*, 30(4), 362-375.