

# FACTORS AFFECTING ELECTRONIC MONEY (E-MONEY) SALES CASE STUDY IN BANKING ENTITIES IN INDONESIA

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## Abstract

*Electronic money instruments with non-cash transactions continue to increase positively from year to year. This is also due to the launch of the national non-cash or cashless movement which has been widely applied, especially in Indonesia. This study aims to find out what factors influence e-money sales, especially in banking entities in Indonesia. This study uses multiple linear regression analysis method using SPSS 22, which aims to examine the relationship or effect of the dependent variable with the independent variable. The results of the study have found that in the partial sale of electronic money is only influenced by e-money marketing channels / partnerships. While ease of transaction, ease of top up, and type of design do not have an impact on e-money sales. Meanwhile, simultaneously, these factors have an impact on E-Money sales.*

**Keywords :** *Ease of transaction, Ease of Top up, Electronic Money Type of Design.*

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## INTRODUCTION

The 4.0 industrial revolution in Indonesia has resulted in more and more recent technological-based innovations that have made it easier for the needs of society. One of the latest innovations in the field of finance itself is financial technology.

According to the fintech regulations stipulated in Financial Services Authority Regulation Number 77 / POJK.01 / 2016 and Bank Indonesia Regulation Number 19/12 / PBI / 2017 Regarding Financial Technology Implementation, it is stated that "The development of technology and information systems continues to give birth to various innovations, particularly those related with financial technology to meet the various needs of the community including access to financial services and transaction processing, the development of financial technology on the one hand has proven benefits, but on the other hand it has potential risks.

Electronic money according to Soerfianto, Iswi, and Serfiani (2012) as a means of payment which has the following

elements: issued on the basis of the value of money deposited in advance, the value of money is stored electronically in a medium such as a server or chip, used as a means of payment to traders which is not the issuer of electronic money, and the value of electronic money paid by holders and managed by the issuer is not a deposit as intended in the law governing banking.

Diniz, Porto, and Adachi, (2004), studied the factors that hindered adoption of M-banking among internet users in Brazil. According to these findings it is concluded that most users have never used M-banking services. Users identify risks, costs, complexity, and lack of understanding of the relative superiority of these services as the main obstacles in using M-banking services.

Davis, (1989), states that perceived ease of use, on the contrary refers to the degree to which a person believes that using a particular system will be free of effort. This follows from the definition of—ease: re-freedom of difficulty or great effort. Business is a limited resource that a person can

allocate to various activities for which he is responsible (Radner, & Rothschild, 1975).

According to Turban, and King (2014), E-Cash is Electronic Cash, often also referred to as Digital Cash, Digital Money. E-Cash means that a person can buy goods or services by sending a number from one computer to another. The number is issued by a bank and represents an actual amount of money that has an anonymous exchange rate (without name) and can be used like ordinary cash. When the value of electronic money stored in electronic media will be reduced by the value of the transaction and afterwards it can be refilled (top-up).

Based on the type of media storage, e-money can be classified into card-based products / prepaid cards and software-based products (Bank Indonesia, 2006; European Central Bank, 2000). The first category is stored-value for money as digital money on chips on a smart card, while the second category is stored as money in digital cash on a server or software / application. Design quality is a function of product specifications while conformity quality is a measure of how far a product can meet the specified quality requirements and specifications (Tjiptono, 2005).

Based on the description above, the purpose of this study is to determine the ease of transactions, the ease of top up and the type of design being one of the components that influence the factors affecting E-Money sales at Indonesian banking identity.

## LITERATURE REVIEW

### Based on Electronic Money Value Storage Places

According to Bank Indonesia regulation No16/8/PBI/2014, based on the depository value of electronic money funds, E-Money in its appearance was first introduced with a chip base (even today) embedded in a card

or other media (chip based). Chip/card-based e-money users can make transactions offline.

Chip/card-based e-money users can make transactions offline. How to use e-money based on this chip is only by attaching (tap) the card to the Electronic Data Capture (EDC) machine. The following are some examples of card-based Electronic Money seen in Figure 1.

### Ease of transaction

According to Zhang, Liu and Liu (2002) perceptions of ease can be seen by using indicators that are easy to learn, easy to use, clear and easy to understand, to be skilled. Meanwhile, according to Wibowo, Rosmauli, and Suhud. (2015) the perception of ease of use is when someone believes that using a technology will be free from effort.

Sigar, (2016), research revealed that there was a positive and significant influence between perceived usefulness, perceived ease of use and perceived pleasure on the intention to use electronic money. So that people can find out the benefits and how to use electronic money as a means of payment. This study was supported by Farida, Ardyan, and Nuryakin. (2016), who stated that the influence of PBC (Ease Behavior) affected the sale / use of e-money.

### Ease of Top up

Perceived ease is if someone who already believes in an easy-to-use information system will use it, but conversely if someone believes that the information system does not provide convenience when used then he will not use it (Rahmayanti, & Husaeni, 2017).

The filling of electronic money balances or top up of Bank Mandiri e-Money cards can be done in various ways, by inserting a debit card into an ATM machine, through the Mandiri e-Money Refill application, through the e-banking channel, Mandiri



**Figure 1. Card-Based Electronic Money**  
**Source: Bank Indonesia Regulation No.16/8/PBI/ 2014**

Online, coming directly to the office Bank Mandiri branches, or through merchants that have the same conditions as Bank Mandiri. (Seva, 2017). According to Seva (2017) service quality and product quality partially affect customer satisfaction at Bank Mandiri Surabaya Undaan Branch.

**Type of Design**

According to Poon (2008) there are several constructs that are indicators of feature availability of an internet banking system, namely, the ease of access to information about products and services, diversity of transaction services, diversity of features, and product innovation.

Klarmann, Schmitt, and Homburg (2010), found that features are characteristics that add to the basic functions of a product. Because this feature is the reason for consumers to choose a product, for traditional marketers the feature is a key tool to differentiate their products with competing products.

Examples of types of e-money designs are shown in Figure 2 of Bank Mandiri such as the 2018 Asian Games edition of E-money Mandiri designs, Marvel Avengers, Star Wars, Disney Tsum Tsum, and others. While the example of Brizzi electronic money design from BRI Bank is the design of the 2018 Asian Games edition, the limited edition design of Bumi Langit Heroes Series, and the Tap Cash electronic design from Bank BNI, which is like the design of the 2018 Asian Games edition.

The research of Okeke, and Amobi, (2014) hows that the seven variables are one of the characteristics of service products that are significant in influencing the use of E-Banking by consumers.

The results showed that a higher level of performance in the quality of service dimensions of guarantee, reliability, and responsiveness influenced consumers' use of E-Banking services.



**Figure 2. Types of Electronic Money Designs**  
**Source: Bank Indonesia Regulation No.16/8/ Pbi/2014**

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## RESEARCH METHOD

The object of research in this study are banks that issue Electronic Money services in the form of card / chip based or companies that provide electronic money services or Electronic Money and are registered with Bank Indonesia. The population used in this study is banking entities in Indonesia. and the writer uses purposive sampling method by using several criteria. Based on predetermined criteria, the samples obtained in this study are as many as 6 bank samples that meet predetermined criteria. The banks used in this study were 6 banks with a study period of 5 years of observation, so as to obtain  $6 \times 5 = 30$  observational data (multiplication of the number of samples with the number of years of observation).

**Operational variable:** (a) Independent Variable (X): The independent variables used in this study are transaction ease, top up convenience, and type of design, (b) Dependent Variable (Y): Dependent Variable is the variable that is affected, as a result of the existence of the independent variable. Said to be the dependent variable because the dependent variable is influenced by the independent variable.

## Analysis Technique

In this study the analysis technique used is Multiple Linear Regression. Multiple Linear Regression Analysis aims to determine the effect of ease of transaction, ease of top up, and type of design as an independent variable on the dependent

variable, namely Electronic Money sales. The steps in this analysis technique are: Normality test, Multicollinearity test, Autocorrelation test, Heteroscedasticity Test, Simultaneous Effect Test (F Test) and Partial Test (T Test).

## RESULT AND DISCUSSION

### Classic assumption test

The results of calculations on the classic assumption test consist of four test results namely, normality test, multicollinearity test, autocorrelation test and heteroscedasticity test. The results obtained from the four tests include: (a) Normality Test: Normality test conducted with the Kolmogorov-Smirnov, which is shown that the regression model had fulfilled the normality assumption, (b) Multicollinearity Test: Each independent variable has a VIF with a value of less than 10.00 ( $<10.00$ ), which is the transaction ease variable of 4.307, the top-up convenience variable of 3.308, and the design type variable of 4.735 so it can be concluded that there is no multicollinearity. The tolerance value of each variable is more than 0.100 ( $> 0.100$ ) which for the transaction convenience variable is 0.232, the top-up convenience variable is 0.302, and the design type variable is 0.211. It can be said that this multiple linear regression model does not have multicollinearity between the dependent variable and other independent variables so that it can be used in this study, (c) Autocorrelation Test: The Durbin Watson value obtained is 1.211, which is the  $d_u$  value contained in the distribution of the Durbin Watson table values based on  $k$  (5) and  $N$  (30) with a significance of 5% that is 1.83, so that it is obtained:  $(1.83) > \text{Durbin Watson}$  (1,211)  $< 4 - d_u$  (2.17). This heteroscedasticity test shows that there was no heteroscedasticity in the regression model, which means that in the regression there was an inequality of variance from the residuals of one observation to another, (d) Heteroscedasticity

Test: Based on the results of SPSS data processing that has been done previously, the results of the heteroscedasticity show the points (plots) spread randomly which do not form certain clear patterns and are also scattered above and below the zero (0) on the Y axis. So this can be concluded that heteroscedasticity did not occur in the regression model.

### **Hypothesis Test Results**

The results of testing this hypothesis indicate that of the three variables, namely the variable transaction ease, ease of top up and the type of design does not have a significant influence on the sale of E-Money. This is based on the results of partial test (T-test) which shows a significant value above or greater than 0.05. The biggest significant result is the variable ease up top of 0.682 or 68% when compared with the results of the value of the transaction ease variable (0.682 or 68%) and the type of design (0.198 or 19%).

The statistical results of the test f show that the significance level  $<0.05$  while the value of the Fcount obtained is 8.647 and the Ftable value is 2.60 so that the Fcount (8.647)  $>$  Ftable (2.60) and level significance  $<0.05$ , then this regression model can be used for Electronic Money sales case study variables in banking entities in Indonesia (Ha accepted). Or in other words it can be said that the variable transaction ease, top up convenience, as well as the type of design together (simultaneously) significantly influence the Electronic Money sales variable.

### **Result of Multiple Linear Regression Analysis**

Testing the basic classical regression analysis requirements that have been done previously has given results that the variables involved in it have met the qualifications of classical requirements and assumptions. Therefore, this study continues with testing the significance of the model and

interpretation of the regression model, while the coefficient of determination of this research is known to be 0.569. These results indicate that the independent variables namely transaction ease, ease of top-up, and type of design only account for 56.9% of the dependent variable which is electronic money sales, while the other 43.1% is explained by other variables which are not included in the this model.

### **Description of Results Interpretation**

#### **Effect of Ease of Transaction (X1) on Sales of Electronic Money (Y)**

Based on the results of previous tests showed that the ease of transaction does not significantly influence the sale of E-Money to banking entities in Indonesia. It can be concluded that the sale of electronic money that occurs at this time is not influenced by the ease of transactions that occur because of the payment method with cashless which has been supported by the State itself so that all forms of transactions will become easier.

The results of this study are not in line with research Sigar, J. F. (2016), revealed that there is a positive and significant influence between perceived usefulness, perceived ease of use and perceived pleasure on the intention to use electronic money. So that people can find out the benefits and how to use electronic money as a means of payment. this can be caused by people's perceptions about the ease of e-money transactions will differ from year to year as well as the development of digital technology that currently exists which requires someone to follow it.

#### **Effect of Ease Top Up (X2) on Electronic Money (Y) Sales**

The previous test results stated that the convenience of Top Up did not significantly influence the sale of E-Money to banking entities in Indonesia. Then this reveals the increasing number

and easiness of the top-up process for e-money that makes it easier for e-money users / consumers to top up e-money. This is because we can refill the process anywhere, both in retail stores, marketplaces, related banks, related bank applications, as well as in several toll gates that have supported the top-up process itself. It can be concluded that the current sale of electronic money is not influenced by the ease of top up, this is because it is easier for us to refill / top up.

The results of this study are different from the research Seva, S. (2017) revealed that the results of testing the quality of service and product quality partially influence customer satisfaction at Bank Mandiri Surabaya Undaan Branch.

### **Effect of Design Type (X3) on Electronic Money (Y) Sales**

Current electronic money sales are not influenced by the type of design of the e-money card itself. This is because people's perceptions about the type of e-money design will differ from year to year, and also because many electronic money card users prioritize the function of the e-money card itself rather than the design.

The results of this study are not in line with the research of Okeke, and Amobi, (2014) which shows that the characteristics of service products are significant in influencing the use of E-Banking by consumers.

### **CONCLUSION AND SUGGESTION**

Based on the data that has been obtained and previous tests conducted on the problem, it can be concluded that the ease of transaction, ease of top-up and the type of Electronic Money design does not significantly influence Electronic Money sales. In this study, although researchers have arranged the research as well as possible, but researchers realize there are still many shortcomings in this study with all its limitations. This research is expected to be the basis for future research. For those who

want to further research similar research, can use the variables that have been used in this study or add other variables, as well as expand the scope of research and take other objects in the community so as to be able to identify other factors which affect the decision on the sale of electronic money or Electronic Money, especially in banking entities in Indonesia. This is because there are still more or less 36% ( $\pm$  36%) other factors that influence decisions in selling electronic money that are not discussed in this study.

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