

## E-PAYMENT INNOVATION IN IMPROVING BANK INDONESIA'S FINANCIAL PERFORMANCE

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**Abstract:** Business competition in the financial services industry keeps the banks constantly innovating in services and products. One of the innovations made by the banking industry is e-payment. This study aims to determine the effect of e-payment on financial performance with moderated bank size. The population in this study is banking companies listed on the Indonesian Stock Exchange (IDX) in 2014-2016 as many as 43 banks. Sample selection method used is purposive sampling, so that obtained the number of samples of 10 banks. The data obtained were analyzed using Moderated Regression Analysis (MRA). The results of this study indicate that e-payment has a significant positive effect on financial performance and bank size strengthen the relationship between e-payment to financial performance. The results indicate that innovation in adopting e-payment can improve bank financial performance. The banks need to pay attention to innovation in financial services as a competitive strategy to improve financial performance.

**Keywords:** *E-Payment, Bank Size, Financial Performance*

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### 1. Introduction

The payment systems in economic transactions made progress with the development of advanced technology. Technological advances in the payment system have replaced the role of cash in the form of more effective and efficient non-cash payments. This is supported by the increasing number of companies or shopping centers in Indonesia that accept payment transactions using non-cash payment system.

Developments in information technology, followed by the level of competition that the higher bank encourage the banking sector to become more innovative in providing a range of alternative non-cash payment services. One of the innovations made in non-cash payment services is e-payment. The development of e-payment in Indonesia has great potential. This is due to the tendency and demands of people to transact using a more efficient and safer instrument.

E-payment makes it easy for card owners because there is no need to carry excess money when making transactions. In addition, with this service then the transaction can be done anytime and anywhere. On the other hand, banks can have a competitive advantage compared to banks that do not yet provide e-payment services. The increased use of e-payment in transactions can improve the bank's financial performance. Therefore, almost all banks make technology investments through the adoption of e-payment

One of the most influential factors in adopting e-payment innovation is the size of the bank. Large banks certainly have more assets than small and medium sized banks. Large banks in any investment will have little effect on the loss or displacement of assets owned. Thus, the large banks will be braver out investments to adopt new technologies to finance the growth of the service product compared with medium-sized banks and small.

Adopting e-payment is one of the competitive strategies used by the banking industry. E-payment system is a strategic information that is considered as one of the main components to strengthen the capacity and the provision of financial services. Roozbahani et al. (2015) argues that e-payment is a form of financial exchange between buyers and sellers and electronic communications that facilitate financial exchange. Some supporting tools that can be used to perform e-payment service are debit and credit card.

Several previous studies have examined the relationship between e-payment and financial performance, such as Kumar (2017). The results of his research found that the use of e-payment in transactions can improve bank services and financial performance of banks. Similar results were also found by Jenevive and Anyanwaokoro (2017) that the use of e-payment has a significant influence on the profitability of banks in Nigeria.

Based on the description related to the perceived contribution of e-payment adoption, as well as the findings of previous research, this study would like to examine the effect of e-payment on financial performance with moderated bank size.

Innovation diffusion theory is one of the theories used to analyze an innovation in creating a competitive advantage. Kombe and Wafula (2015) suggest that innovation diffusion theory tries to explain and illustrate the success of adopting one of the innovation decisions. The innovation meant in this case is the adoption of e-payment.

Innovation diffusion theory assumes that not all innovations can be adopted because it takes a long time to adopt them. Refusal to adopt an innovation is an obstacle to the diffusion of innovation while not stopping the innovation. Okiro and Ndungu (2013) stated in his writings that innovation diffusion theory is based on the assumption that the new innovations adopted will be superior to the previous ones. E-payment is considered an innovation banking service strategy to replace the role of cash.

### **Hypothesis**

Adopting e-payment is one of the competitive strategies used by the banking industry. E-payment brings a paradigm shift in transactions by increasing the effectiveness and add value of products and services. Innovation diffusion theory tries to explain and illustrate how the adoption and success of one of the innovation decisions is e-payment. The success of e-payment adoption can be seen with the increasing financial performance of banks.

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Meihami et al. (2013) states that the use of debit cards has a significant effect on bank earnings. Aduda and Kingoo (2012) in research conducted in Kenya, said that the debit card is a financial innovation in the banking sector. The findings show that the number of use of debit cards has increased since 2005, but it has no significant relationship with financial performance.

Muiruri and James (2014) in his study, found that some banks in Kenya have adopted some form of credit card innovation and this has a considerable impact on the commercial bank finance. Other research conducted in Kenya also concluded that the implementation of financial services innovation has improved the financial performance of banks. This is mainly achieved through the use of credit cards (Aduda and Kingoo, 2012). One of the factors influencing the adoption of e-payment is the size of the bank. The size of the bank is the size of the bank seen from its assets. Bank large have a great asset, so it is considered to have a substantial investment ability to adopt e-payment. This can support the adoption of e-payment in improving the bank's financial performance.

H1: E-payment has a significant positive effect on financial performance.

H2: Bank size can strengthen the effect of e-payment on financial performance.

## **2. Research Method**

This research uses quantitative approach with correlation method. The population in this study is a banking company listed on the Indonesian Stock Exchange (IDX) in 2014-2016 amounting to 43 banks. While the sample used consists of 10 banks selected by using purposive sampling method. The criteria of this sample selection are banking companies that include information related to the number of debit cards and credit cards in the annual report. Data analysis technique used is Moderated Regression Analysis (MRA).

The variables in this study have each measurement, namely:

### **1. Financial Performance**

Financial performance is a description of the company's financial condition at a certain period. In this study, the indicator used in measuring financial performance is ROI (total sales-investment / investment).

### **2. E-Payment**

E-payment is a payment service using electronic information and communication technology. There are two indicators used to measure e-payment of debit and credit card.

### **3. Bank Size**

Bank size is large or small bank which is indicated by the number of total bank assets at the end of the year. The indicator used in measuring bank size is natural logarithm (Ln).

## **3. Results and Discussion**

### **3.1 Results**

After doing research, the results of data processing are as follows:

#### **3.1.1 Results of Regression E-payment on Financial Performance**

**Model Summary<sup>b</sup>**

| Model | R                 | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|-------|-------------------|----------|-------------------|----------------------------|---------------|
| 1     | .854 <sup>a</sup> | .730     | .710              | .21340                     | 1.585         |

a. Predictors: (Constant), ukuran bank, epayment

b. Dependent Variable: kinerja keuangan

**Coefficients<sup>a</sup>**

| Model       | Unstandardized Coefficients |            | Standardized Coefficients | t     | Sig. |
|-------------|-----------------------------|------------|---------------------------|-------|------|
|             | B                           | Std. Error | Beta                      |       |      |
| (Constant)  | -6.517                      | .897       |                           | -7.27 | .000 |
| 1 epayment  | .155                        | .048       | .323                      | 3.22  | .003 |
| ukuran bank | .167                        | .021       | .795                      | 7.94  | .000 |

a. Dependent Variable: kinerja keuangan

### 3.1.2 Result of Regression E-Payment on Financial Performance After Moderated Bank Size

**Model Summary<sup>b</sup>**

| Model | R                 | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|-------|-------------------|----------|-------------------|----------------------------|---------------|
| 1     | .856 <sup>a</sup> | .733     | .713              | .21224                     | 1.604         |

a. Predictors: (Constant), interaksi, epayment

b. Dependent Variable: kinerja keuangan

**Coefficients<sup>a</sup>**

| Model      | Unstandardized Coefficients |            | Standardized Coefficients | t      | Sig. |
|------------|-----------------------------|------------|---------------------------|--------|------|
|            | B                           | Std. Error | Beta                      |        |      |
| (Constant) | -1.178                      | .581       |                           | -2.027 | .053 |
| 1 epayment | -.279                       | .072       | -.579                     | -3.878 | .001 |
| interaksi  | .014                        | .002       | 1.196                     | 8.012  | .000 |

a. Dependent Variable: kinerja keuangan

## 3.2 Discussion

### 3.2.1 Effect of E-payment on Financial Performance

Coefficient value for the relationship between e-payment and financial performance of 0.155 with a significance level of 0.003. This value indicates that there is a positive relationship between e-payment and financial performance. Thus, the hypothesis that "e-payment has a significant positive effect on financial performance" is accepted. This means that innovations made in the form of e-payment adoption contribute positively to the financial performance of banks.

As stated in innovation diffusion theory that innovation will be done if it is profitable (Roger, 1996). So the results of this study provide evidence that the innovation made by banking companies in the form of adopting e-payment provides benefits. Innovation e-payment as one of the products that provide practical value for customers, can also contribute in improving bank financial performance. Increased transactions made using e-payment such as debit and credit cards provide increased commissions or fee-based income in the bank. Banks may take commissions with a certain percentage range of total transactions conducted by their customers through e-payment services. In addition, especially for the use of credit cards, can be earned in the form of interest income, in which banks can charge interest with a certain percentage range to customers who do not pay their credit card arrears in full.

The results of this study are supported by previous research conducted by Kumar (2017). The results of his research found that the use of e-payment in transactions can improve bank services and financial performance. The form of credit card innovation as e-payment has a big impact on commercial bank finances (Muiruri and James, 2013). In addition, Meilhami et al. (2013) found that the innovation of debit cards can also improve the bank's financial performance.

### **3.2 Effect of E-Payment on Financial Performance by Moderated Bank Size**

Coefficient value for the interaction between e-payment and financial performance is moderated by bank size of 0.14 with a significant level of 0.00. This value indicates that the interaction between these variables is either positive or interrelated. The R square value as the effect of the moderation variables increased from 0.730 to 0.733, which means that the moderation variable of bank size can strengthen the effect of e-payment on financial performance. Thus, the hypothesis that "Bank size can strengthen the effect of e-payment on financial performance" is accepted.

Based on the results of this interaction relationship, it can be said that the company can improve financial performance by investing in the form of e-payment services. Where the larger the size of a bank then the more likely to be able to make an e-payment investment. Large banks have more resources and investment channels making it possible to adopt more e-payment services compared to smaller banks. This may contribute to the improvement financial performance of banks.

As explained by Guru et al. (2000) that large banks have greater assets and diversified products and accessibility to better markets, which may not be available to small banks. Furthermore Smirklock in Al-smadi and Al-Wabel (2011) states that if the bank size increases, the strength of the market and profits were increased. One of the differences in profitability between large and small banks is due to differences in technology. This is due to differences in capabilities possessed by large and small banks in adopting the technology.

## **4. Conclusion**

This study found that e-payment has a significant positive effect on financial performance and bank size can strengthen the relationship between e-payment to financial performance. The result of this study shows that innovation in adopting e-payment can improve bank financial performance. Banks need to pay attention to innovations in financial services as one of the competitive strategies that can improve financial performance.

The indicators used to measure e-payment variables are limited to debit and credit card. This is due to the lack of data available in the bank's annual report related to indicators that can be used to measure e-payment. Therefore, further research can use other e-payment measurement indicators other than debit and credit card.

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