

The Influence Of Mobile Banking Transaction Used On Cost Reduction Of SMEs Employers

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Abstract- The aim of this study is to investigate the use of mobile banking as a way to decrease the transaction costs for the SMEs entrepreneurs. Mobile banking is a facility that is provided by the bank to its customers to better facilitate them in the transaction. Efficient in terms of time and cost is one of the advantages possessed by mobile banking, but a lot of coverage in the media in which the mobile banking users complained that they are actually harmful in terms of spending. Rates may not affect mobile banking for the users individu because the pricing is relatively small, but this will be a problem for employers in terms of transaction costs that they incur as well as for the management of Micro, Small and Medium Enterprises (SMEs) Cibaduyut shoes as one unit the biggest business in West Java, Indonesia. The method used in this research is descriptive and verification, testing analysis is done by a simple linear regression test and t test as an additional test to give an explanation that the use of mobile banking can lower transaction costs incurred. From the results of this study provide an overview of the use of mobile banking by employers that are proven to reduce transaction costs between before use and after use mobile banking. From the above results is expected that all parties concerned can further promote ease of use of this technology further efforts to contribute to the progress of the managers of SMEs.

Keywords: *mobile banking, operating expenses, transaction costs, SMEs*

I. INTRODUCTION

Electronic banking (e-banking) has triggered major changes in the practice of commercial banks since it was first introduced as home banking services by the four major banks in New York in 1981. Ability of electronic commerce (e-Commerce) is applied in the banking world, useful to offer productivity gains, transaction cost reduction, improved customer service and flexibility in meeting customer needs and lifestyles. Mobile banking in developing countries by Britani Must and Kathleen Ludwig (2010) insists that the benefits of mobile banking is as a tool to access the savings that customers have, the ease of making purchases mapupun bill payments, and may reduce transaction costs.

The development of rapid information technology realized by the banking sector especially in Indonesia in a variety of innovations to the service (service bank) to its customers. Mobile banking is the latest innovation support electronic

banking after the success of Automatic Teller Machine that is able to improve the quality of service in the banking world. Achraf (2005) Mobile banking services are treated as one of the information systems of the banks are the most important and able to produce financial information, which include check balances, transfer funds, credit card billing information, payment of bills, and so on through an internet without auxiliaries cable. Luciana (2008) concluded that in Indonesia Mobile banking services are services that are safe to use so that the service is widely used by many people in Indonesia. Research conducted by Ahmad Kaleem (2008) on the perception of bank customers towards electronic banking in Pakistan, concluded banking customers assume that the gains in using mobile banking service that is on time and is more likely to be able to minimize the transaction costs incurred. In conducting activities either through electronic banking transactions, will not be separated from the cost of the transaction. Transaction costs are costs incurred in the transaction where the cost is used to determine and enforce the rights of ownership of the goods and services. Transaction costs influence the actions of an enterprise and the pattern of efforts to act in the market, transaction costs can be seen from the level of efficiency of an economic activity. And research Issac Mbiti (2011) which analyzed the impact of mobile banking in the country of Kenya stated that the M-PESA service which is a mobile phone based money transfer system in Kenya state, may reduce transaction costs so that the impact on the price reduction.

Many alleged that the mobile banking transactions will increase each year. It is backed by innovative services of the banking industry. According Insley et al. (2003) on the future of financial transactions is forecast to be the most popular banking product accessed through mobile phones. The transaction value will be doubled each year throughout the world and became a four-fold increase after the year 2011. A research institute, Juniper Research, predict users of banking services via the mobile telecommunications will increase 10-fold in 2011. It is predicted that 816 million subscribers will also utilize the services and banking products through mobile communication equipment. China, India, the Philippines and several countries in Western Europe, has a market users of mobile banking services and the largest in the world. Indonesia

is a country with a large amount of growth of the mobile banking services in conformity pamper customers (Alert, May 17, 2008). But a lot of news about the complaints of mobile banking users in a variety of media such as detik.com, preaching the ineffectiveness of the system starting from the current mobile banking customers have activated the service, the occurrence of errors during a transaction, up to a rate soared because of technical errors. Rates incurred when using mobile banking services may be less of a problem if it is used by an individual who is not engaged in the business (entrepreneur), because the frequency of activities a bit so that the cost is quite low. However, this becomes a problem when the user's mobile banking services are a businessman or someone who runs the Micro, Small and Medium Enterprises (SMEs), in which case they should emphasize minimal costs incurred, including costs incurred when using electronic banking services.

SMEs should pay attention to the rapidly growing technological advancements. By utilizing information technology SMEs can minimize costs arising from the activities. One of the biggest SMEs in Bandung, Indonesia Cibaduyut shoes are SMEs, which recent data obtained from SMEs turnover reached Cibaduyut shoes. 23 billion. From year to year, efforts Cibaduyut shoes have become icons of the city of Bandung and be role models for the other business units in developing their business. In this case, the involvement of SMEs in the world of electronic banking which is expected to trigger Cibaduyut effectiveness, economy and efficiency for the conduct of business activities undertaken, especially as customers who have been using Mobile banking and internet banking to transaction costs that they incur while using the service system The banking information.

Based on the above background, the purpose of this study was to obtain data and information to determine the use of mobile banking, the recognition of transaction costs after using mobile banking, and to determine the effect of using mobile banking to decrease transaction costs for SMEs Cibaduyut shoes. This study is expected to be the input for financial institutions to provide feedback to enhance the mobile banking system implemented by the concerned bank, for SMEs this research can provide input in Opera and minimizing operational costs related to business activities conducted , as well as an input for dedication in informing the SME entrepreneurs as a way to minimize operating costs.

II. LITERATURE RIVIEW

Small and Medium Enterprises (SMEs)

According to the World Bank definition of SMEs, namely:

- 1) Medium enterprise is a business that has the number of employees up to 300 people, has revenues of U.S. \$ 15 million, and has total assets of up to U.S. \$ 15 Million.
- 2) Small enterprise, the number of employees who coined the businesses of less than 30 people, whereby revenues during the year does not exceed U.S. \$ 3 million, and has total assets of not more than U.S. \$ 3 million.

- 3) Micro enterprise, the business criteria for the number of employees who have less than 10 people, where the annual income does not exceed U.S. \$ 100 thousand, while the asset does not exceed U.S. \$ 100 thousand.

The role of SMEs For Indonesian Economy

According Murpi (2012) suggested the role of SMEs for progress and economic development of Indonesia, namely: the largest contributor to the value of the Gross Domestic Product (GDP), SMEs have the greatest absorption of labor that is 97.3% of the total labor force in Indonesia, and entrepreneurship as a solution the nation's economic problems that entrepreneurship in the SME sector has a major role as a solution to the nation's economic problems.

Mobile Banking

Mobile banking by Supriyono (2011) is a banking service that can be accessed through mobile phone networks or mobile phone GSM or by using the CDMA data services provided by mobile phone operators. Excess use of Mobile Banking is for security, efficiency / saving time, using easy and economical.

Transaction Costs

Kochner and Pichot in Muftadi Anang (2008) transaction costs are divided into four (4) types of cost is the cost of searching for information, the cost of making a contract or negotiating (bargaining costs), monitoring costs, costs of adaptation. Duran and McNutt (2010) classifies three (3) components namely negotiating cost transaction costs, monitoring costs, and enforcing cost. The third component is a representation of the process that took place in a contract that includes a pre-contract activities, discovery and negotiation of potential partners, and activities that take place after the contract agreement.

Besides the Fox Coase, (2007) also made three categories of transaction costs, namely: (1) the relevant cost price discovery, which includes the cost of the search (search cost). Search cost is the value of the resources used by people to find potential partners in order to carry out a voluntary exchange, both bilaterally and multilaterally. (2) the cost of negotiation (negotiation costs). This cost is the value of the resources used in the process of negotiations with potential partners to reach agreement forms that are equally satisfying. (3) costs to terminate the exchange (concluding cost), the value of the resources used by the participants in the exchange to verify the other participants in order to fulfill the entire contract.

According to Anand (2008) the things that can affect the lower the transaction costs is to increase the ability to manage information or by using the new information system and improve communication and coordination. Rothbard in Meramveliotakis and Milonakis (2010) cost divided into two groups, namely the objective costs / wiki accountancy costs and costs / economic costs.

III. FRAMEWORK

For more than a decade, information technology has affected the banking industry. Banks and other financial institutions have increased their function as financial intermediaries by adopting a variety of information technology (Chang, 2002; VanHoose, 2003). Generally, when coupled with information technology functions of banks and financial institutions, it is a barometer of the formation of electronic banking. Electronic banking technology has led to banks and financial institutions to improve the effectiveness of distribution channels by reducing transaction costs and increasing the speed of service. From the point of view of consumers, electronic banking technology allows consumers to access financial services in a more convenient, lower cost of bills and save time in managing their finances. Due to the advantages for both suppliers and consumers in the financial markets, banking services electronically has grown exponentially in the United States. For example, Anguelov et al. (2004) reported that the average number of electronic technology used by the United States increased from an average of 1.4 in 1995 to 2.5 in 2001, while the average number of non-electronic technology has not changed during the same period. It is proved that the development of information technology especially mobile banking can affect the activity of a company or in the study of SMEs.

In this case the mobile banking is a banking services through mobile media allowing customers to conduct transactions anywhere and anytime. Thus the utilization of these services can have a positive impact for entrepreneurs so that they can be more efficient in making payments or know their account balance, in terms of efficiency can be seen in terms of time and cost. Ease of use of mobile banking services is a major factor in lowering costs, because users do not have to pay extra to just go to the ATM or go to the burning electricity or telephone payments. They simply use mobile banking facilities provided by the lower cost (low cost), so the use of mobile banking can affect the recognition of business activity decreased transaction costs for SMEs.

IV. RESEARCH METHOD

The method used in this research is descriptive and verification with a survey approach. In connection with this study, the authors gave questionnaires to the parties that are the subject of research in order to obtain the necessary data, then the data is processed to determine the perceptions, opinions, or opinions of the parties who use mobile banking services on their perception in the operationalization this variable using a Likert scale. Based on the above explanation that serve as the population in this study is the entrepreneur who is managing SMEs shoes.

As an illustration Cibaduyut shoe industry center located 5 miles south of downtown Bandung, Indonesia with an area of about 14 km². In 1918, preceded by some residents Cibaduyut who learned to make shoes, footwear Cibaduyut business

slowly grew into a small industrial center began around 1920, there were 15 business units. The production of the new shoe craftsmen then marketed based on individual orders. In 1940 the number of shoe craftsmen growing and expanding, and in about 1950 the craftsmen of the growing number of entrepreneurs to 250 entrepreneurs. With the condition of the raw material comes from outside the area and some of them obtained by imports.

Based on a population that has been described above, researchers attempt to determine the characteristics of the sample medium Cibaduyut shoes but as many as 50 samples of assessment questionnaires, only 27 respondents who meet criteria of the shoe medium entrepreneurs who use mobile banking and is in the area Cibaduyut, sample withdrawal method survey.

Type of data used is a type of primary and secondary data. Primary data for the study using questionnaires and secondary data required for the bank as a supporter of the research. Data was collected through survey methods. Validity and reliability test was conducted to test the instruments used. The correlation coefficient is then compared to the critical value, the test is done with SPSS version 17.0 and using the 0.05 significance level. Reliability test is used to measure the results obtained show the reliable (reliable). Measurement methods that researchers use the Cronbach Alpha method that will produce the alpha value in scale 0-1, which can be grouped into five classes, namely 0.00 to 0.20 less reliable, somewhat reliable 0.201 to 0.40, 0.401 to .60 quite reliable, 0.601 to 0.80 reliable, and 0.801 to 1.00 is very reliable.

Data Analysis

Data were analyzed with descriptive analysis and verification. To rank in each set of descriptive variables, can be seen from the comparison between the actual score and the ideal score. The results of these calculations are not well organized into 20.00 to 36.00, 36.01 to 52.00 is not good, from 52.01 to 68.00 is pretty good, good from 68.01 to 84.00, and 84.01 - 100 is very good. Verification method of data analysis that have been converted are then processed using simple linear regression. Spearman rank correlation is used to find the closeness of the relationship between two or more variables, which has a measurement scale ordinal scale. The resulting coefficients can be interpreted as the correlation between the two variables: 0.00 to 0.199 is very low, from 0.20 to 0.399 lower, 0.40 to 0.599 were, 0.60 to 0.799 strong, and from 0.80 to 1.00 is very strong. Then calculated the coefficient of determination.

V. RESULT

Results of correlation calculations for validity gauge variable Y is transaction cost reduction obtained validity coefficients between 0.300 to 0.548. Where items are correlated over 0,367 items categorized as valid and feasible to test, reliability test in this study using Cronbach's alpha coefficient method with the results:

Table I. Reliability Test Variables Using Mobile Banking

Alpha	N of Items
.794	2

From the table above, the value of Cronbach's Alpha of 0.794 on the Use of Mobile Banking instrument variable (X). Based on the criteria which the Cronbach's Alpha values were in the range of 0.601 to 0.80, it was concluded that the instrument is reliable.

Table II. Variable Reliability Test Transaction Cost

Cronbach's Alpha	N of Items
.466	2

Further calculations on variables reduction in transaction costs (Y) values obtained Cronbach's Alpasebesar 0,466. This value is in the range of 0.401 to 0.601, it was concluded that the research instrument is very reliable.

Use of Mobile Banking

Mobile banking services are treated as one of the information systems of the most important banks are able to produce financial information include: check balances, transfer funds, credit card billing information, payment of bills, and so on through an auxiliary tool the Internet without wires. It is important for customers to get the easiness in obtaining financial information and conduct transactions on-line, without having to visit the bank where they become customers. Respondents regarding the use of mobile banking indicates that 77.96 means that the use of mobile banking in the shoe industry center Cibaduyut criteria included both positive outcomes addressed by the employers, which means an information system that both meets the criteria both in terms of safety, ease of use, economical and efficient, a good information system affects the level of its use anyway.

Against Recognition Transaction Cost Reduction

Based on the questionnaire that has been deployed, an assessment of the cost per transaction decreased perceived after use mobile banking facilities obtained through the assessment of the questionnaire respondents about the perceived reduction in transaction costs after using mobile banking showed 75.41%, indicating that mobile banking users feel the decline the cost per transaction that they incur as mobile banking service is very efficient, which only by using the command through media such as mobile phones, customers can conduct banking transactions without having to come to the office of a bank or ATM, so it is more efficient in terms of time and costs . Not only is it the things that can affect the lower the transaction costs is improving the ability to manage information or by using a new information system, in this case mobile banking is an information system that can be relied upon to reduce or suppress the level of transaction expenses. Results of simple linear regression analysis is used to

determine the effect of the use of mobile banking to the following:

Table III. Calculation Result Simple Linear Regression Analysis

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.224	.895		1.368	.184
Mobile_Banking (X)	.642	.220	.503	2.911	.007

From the regression results contained in the table above, it can be formed of a linear equation $Y = 1,224 + 0642 X$, the regression coefficient has a positive value means the use of a mobile banking service will increase the reduction in transaction costs. Spearman rank correlation analysis is used to determine the relationship between the independent variables, namely the use of mobile banking with the dependent variable is the reduction in transaction costs, with the result of the following calculation:

Table IV. Spearman Rank Correlation Test table

			Correlations	
			Mobile Banking	Transaction Cost
Spearman's rho	Mobile Banking	Correlation Coefficient	1.000	.472*
		Sig. (2-tailed)	.	.013
		N	27	27
Transaction Cost	Transaction Cost	Correlation Coefficient	.472*	1.000
		Sig. (2-tailed)	.013	.
		N	27	27

*. Correlation is significant at the 0.05 level (2-tailed).

Correlation of the results of the above calculations, a score $r_s = 0.472$, and the results show the relationship above criteria are. Only declare the value of the correlation r closely or not the relationship between the variables X and Y. Therefore, to determine the extent of the influence of the independent variable on the dependent variable used in the calculation of the coefficient of determination $K_d = 22.27\%$. That is, the use of mobile banking gives the effect of 22.27% of the reduction in transaction costs. In this case, if mobile banking is used by the SMEs managers can reduce transaction costs by 22.27%. While the remaining 77.73% indicates that the reduction in transaction costs may be influenced by other factors not examined by authors such as raising the bar in terms of coordination. Furthermore, to test whether the use of Mobile Banking significant effect on the reduction in transaction costs is done by t test. Based on these calculations, it can be seen that the magnitude of t is 2676. By using a significance level of $\alpha = 5\%$ and $df = n-2$ ($27-2 = 25$) the obtained value t table 2,060. From the results of hypothesis testing can be seen that the use of mobile banking in the shoe industry center Cibaduyut positive effect on the reduction in transaction costs.

With the test results based on the Spearman rank correlation test that shows the value of the correlation coefficient 0.472. This value indicates that the variable use of mobile banking and transaction cost reduction variable has the relationship, that the relationship between them is not too low and not too strong because it is in the middle. In this case, if the use of enhanced mobile banking, it is automatically level reduction in transaction costs will increase as well. Furthermore, in the calculation of the coefficient of determination (Kd), note that the variables affect the use of mobile banking for 22.27% of the reduction in transaction costs rest influenced by other factors not examined in this study.

The test results are in line with empirical research conducted by Donner (2008) which concludes that Mobile banking is a system which proved to be an important innovation for developing countries in terms of lowering the cost of moving money from one place to another tempat, where the cost is transaction costs. And is also consistent with research on the use of mobile banking perception conducted by Salma Ahmad Kaleem and Ahmad (2008) who concluded that the mobile banking user perception in terms of its advantages over many assume that electronic banking can minimize the cost per transaction (transaction cost). In line with the benefits delivered by mobile banking Supriyono (2011) that mobile banking is very efficient, which only by using commands through media such as mobile phones, customers can conduct banking transactions without having to come to the office of the bank or ATM, so it is more efficient in terms of time and also the cost.

VI. CONCLUSION

From the analysis and discussion on the use of mobile banking to the decline in transaction costs on SMEs Cibaduyut shoes, it can be concluded the use of mobile banking in the shoe industry center Cibaduyut including both criteria, Cibaduyut shoe industry center managers feel that by using new information systems such as mobile banking can reduce the level of expenses, the recognition of the reduction in transaction costs after using mobile banking for that they feel the reduction in transaction costs when using mobile banking facilities provided by banks than before using mobile banking, mobile banking using a shoe organizer Cibaduyut could be minimize transaction costs.

REFERENCES

- [1] Ahmad Kaleem. , 2008. Banker's Perception of Electronic Banking in Pakistan. *Journal of Internet Banking and Commerce*. Vol.13.no.1.
- [2] Chang, Tina, Yoonhee 2005, Dynamics of Internet Banking Adoption, ESRC Centre For Competition Policy, University of East Anglia
- [3]Duran, Xavier and Patrick McNutt. 2010. Kantian Ethics within Transaction Cost Economics. *International Journal of Social Economics*. Vol. 37, No.. 10, pp. 755-763.
- [4] Donner, Jonathan and Tellez, Camilo. (2008). Mobile banking and economic development: Linking adoption,

- impact, and use, the *Asian Journal of Communication*, 18 (4), 318-322.
- [5] Fox, Glenn. 2007. The Real Coase Theorems. *Cato Journal*. Vol. 27, No.. 3, pp. 373-396.
- [6] Isaac Mbiti. , 2011. Mobile Banking: The Impact of M-Pesa in Kenya. The national Bureau of Economic Research.
- [7] Kathleen L. Britani. 2010. Mobile Money: Cell Phone Banking in Developing Countries. *Policy Matters*, Vol. 7.No.2.
- [8] Meramveliotakis, Giorgos and Dimitris Milonakis. 2010. Surveying the Transaction Cost Foundations of New Institutional Economics: A Critical Inquiry. *Journal of Economic Issues*. Vol. XLIV, No.. 4, pp. From 1045 to 1071.
- [9]Ayadi, Achraf. , 2005, "Value Creation in Mobile Banking", *Journal of Marketing Management*. GET/Institut National des Telecommunications.
- [10] Amalia. S. L. , 2008. WAP and SMS Banking Services Banking. Jakarta.
- [11] Murpi, S. , 2011. Business Plan for SMEs Practical & fierce. Jakarta: Warriors Literacy.
- [12] A. Muftiadi , 2008. Module Introduction to Economics transaction costs. Bandung: Padjadjaran University.
- [13] <http://www.waspada.co.id>, retrieved October 4, 2012