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Research Article

NON-CASH TRANSACTION SUPPORTING ANALYSIS WITH ANALYTICAL HIERARCHY PROCESS (AHP) APPROACH

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ABSTRACT

Compared to ASEAN countries, Indonesia still ranks low in non-cash transactions. Based on McKinsey (2013) study, Indonesia's non-cash retail transactions amounted to 0.6%, while for Thailand 2.8% and Malaysia 7.7%. Singapore ranks highest at 44.5%. One of the causes of low non-cash transactions in Indonesia is the low involvement of retail small and medium enterprises (SMEs) in implementing non-cash transactions in their business environment. This study aims to analyze factors supporting the implementation of non-cash transactions in retail SMEs. The method used in this research is by the Analytical Hierarchy Process (AHP) approach. The results of the study found that the implementation of non-cash transactions can be enhanced by maximizing the potential carrying capacity: (1) Speed, (2) Security, (3) Efficiency / Practice, (4) Value of money, and (5) Government program. The main supporting factor that gets the highest priority is efficiency or practicality of 23%.

INTRODUCTION

Indonesia still ranks below in the percentage of non-cash transactions. According to Bank Indonesia's (BI's) record, there are 48,000 transactions with a value of Rp 1.4 Billion per day in 2009. It should be realized that payments through cash transactions have many disadvantages of non-cash payments. Some of the disadvantages of cash payments are as follows: (1) Less practical; (2) Longer transaction time; (3) The risk of counterfeit money; (4) The value of money is less awake; (5) Less secure.

Several efforts have been made by the stakeholders to spur the increase of non-cash transactions, one of which is by Bank Indonesia as the Central Bank in Indonesia. One of the programs that have been implemented is the declaration of the Non-Cash National Movement (GNNT) on 14 August 2014 by the Governor of Bank Indonesia Agus D.W. Martowardjoyo. The launching of this movement is a refresher of Government Regulation No. 82 of 2012 on Electronic System and Transaction in Digital Financial Services. Through GNNT it is expected to accelerate the use of non-cash payment instruments that Bank Indonesia has sought from several years previously. Several activities have been undertaken to encourage the use of non-cash payment instruments, such as facilitating the use of electronic money in the public transportation sectors, such as TransJogja, TransSolo, and TransJakarta. Some of the current GNNT strategies are as follows: (1) Establishment of Non-Cash Areas in Campus Environment; (2) Non-Cash Payment Instruments for Government Financial Services; (3) Distribution of Government Social Assistance.

Three GNNT strategies that are being pushed are still in the upper and lower levels of society. The top layer is a non-cash policy on campus and government, while the bottom layer is assistance to the underprivileged (government social assistance). So there is one thing that is overlooked by the policymakers that there is still a middle or middle level that makes this policy "discontinuous", which is the concern of strategy at the retail level of SMEs. It should be realized that Indonesia's retail plays an important role in the penetration and expansion of non-cash transactions in the middle and to contribute to the program. Retail directly touches all Indonesian consumers.

SME-based retailers are a huge potential for the development and expansion of non-cash financial transactions in Indonesia. It needs great effort in encouraging people to conduct non-cash transactions, but without the support of adequate instruments and community roles, this program will be difficult to develop

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quickly and optimally. One of the activities that can be used to support GNNT is the implementation of non-cash payment instruments in the form of EDC (Electronic Data Capture) machines in Small and Medium Enterprises (SMEs) in the retail field. Based on McKinsey's (2013) study, Indonesia's non-cash retail transactions amounted to 0.6%, while for Thailand 2.8%, Malaysia at 7.7% and Singapore with 44.5%. This is a homework as well as a huge challenge for stakeholders to accelerate the growth of non-cash transactions in Indonesia. Given Indonesia's economic growth of 5.0% is still relatively high among ASEAN countries 5, ie 4.7% of the non-cash payment system in Indonesia must also be driven to catch up.

The real problem in the SME community is that very few SME players are installing or implementing the use of EDC (Electronic Data Capture) in their business environment. This is certainly very hampering the growth of transactions involving the wider community. On the one hand, according to BPS, the number of SMEs in Indonesia is the largest number of SMEs compared to other countries, which is 56,534 592 perpetrators of SMEs in 2012. If the perpetrators and communities of these SMEs are empowered, it certainly can improve and optimize GNNT through non-cash transactions very large both the number and frequency

LITERATURE REVIEW

Many different manifestations of money, both physical and electronic. Economic theory identifies three functions of money, namely: (1) As a store of value that can be used to transfer purchasing power from today for some time to come. (2) A means of exchange for making payments. (3) A unit of account to measure the value of each particular item (Ali et al., 2014).

Meanwhile, according to Bank Indonesia electronic money is money used in internet transactions by electronic means. Typically, these transactions involve the use of computer networks (such as internet and digital pricing systems). Electronic Funds Transfer (EFT) is an example of electronic money. Electronic Money (electronic money) is money used in Internet transactions by electronic means. Typically, these transactions involve the use of computer networks (such as the internet and digital pricing systems). Electronic Funds Transfer (EFT) is an example of electronic money.

Technology development has brought a change in the needs of society over a means of payment that can meet the speed, accuracy, and security in every electronic transaction. History proves that the development of means of payment is constantly changing, from metal forms, conventional banknotes, until now the means of payment have evolved in the form of data that can be placed in a container or called electronic payment instrument (Adiyanti: 2015).

According to Budiarjo (2009) banking transactions through the bank branch offices are banking transactions in a conventional way. In this transaction, the customer must come to the nearest bank branch office. Along with the high activity and mobility of customers and the demands of ease and flexibility in conducting banking transactions, the bank provides alternative banking transaction services through facilities such as Electronic Data Capture (EDC). The transaction through EDC provides convenience for customers in conducting non-cash transactions that have a positive impact in the form of increasing fee-based income for banks.

The Analysis Hierarchy Process (AHP) method was developed by Thomas L. Saaty. The AHP model is applied to many different corporate and non-company problems to improve decision making (Hogan & Olson, 2004, 2006; Ishizaka &Lusti, 2004). The main advantage of this model is its ability to accommodate complex qualitative and quantitative information into the decision-making process. Other benefits include simplicity of use and its ability to apply consistency to decision-making processes (Hogan et al., 2009).

The AHP method helps solve complex problems with structuring hierarchy of criteria, interested parties, outcomes and by drawing considerations for developing weights or priorities. This method also combines the power of feelings and logic concerned with various issues, and then synthesizes various considerations in the results according to our intuitive estimates as presented in the considerations that have been made (Saaty, 1990).

RESEARCH METHODS

This research is survey research with the qualitative and quantitative approach. The location of this research is in Banyumas Regency, Central Java. Data sources are secondary data and primary data. The method used through semi-structured interviews. Methods of collecting these respondents through the filling of questionnaires that have been prepared. Secondary data is obtained from data already available from both Bank Indonesia's own environment and other available data sources. Primary data is obtained directly from respondents who are experts, employees or promotional officers of Electronic Data Capture (EDC) implementation from the bank to determine the level one and level two constraint factors of EDC implementation in SME retail. The method used to obtain data from these respondents is through semi-structured interviews. Another respondent is the owner / Manager or Retail SME Store Head who has implemented EDC to determine his low-level low-constraint preferences. The method of collecting this respondent is through the filling of the prepared questionnaire.

RESULTS AND DISCUSSION

Defining Problems and Creating Hierarchical Structures Supporting factors and sub-factors have been published by Sutarmin and Adi Susanto (2017) which examine the potential of non-cash transaction implementation. Furthermore, this study arranged hierarchy to assist decision making by taking into account all decision criteria involved in the system. This study uses the analytical hierarchy process, then the questionnaire used to compare each supporting factor. The scale used is Saaty's scale 1-9 with the following explanation:
1 = the same support, which means that the two factors compared have the same weight in supporting the use of EDC machines in Retail SMEs in Banyumas district.

3 = Slightly more supportive, which means one of the comparable factors has slightly more weight supporting than the other factor.

5 = Somewhat supportive, which means one of the comparable factors has a somewhat more supportive weight than the other factor.
7 = Remote support, which means one of the factors that is compared has a much more supportive / inhibiting weight than the other factor.
9 = Absolute more supportive, which means one of the comparable factors has an absolute weight more supportive than the other factor.

2,4,6,8 = is the middle value if the respondent is hesitant in determining the scale, eg in 4 where the respondent is hesitant to determine between 3 and 5 scale.

Using this comparison scale, matrixes based on respondents' answers are either reciprocal or reverse matrices. For example factor A is more favorable than factor B with weight 7, then factor B has 1/7 more support than factor A.

Pairwise Comparison

The next step is to make a pairwise matrix comparison based on the respondent's answer. The matrix form of pairwise comparison of the main supporting factors. The main supporting factor has 6 sub-factors in which each pair matrix comparison is made, namely speed, security, efficiency/practicality, the value of money and government programs.

The result of the weight calculation of the supporting factor is presented in the pie diagram as follows:

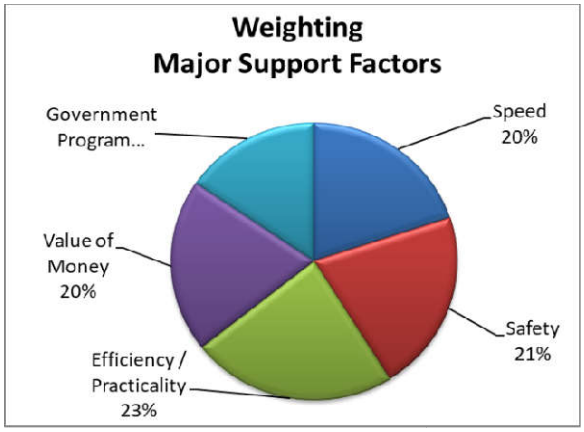

Figure 1 Weight Calculation of the Major Supporting Factors

While the results of the weight calculation of the supporting factors and sub-factors are summarized in the table as follows:

Based on the weighting table of factors and sub-factors above, the following is the discussion sorted by the weight of the obtained:

Practicality

The result of weight calculation, practical factor has the biggest weight, that is 0,232 or equal to 23,2%. Subfactor of this practical factor is 4, that does not need to carry a lot of cash, do not need change changechange, payment according to the transaction amount, no need to take or deposit money in bank and payment to the vendor. Of the five sub-factors, which have the greatest weight in the second level is the sub payment factor according to the number of transactions with a weight of 0.053 or 5.3%.

Security (Safety)

Factors that ranked second in terms of supporting the use of EDC machines in Retail SMEs in Banyumas District is a security weight of 0.212 or 21.2%, Although security is a second ranking factor, there is sub-factors evidence transaction is a subfactor that has the greatest weight on second level hierarchy. This means that subfactor is transaction proof is the most dominant subfactor supporting the use of EDC machine in Retail SME with weight 0,2785 or 27,85%.

Value of Money

The supporting factor of the value of money has a weight of 0.202 or 20.2%. This Value Factor of Money has a sub-factor Wake up not inflation with a weight of 0.392 or 39.2%, Earn interest or service with a weight of 0.323 or 32.3% and Likelihood of prize drawing with a weight of 0.2851 or 28.51 %.

Speed

The speed factor is a supporting factor in the fourth rank with the weight 0.199 or 19.9%. Subfactor that has the greatest weight in the factor of Speed is Once friction of each transaction with a weight of 0.293 or 29.3%. While the subfactor The faster transaction time has a weight of 0.250 or 25.0%, subfactor No need to calculate the money has a weight of 0.236 or 23.6% and subfactor No need to set the money has a weight of 0.221 or 22.1%.

Government Program

Factors supporting the government program is the factor with the least weight that is equal to 0.155 or 15.5%.

Table 1 The Weighting of First and Second Levels of Supporting Factors

Level One		Final	Level Two	
Supporting factors	**Weight(%)**	**Weight**	**Supporting Subfactors**	**Weight(%)**
Speed	0,293	0,199	Once a swipe from each transaction	0,058
	0,220		No need to arrange money	0,044
	0,236		No need to count money	0,047
	0,250		Transaction time is faster	0,050
Security	0,278	0,212	There is evidence of transacon	0,059
	0,223		No risk of being robbed / stolen	0,047
	0,229		There is no risk of loss	0,049
	0,270		No risk of counterfeit money	0,057
Efficiency/ Practicality	0,223	0,232	No need to carry a lot of cash	0,053
	0,182		No change change	0,042
	0,230		Payment according to the number of transactions	0,053
	0,206		No need to take / deposit money in the bank	0,048
	0,159		Payment kevendor with non-cash	0,037
Value of Money	0,392	0,202	Awake not inflation	0,079
	0,323		Getting interest or services	0,065
	0,285		Possible prize draw	0,057
Government Program	0,428	0,155	Support the GNNT government program	0,066
	0,252		Cash circulation is reduced	0,039
	0,320		Multiplier of economic effects	0,049
Total	5,000	1,00	Total	1,000

The sub-factor of the government program is Supporting the GNNT Government Program. Sub-factors GNNT government program that has the greatest weight is 0.428 or 42.8%. The second sub-factor is Multiplayer Securities with a weight of 0.320 or 32.0% and the third sub-factor is Cash Circulation reduced by the weight of 0.252 or 25.2%.

CONCLUSION, SUGGESTION, AND LIMITATION

Based on this research, it can be concluded that the implementation of non-cash movement can be improved by considering the supporting potentials: (1) Speed, (2) Security, (3) Efficiency / Practice, (4) Value of money and (5) research done above is known that the main supporting factor that gets the highest priority is the efficiency or the practicality of 23%. Stakeholders can take into consideration the strategy of improving their non-cash implementation by promoting efficiency or practicality and striving to minimize the business environment of retail SMEs that are not yet supported. On the results of this study required a further study how to formulate a strategy for the implementation of non-cash transactions in Indonesia becomes greater.

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