

## Effect of E-Cash Payment E-Cash Acceptance Using Tam (Technology Receiving Model) To Non-Cash Transaction Intensity

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**ABSTRACT:** This article describes the view of the community towards electronic payment is growing today. Electronic payment is the latest alternative that simplify the public in making transactions. The purpose of this research is to see the effect of acceptance of e-cash payment system using Technology Acceptance Model to the intensity of non-cash transactions. This research is a quantitative research by using questionnaires for data retrieval. The results of this study indicate that the benefits and usefulness of e-cash applications make users tend to perform non-cash transactions. This research is useful for the development of e-payment in Indonesia.

**KEYWORDS:** E-cash, Technology Acceptance Model (TAM)

### I. INTRODUCTION

The rapid technological developments especially in the case of the Internet have made such rapid changes to modern commercial activity (Gu et al., 2016; Zhao et al., 2016). The ease of doing transactions is offered by banking companies. Currently, the popularity of cash began to decline replaced with electronic money. E-cash is one of the most popular e-money today. At Bank Mandiri Tbk, the number of e-cash users jumped 333% during 2016. The number of transactions increased 177% with the transaction value growing 158% (Prahadi, 2017). E-cash makes it easy for users to make payments of credit content, e-commerce, billing, fund transfers and toll fee payments in automatic toll booths. Another benefit of e-cash is to make it easier for users, especially children who do not have an account in the bank but want to do electronic transactions (Prahadi, 2017). Developments in the digital world of banking make researchers want to see user acceptance of electronic transaction applications and their intensity in performing electronic or non-cash transactions.

### II. LITERATURE REVIEW

The development of digitalization in the modern era makes things more practical and efficient. Competitive competition makes every company competing to provide the best for their customers. By generating new technologies or reorganizing existing technologies, companies can provide the best for consumers in the form of new applications in the financial industry (Tornatzky and Fleisher, 1990). Innovation in this technology certainly benefits innovators as well as users and benefits the market as a whole (Frame and White, 2004).

The era of digitalization also greatly affected the banking industry. Generally, digitization provides several opportunities for banks, such as increased customer interaction, improved management decisions, and enables improvements to the business model (Hirt & Willmott, 2014). This is what makes banking should quickly adapt to the changes in the era of digitalization.

In recent years, one of the banks in Indonesia issued a non-cash payment application known as e-cash. The existence of this e-cash application makes it easier for users or consumers to perform various non-cash transactions such as payment of pulses, electricity, fund transfers and payment of toll rates in automatic toll booths. Other uses of e-cash is to make it easier for users, especially children who do not have an account at the bank but want to do electronic transactions (Prahadi, 2017).

To analyze the behavior of users of information technology used Model Technology Acceptance Model (TAM) that has been used for the last four decades (Leiva et al, 2017). The TAM model was developed based on 'Theory of Reasoned Action' (Ajzen & Fishbein, 1980). The Technology Acceptance Model (TAM) method is used for the purpose of making predictions about the acceptance and use of new information technology systems and user adaptability (Davis et al., 1989).

### III. RESEARCH METHOD

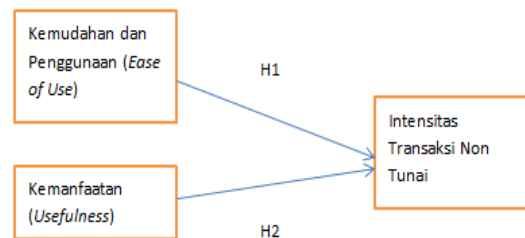
In this study use the benefit and usefulness indicator from model Technology Acceptance Model (TAM) developed by Davis et. al. (1989). The perception of ease of use is defined as the extent to which one believes that they will not experience distress or obstacles when using a particular system (Davis et al., 1989). There have been many previous studies using perception of ease. One of the studies using this perception is the research conducted by Park et. al (2014) show that ease perception has a positive impact on the attitude of mobile social networking gaming. The same is true of the research conducted by Ha et. al. (2007). Based on the theoretical basis and previous studies developed hypothesis as follows:

H1: Ease of use of e-cash application has a positive impact on the intensity of non-cash transactions.

Several previous studies have also explained the relationship of benefits to user attitudes (Leiva et al, 2017, Aboelmaged & Gebba, 2013; Krishanan et al, 2016). The same is also explained in previous research on the intensity to use (Kulvivat et al 2007, Zhang & Mao, 2008). Based on the theoretical basis and previous studies, the following hypotheses are formed:

H2: User e-cash user experience has a positive impact on the intensity of non-cash transactions.

Based on the hypothesis that developed a research framework that is supported in Figure 3.1.



Gambar 3.1. Kerangka Penelitian

This research is a quantitative research using Technology Acceptance Model (TAM) questionnaire. Model Technology Acceptance Model (TAM) in this study using instrument Davis et al (1989). The TAM indicators used in this study are usefulness and benefits.

Respondents in this study are all people (Students, students, employees and employers) who ever use e-cash application in conducting non-cash transactions. The total respondents in this study were 125 people. The Technology Acceptance Model (TAM) indicators of benefit and usefulness each have three question indicators measured by Likert scale. Indicators for the intensity of non-cash transactions also have three question indicators. This study uses Partial Least Square (PLS) to test the hypothesis.

### IV. FIGURES AND TABLES

Information of 125 respondents of e-cash users regarding job and gender is completely explained in table I.

Table I. Profile of Respondents

	N	%
Gender:		
Man	58	46,4
Women	67	53,6
Job :		
Student	1	0,8
College Student	26	20,8
Employee	95	76
Businessman	3	2,4

Based on the profile, respondents can see better by 53.6% percentage. Related parties for online transactions. In the profile section, respondents know that students who use e-cash are still low. This shows the function of e-cash to help students who do not have an account at the bank doing non-cash transactions has not been successful. Banking in this case should conduct an intensive e-cash campaign to the students to achieve the desired goals. Users of e-cash applications by students and employees. Students and employees use e-cash for online transactions and credit purchases.

The first test that needs to be done before doing hypothesis testing is the reliability and validity testing of the questionnaire data. The technique used in this test is composite reliability technique. A measuring instrument is said to be reliably if the reliability coefficient is greater than 0.7 (Ghozali, 2008: 43). The full reliability test is described in Table II. Table II explains that the AVE value of each indicator is greater than 0.5. Based on the statistical data in table II can be concluded that the variables used are valid and reliable.

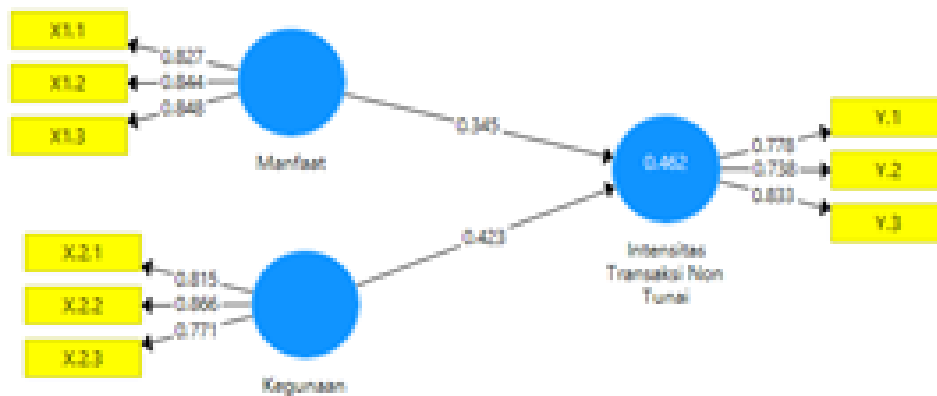
**Table II. Outer Loading dan Average Variance Extracted**

		Outer Loading	Reliability	AVE
X1.1	The existence of e-cash makes it easy for me to transact on non-cash services available	0,827	0,878	0,705
X1.2	Trading using e-cash can add my transaction quality	0,844		
X1.3	Transacting using e-cash helps me in transaction effectiveness	0,848		
X2.1	E-cash payment system is very easy to learn	0,815	0,858	0,670
X2.2	E-cash payment system is very easy to use	0,866		
X2.3	The e-cash payment system can be easily used on all non-cash transaction services	0,771		
Y.1	I mostly do non-cash transactions with e-cash	0,778	0,827	0,615
Y.2	I will do Top-Up balance e-	0,738		

cash if it is  
up  
Y.3 I will 0,833  
continue to  
use e-cash in  
all non-cash  
transactions

The hypothesis proposed in this research will be tested by using Structural Equation Model (SEM) model with Partial Least Square (PLS) analysis. Analysis of PLS is done with the help of software smartpls 3. Results of hypothesis testing shown in Figure 1.

Figure 1. Hypothesis Test Results



To see the direction of the results of the hypothesis can also be seen in table III.

Table III. Hypothesis Result

	Standard Deviation (STDEV)	T Statistics	P Values
Usefulness-> ITNT	0,087	4,845	0,000
Benefit-> ITNT	0,092	3,757	0,000

Based on Figure 3.1 and Table III it can be seen that usability has a positive effect on the intensity of non-cash transactions. This is indicated by the value of the path coefficient is positive value of 0.423 and p-value <0.001. This indicates that H1 is accepted. The usefulness of the e-cash application makes users more likely to return to non-cash transactions.

Based on drawings and tables it can be seen that the benefits have a positive effect on the intensity of non-cash transactions. This is indicated by a positive value coefficient value of 0.345 and p-value <0.001. This indicates that H2 is accepted. Benefits received from e-cash applications make users more likely to re-conduct non-cash transactions.

V. CONCLUSION

The purpose of this research is to see consumer acceptance of e-cash application which is development done by banking. Current e-payment transactions facilitate all payment processing or transactions and the existence of e-cash applications make non-cash transactions more favorable by consumers or users. The results of this study indicate that e-cash application can increase the intensity of non-cash transactions. The suggestion for further research is to add some other indicators of the Technology Acceptance Model (TAM).

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