The Influence of Usefulness, Adequacy of Information, and Perceived Risk of Electronic Money Brizzi Adoption in Banda Aceh – Indonesia

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Abstract

The objective of research is to investigate the influences of usefulness, the adequacy of information, and perceived risk on the electronic money adoption Brizzi in Banda Aceh. The object of this study is Bank customers in Banda Aceh city who use e-money services of which consist of 100 persons. The research employs purposive sampling method and taken by using Slovin’s formula. This field survey based research is mainly based on primary data obtained directly from a closed questionnaires distributed to respondents. The data collected are analyzed by using multiple regression method with SPSS software. The results of this research show that usefulness, the adequacy of information, and perceived risk have a significant influence on the electronic money adoption Brizzi in Banda Aceh, either tested partially or simultaneously.

Keywords: money, electronic money adoption, usefulness, adequacy of information, and perceived risk.

Introduction

The present technological development has been emerged in various fields in Indonesia, so that the activities of the community today cannot be separated from the use of technology. To follow the development of this technology, various business activities have transformed itself into a modern company that uses technology in it, such as banking. Banking whose basically provides services to customers has continued to create the latest innovation by creating a variety of alternatives in form of information technology. The latest payment instrument has become an issue is a non-cash payment instruments, namely electronic money (e-money).

According to Wapada (2012, p. 123), non-cash payments provide usefulness to the economy, among others: the level of customer satisfaction is increasing with lower transactions costs, the existence of sources of revenue for non-cash payments service provider, increased transaction speed, economic growth, and prosperity level. However, the use of electronic means of payment can also increase the risks for the economy and payment systems, among others: increased the risk of default (negligence), especially on the credit card instruments (and credit cards).
Although many banking and telecommunications issue e-money, but not all of them can be found in Banda Aceh. One of e-money products emerging in Banda Aceh is Brizzi. Brizzi is a new product from BRI Bank, in the form of electronic money that can be used as a substitute for cash payments and can be recharged if the balance is less or has run out. Brizzi as a means of payment can be used for shopping at some merchants who have cooperated with BRI and has Brizzi logo and was launched in London in 2013 (aceh.tribunnews.com).

Currently carrying cash in large amounts without police escort is so dangerous that could trigger robberies as experienced by Rahmat Ismail Kurniadi, when he had taken the money at BRI Branch of Banda Aceh. The robber stalked the victim, when the unsuspecting victim offender took the bag containing cash from the trunk of a car belonging to the victim (ajnn.net). According to Budi Nugroho Tri, BRI deputy leader of the Banda Aceh region, Brizzi is much safer for the robbery because robbery is more vulnerable to people who carry cash (aceh.tribunnews.com). In Banda Aceh, people are still accustomed to using cash so that payments with e-money have not been regarded as a necessity.

This study used usefulness, the adequacy of information, and the perception risk as the parameters in adopting this e-money. Advantages is one of the factors that can motivate customers to take advantage of e-money, customers who are getting interested will try to find information about e-money that will be used so that the adequacy of information has been very important for consideration before someone decides to use it. Another factor that has become the problem is also the public perception of the risks that occur when using e-money, something related to the security of transactions and other risks that concern the community.

Research conducted by Waspada (2012) in Bandung, which stated that, the usefulness and adequacy of information very effectively influences the frequency level of the use of e-money transactions. The research conducted by Sigar (2016) in Manado which states that the usefulness positive and significant impact on the intention to use e-money.

**Literature Review**

**Electronic Money Adoption**

Definition of e-money refers to the definition issued by the Bank for International Settlements (BIS) in one of its publication in October 1996 which is stored-value products or prepaid where the amount of the value of money is stored in an electronic media owned by someone (Hidayati et al., 2006, p. 4).

Bank Indonesia Regulation No.11 / 12 / PBI / 2009 on Electronic Money explains e-money as a payment instrument that satisfies the elements as follows: issued on the basis of the value of money paid in advance by the holder to the issuer, the value of money stored electronically in a medium such as a server or chip, used as a means of payment to merchants that is not the issuer of the electronic money and electronic money value paid by shareholders and managed by the issuer do not represent deposits as defined in the laws regulating the banking sector.

Electronic money adoption or use of e-money is the intensity transactions demonstrate actual use of customers or users of e-money for shopping. The use of e-money by the customer indicated by transactions using e-money, how often customers make transactions using e-money services and the intensity of the customers in using e-money depending on the purpose of each customer (Waspada, 2012).
Usefulness
Davis (1989, p. 320) defines the perception of the usefulness as the extent to which a person believes that using a technology will improve his performance. The easier performance made can usefulness the users, so that will be used in each possible payment. If e-money has usefulness required by the customer, so the more often customers will use e-money (Anendro, 2016). Usefulness is a matter that can be useful and bring good effects for someone using e-money.

As we know that in terms of practicality, e-money is more practical, quick and efficient usage compared to the use of paper money and other types of payments. So the usefulness is there in this type of payment predicted may predispose a person to use it. The more the perceived usefulness the more it will affect its use. Previous research conducted by Sigar (2016) and Millani et al, (2013), the results suggest that usefulness influence the use of e-money.

Adequacy of Information
Waspada (2012) in his research stating the adequacy of information indicates the amount of information owned by the user is associated with e-money products. The adequacy of information to the user gives an overview on all matters concerning the e-money, so that this information can encourage the use of e-money. Generally, people will use a product in this case is e-money if they know a lot of information related to the product. The amount of information gained will affect the use of e-money, because the adequacy of the information is important to give confidence to the user to use it. Previous research conducted by Waspada (2012) and Yudhistira (2014), the results suggest that the adequacy of information influence the use of e-money.

Perceived Risk
Perceived risk, according to Yudha (2015) is a negative perception of the consumers on a number of activities that are based on negative results making it possible that the results could be real. Risk is an uncertain situation considered by ones to decide or not to conduct online transactions. People really consider the distance and impersonal atmosphere (fair) in online transactions and global infrastructure which contain an element of risk (Amijaya, 2010). When the risk is more dominant than the trust, the customer does not intend to use e-money and when the risks that will be experienced are smaller, the greater the trust of customers to use e-money. Therefore, the perceived risk gives such an effect to the adoption of e-money. Previous research conducted by Khatimah & Halim (2014) and Yudha (2015), the results suggest that perceived risk influence the use of e-money. Based on the critically review the previous researchs, it can be formulated the research theoritical framework as shown on the following Figure 1.

![Figure 1. Theoretical framework.](image-url)
Hypothesis

H$_1$: Usefulness, adequacy of information and perceived risk influence the adoption of electronic money simultaneously.

H$_2$: Usefulness partially influences the adoption of electronic money.

H$_3$: Adequacy of information partially influences the adoption of electronic money.

H$_4$: Perceived risk partially influence the adoption of electronic money.

Research Method

Population and Sample

Population refers to a whole group of people, events, or interests that the researcher wants to investigate (Sekaran & Bougie, 2013, p. 240). The population in this study are all customers of BRI Bank in Banda Aceh under characteristics of using e-money cards Brizzi. Total population in this study are 8530 Brizzi active users around the community, effective until November 2016 branch office of Banda Aceh. Samples taken by purposive sampling. Determination of the number of samples in this study is based on Slovin formula resulting in 98.8 rounded to 100 respondents.

Sources and Data Collection Techniques

The data used in this study are primary data. Primary data is data obtained through direct research to the respondents by distributing questionnaires (Sekaran & Bougie, 2013, p. 113). Data collection techniques in this research are conducted through field research that conducts direct research to the research object. Collecting data by questionnaires will be measured by using a Likert scale.

Variable Operationalization

Electronic money Adoption (Y)

Electronic money adoption is the intensity of the transaction showing actual usage customers or users of e-money for shopping. Adoption of electronic money measured by indicators of the intensity of use, using habits, the desire to continue using, and the desire to recommend (Quthbi, 2016).

Usefulness (X1)

Thompson et al. (1991; 1994) in Nasution (2004) suggests that the usefulness of TI is the usefulness expected by users of TI in performing their duties. The indicators will be used to measure the usefulness perception, i.e. speed of transaction, practicality of the transaction, and the risk of miscalculation when using cash transactions (Quthbi, 2016).

Adequacy of Information (X2)

According Waspada (2012), the adequacy of the information indicates the amount of information that the user has with regard to e-money products. Adequacy can be measured by the amount of information obtained and understood from various sources such as electronic media, print or from conversations and discussions daily (Quthbi, 2016).

Perceived Risk (X3)

Perceived risk is something related to security, in which the greater level of security as well as the risk avoidance when using e-money can predispose a person to use it. The variable perceived risk is measured by using indicators of the magnitude of the risk, transaction security, and the need of transaction and security requirements of banks (Amijaya, 2010).

Analysis Method

The research employs a multiple linear regression equation as follows:

$$ Y = a + b_1X_1 + b_2X_2 + b_3X_3 + e $$
Description:
\( Y \) : Electronic money adoption
\( X_1 \) : Usefulness
\( X_2 \) : Adequacy of information
\( X_3 \) : Perceived risk
\( a \) : Constant
\( b \) : Regression Coefficient
\( e \) : error term

Results and Discussion

Descriptive Statistic Test

Table 1. Descriptive statistic test result

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manfaat</td>
<td>100</td>
<td>2,00</td>
<td>5,00</td>
<td>3,9400</td>
<td>.66867</td>
</tr>
<tr>
<td>Kecukupan Informasi</td>
<td>100</td>
<td>1,00</td>
<td>5,00</td>
<td>3,4500</td>
<td>.64842</td>
</tr>
<tr>
<td>Persepsi Risiko</td>
<td>100</td>
<td>1,00</td>
<td>5,00</td>
<td>3,6750</td>
<td>.69039</td>
</tr>
<tr>
<td>E-Money Adoption</td>
<td>100</td>
<td>1,75</td>
<td>5,00</td>
<td>3,7400</td>
<td>.74189</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Primary Data (2017)

Based on Table 1, it can be seen the value of the minimum, maximum, average, and standard deviation for each variable with a sample size of 100 respondents

Classical Assumption Test

Normality Test

Table 2. One-Sample Kolmogorov-Smirnov Test

<table>
<thead>
<tr>
<th></th>
<th>100</th>
<th>Unstandardized Residual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal Parameters a,b</td>
<td>Mean</td>
<td>0.000000</td>
</tr>
<tr>
<td></td>
<td>Std. Deviation</td>
<td>.5433832</td>
</tr>
<tr>
<td>Most Extreme Differences</td>
<td>0.103</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Positive</td>
<td>0.103</td>
</tr>
<tr>
<td></td>
<td>Negative</td>
<td>-.079</td>
</tr>
<tr>
<td>Kolmogorov-Smirnov Z</td>
<td>1.029</td>
<td></td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td>.240</td>
<td></td>
</tr>
</tbody>
</table>

\*\*a. Test distribution is Normal. \*\*b. Calculated from data.

From the output above it can be seen that the significance value (Asymp.Sig 2-tailed) is 0.240. Because of the significance value is more than 0.05 (0.240 > 0.05), then the residual value is said to be normal.
Multicollinearity Test

Table 3. Multicollinearity Test Variance Inflation Factor (VIF) Value

<table>
<thead>
<tr>
<th>Model</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tolerance</td>
</tr>
<tr>
<td>(Constant)</td>
<td>.501</td>
</tr>
<tr>
<td>Usefulness</td>
<td>.503</td>
</tr>
<tr>
<td>Enough information</td>
<td>.540</td>
</tr>
<tr>
<td>Risk perception</td>
<td>.503</td>
</tr>
</tbody>
</table>

The Tolerance Values for all independent variables were above 0.10, and VIF (Variance Inflation Factor) independent variables nothing is above 10. Thus, the data concluded that no symptoms of Multicollinearity.

Heteroscedasticity Test

![Scatterplot](image)

**Figure 2.** Heteroscedasticity with Scatterplot graphic.

Based on the above test results, the scatterplot shows that the point spread above and below the Y-axis, and does not have a regular pattern. So we can conclude independent variables above are free from homoscedasticity.
Hypothesis Testing Results

T-Test Results

Table 4. Outcome of Multiple Linear Regression.

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>.528</td>
<td>.359</td>
<td>1.471</td>
</tr>
<tr>
<td></td>
<td>Usefulness</td>
<td>.295</td>
<td>.117</td>
<td>.266</td>
</tr>
<tr>
<td></td>
<td>Enough information</td>
<td>.280</td>
<td>.116</td>
<td>.245</td>
</tr>
<tr>
<td></td>
<td>Risk perception</td>
<td>.294</td>
<td>.113</td>
<td>.274</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0,681a</td>
<td>0,464</td>
<td>0,447</td>
<td>0,55176</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Usefulness, Adequacy of Information and Perceived Risk
b. Dependent Variable: Electronic Money Adoption

Sources: Primary Data Processed (2017)

Based on the output of SPSS, it can derive multiple regression equation as follows:

\[ Y = 0,528 + 0,295X1 + 0,280X2 + 0,294X3 + e \]

According to Table 5, the value of t-test of usefulness is 2,520, while the t-table value of 1.98. It means that the usefulness have an influence on the electronic money adoption. T-count value is equal to 2.408 for adequacy of information, while the t-table value of 1.98, it means that, the adequacy of information influences the electronic money adoption. And t-count value of perceived risk is 2,598, while the t-table value is 1.98. It infers that the perceived risk has an influence on the electronic money adoption.

F-Test Result

Table 5. Simultaneous Test Result.

ANOVA

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Regression</td>
<td>25,264</td>
<td>3</td>
<td>8,421</td>
<td>27,661</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>29,226</td>
<td>96</td>
<td>.304</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>54,490</td>
<td>99</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Persepsi Risiko, Kecukupan Informasi, Manfaat
b. Dependent Variable: E-Money Adoption

Source: Primary Data Processed(2017)

From the above table, it can be seen the test results for usefulness of (X1), the adequacy of information (X2), and the perception of risk (X3) indicates the value of the F-count equal to 27.661. While the value of F-table is 2.699. This shows that the F-count> F-table so that means usefulness(X1), the adequacy of information (X2), and the perceived risk (X3) significantly and simultaneously influence the electronic money adoption (Y) Brizzi in Banda Aceh.
Discussion

The Influence of Usefulness on the Electronic Money Adoption Brizzi in Banda Aceh

Based on the results of multiple regressions, regression coefficients showed that usefulness affect the electronic money adoption of Brizzi in Banda Aceh. This is consistent with the hypothesis that has been made, i.e. the usefulness affect the electronic money adoption Brizzi in Banda Aceh. The results of this study are in accordance with all the results of previous studies referenced in this research, such as the research conducted Millani et al., (2013) and Sigar (2016).

Influence of Electronic Money Adequacy against Adoption Information Brizzi in Banda Aceh

Based on the results of multiple regression, regression coefficient indicates that the adequacy of information influence the adoption of electronic money Brizzi in Banda Aceh. This is consistent with the hypothesis that has been made, the adequacy of information influences the adoption of electronic money Brizzi in Banda Aceh. The results are consistent with previous research conducted by Quthbi (2016) and Waspada (2012).

The Influence of Perceived Risk on the Electronic Money Adoption Brizzi in Banda Aceh

Based on the results of multiple regression, regression coefficient indicates that the adequacy of information influence on the adoption of electronic money Brizzi in Banda Aceh. This is consistent with the hypothesis that has been made, the adequacy of information influences the adoption of electronic money Brizzi in Banda Aceh. The results are consistent with previous research conducted by Quthbi (2016), Waspada(2012), and Amijaya (2010).

Conclusions

1) Usefulness significantly influences the electronic money adoption Brizzi in Banda Aceh. It means that usefulness derived from using e-money is good enough to predispose a person to use it.

2) Adequacy of information significantly influences the electronic money adoption Brizzi in Banda Aceh. This means that the information gives an enough effect to a person to use e-money.

3) Perception of risk significantly influences the electronic money adoption Brizzi in Banda Aceh. This means that the absence of risk obtained when using e-money is good enough to encourage someone to use it.

4) Usefulness, the adequacy of information, and the perceived risk significantly and simultaneously affect the electronic money adoption Brizzi in Banda Aceh. This means that electronic money adoption Brizzi on the usefulness, adequacy of information, and perceived risk has already been good enough.

This study only tested three variables on the Brizzi users in using e-money, i.e. the benefit, the adequacy of information and perceived risk. Some other variables that may affect the electronic money adoption are not included in this study. The object of research is only on Brizzi users in Banda Aceh, and is not examined to all e-money issuer. So the results cannot be generalized for the entire e-money issuer.

This study uses primary data or using a questionnaire to obtain data. The problem of subjectivity and the seriousness of the respondents in filling out questionnaires are the things that cannot be controlled by the researcher. Moreover, the questionnaire distributed through online, so that the respondent's identity could not be ascertained properly in accordance with the target respondents expected in this study.

For the research appeared to be more representative, it is expected that the further research can increase the number of respondents, expand and enlarge the scope of
future research in order to have a broader scope and produce better research results, and also add the research objects, not only on Brizzi.

Bank should also continue the development of the e-money, so as to minimize the risks that may occur from the system. The bank's clients who use the facility of e-money, particularly in the region of Banda Aceh should always selective in using online banking facilities, such that the e-money.

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