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The Role of Bank BRI's BRILink Digital Services to MSME Business Development in Palembang Using the UTAUT Approach

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Abstract

The BRILink application for the BRI Bank Palembang office is a Mini ATM service provided by Bank BRI for MSME businesses in Palembang. In its implementation, the BRILink application has never evaluated whether the system created follows user expectations or vice versa. This evaluation needs to be done to find out, pay attention and determine the next steps necessary for the developer to develop a better BRILink application according to user needs. This research was conducted using the UTAUT approach and quantitative methods by distributing questionnaires, validity testing, reliability testing, descriptive testing, and normality testing. Other methods, such as multi-collinearity, heteroscedasticity, auto-correlation, partial correlation, coefficient of determination, simultaneous significance, and individual parameter significance, also apply. The results showed three (3) variables that proved to be partially clear performance expectations, social influence, and facility conditions. Only one variable had no effect, namely the business expectation variable. And all variables simultaneously influence the interest in using the BRILink application.

Keywords

BRILink application, UTAUT, the role of digital services, acceptance, utilization, evaluation.

Introduction

By launching the BRILink application, Bank BRI pioneered branchless banking. Because it uses the existing internet network and information technology, the BRILink application is part of the BRI digital banking product as a real-time online banking transaction medium with a more comprehensive area coverage. This study will examine how the BRILink application is used in Palembang, specifically as a mini-ATM transaction method for MSMEs. According to MSME research, using and utilizing technology is still a significant issue for MSMEs (Mawuntu & Aotama, 2023).

The primary purpose of using technology is to make every transaction easier. Unfortunately, this facility is underutilized by businesspeople and their customers in Indonesia. Meanwhile, MSMEs are an essential factor in a country's economy. Because the MSME sector can

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stimulate economic growth and create jobs, it can be said that it can help to maintain financial stability (Department of Economic and Social Affairs, 2019).

The authors researched the level of user acceptance of the BRILink application at Bank Rakyat Indonesia in this case study. According to the case study above, one method of user acceptance of technology is the Unified Theory of Acceptance and Use of Technology (UTAUT) method is also used by Alshami et al. (2022) in their research. The UTAUT model is used because it is the most recent model and is thought to be superior to the previous similar model, TAM.

Using the UTAUT method, efforts should determine what acceptance factors can influence users using the Palembang Regional Office's BRILink application.

Business development is the business's effort to grow and reach a point or peak of success. Companies that have already begun to be processed and have the potential for further progress carry out business development. Increased sales turnover necessitates business development (Islam Siarno, 2019).

The UTAUT model is utilized since it is the most recent model and is considered superior to the previous equivalent, TAM (Liao et al., 2018). This viewpoint is supported by (Williams, Rana, & Dwivedi, 2015), who discovered that UTAUT is highly resilient despite being translated into several languages and utilized across cultures. The UTAUT paradigm uses behavior, performance expectations, effort expectancy, social influence, and enabling circumstances as direct drivers of behavioral intention. Moreover, four moderators are in place to restrict the effect of the dimensions on behavioral intention and use behavior, namely gender, age, experience, and voluntariness of use (Liao et al., 2018). The resulting UTAUT model is shown in Figure 1.

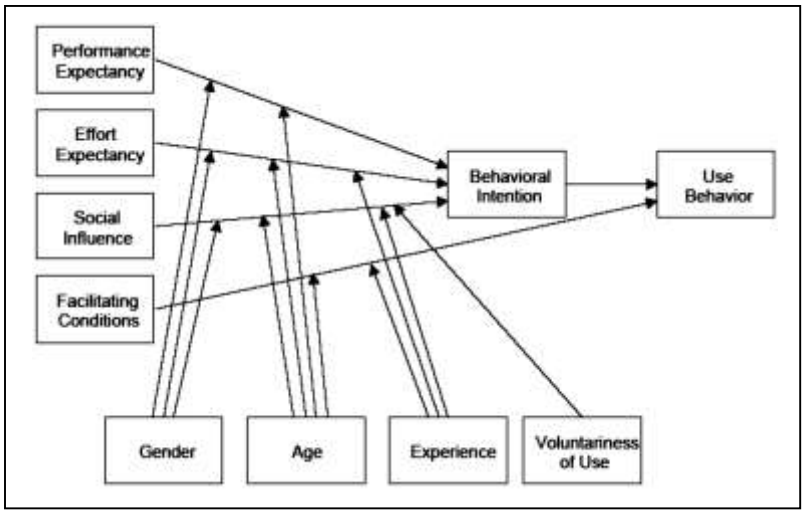

Figure 1. UTAUT model.

The study by Handayani & Sudiana (2017) uses a model as a theoretical framework, namely UTAUT, used in an Academic Information System (SIAkad). UTAUT model used in their study has been modified to follow the scope of the research.

The study by (Nassuora, 2013) and (Alshami et al., 2022) excluded all moderator variables. They argue that these variables do not have too much influence because the research object tends to be homogeneous in the four moderator variables. The research is a different cross-sectional study from UTAUT, developed through longitudinal research. Research by Marchewka & Kostiwa (2014) found that gender and age did not affect the relationship between the four determinant constructs on behavior control, as shown in Figure 2.

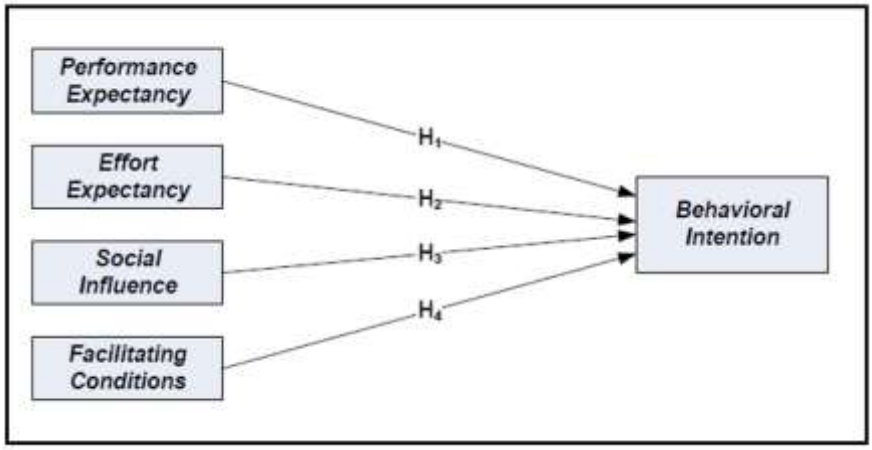

Figure 2. Research model

Based on this, efforts must determine what acceptance factors influence users to use the BRILink application to create MSMEs in Palembang using the UTAUT method.

Amalia et al. (2018) researched Factors Influencing Customer Interest in Using Mobile Banking Services Using the UTAUT Method (Study on BRI KCP Mobile Banking Users, Brawijaya University). The results of this study indicate that several factors, namely, influence the interest of someone in using BRI mobile banking services.

Furthermore, Perceived Credibility (PC) does not affect a person's interest in using BRI mobile banking services. In this study, it can be concluded that the Performance Expectancy variable is the strongest predictor that determines a person's interest in using the service compared to other predictors.

Wahyuningsih, W.A, & Sudarmawan (2021) do research entitled Evaluation of Mandiri Online Mobile Application Acceptance of Customer Interests Using the UTAUT II Method. The results of the study are:
1) Overall, performance expectancy, price value, Mandiri Mobile Banking's habits, and facilitating conditions have had positive results (accepted) and influence customer behavior intention. On the other hand, it is inversely proportional to effort expectancy, social influence, and hedonic motivation, which gets a negative response (rejected) from the customer behavior intention side.
2) The results of habit, facilitating conditions, and behavioral intention to use Mandiri online behavior together is enough to influence 40.9% of the Solo branch. In contrast, the remaining 49.1% are influenced by other variables not included in this study.

Methodology

The research method is a scientific method of gathering data for specific purposes and applications. Because the research that will be studied asks respondents, in this case, BRILink application users, the type of research used in this research is quantitative with the kind of survey research. Data research aims to test established hypotheses using quantitative/statistical methods (Sugiyono, 2014). Figure 3 depicts the quantitative research process.

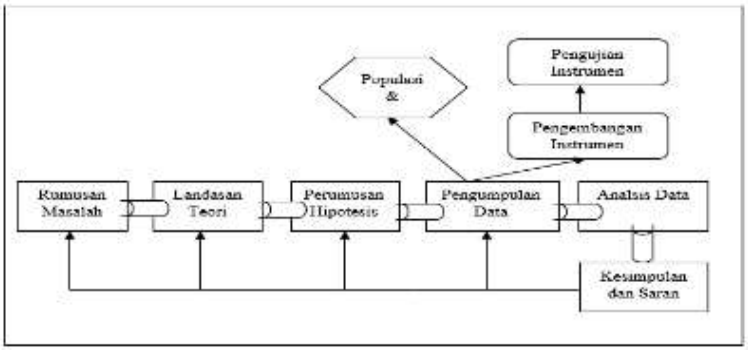

Figure 3. Quantitative Research Process (Sugiyono, 2014)

Research Paradigm

The following is the research paradigm using variables from the UTAUT model, described in figure 4.

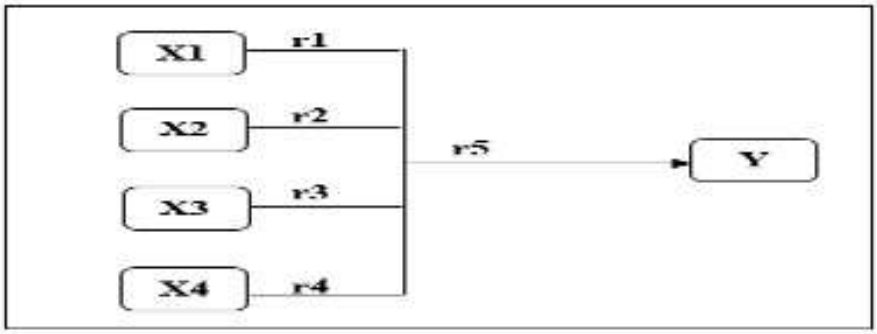

Figure 4. Research paradigm

Four independent variables exist (*X*1, *X2, X3*, *X4*) and one dependent variable in the above paradigm (*Y*).

The Population and the Research Sample

For all MSME users of the BRIlink program in Palembang, the sample size was estimated using the Slovin technique with a margin of error of 5%. The Slovin Method has used this research based on Adhikari (2021):

$$n = \frac{N}{N * (d^2) + 1} \qquad \text{Eq. (1)}$$

Thus, each sample for application users must be proportional to the population. Based on the following calculation method, the number of samples for the user group is as follows:

$$\text{KC Palembang A.Rivai EDC} = \frac{585}{2.842} x\ 351 = 72$$

$$\text{KC Palembang A.Rivai BRILink Mobile} = \frac{822}{2.842} x\ 351 = 102$$

$$\text{KC Palembang Sriwijaya EDC} = \frac{352}{2.842} x\ 351 = 43$$

$$\text{KC Palembang Sriwijaya BRILink Mobile} = \frac{1083}{2.842} x\ 351 = 134$$

The number of samples = 72 + 102 + 43 + 134 = 351. The number of fractions can be rounded up, so the number of samples becomes = 351. Table 1 shows the research samples used in this research.

Table 1. Research Sample

KC Palembang A.Rivai EDC	KC Palembang A.Rivai BRILink Mobile	KC Palembang Sriwijaya EDC	KC Palembang Sriwijaya BRILink Mobile	Population	Sample
582	822	352	1083	2482	351
KC Palembang A.Rivai EDC					72
KC Palembang A.Rivai BRILink Mobile					102
KC Palembang Sriwijaya EDC					43
KC Palembang Sriwijaya BRILink Mobile					134

Research Instrumentation Test

The sample in this research's validity and reliability test is 20 people as active users of the BRIlink application in Palembang.

a. Validity Test

According to Siregar (2018), validity refers to how well a measuring instrument can measure what it is supposed to measure (a valid measure if it successfully measures the phenomenon). Many criteria may be utilized in Siregar's (2018) research to establish whether the concept employed is legitimate.

The following formula was used to test construct validity using the product moment correlation technique:

$$R_{count} = \frac{n(\Sigma XY) - (\Sigma X)\ (\Sigma Y)}{\sqrt{[n(\Sigma X^2) - (\Sigma X^2)]\ [n(\Sigma Y^2) - (\Sigma Y^2)]}} \quad \text{Eq. (2)}$$

Calculating the *rtable* value with $n = 25$, $\alpha = 0.05$

The value of $r(0.05 , 25\text{-}2)$ from the product moment table = 0.413
The product moment table can be seen in the attachment.

where:

Df = *n* – 2, *the number of samples utilized in the study is denoted by n.*
Df = 25 – 2
Df = 23, *Df* = 23 is obtained, and the *rtable* value is 0.413.

b. Reliability Test

The degree to which measurement findings stay consistent after being performed twice or more for the same symptoms using the same measuring equipment (Siregar, 2018). The Cronbach-Alpha formula was used to perform the reliability test. One of the formulas that can be used to test data reliability is the Cronbach-Alpha formula.

The requirements for a research instrument are deemed dependable if the reliability coefficient (r11) is more than 0.6. The stages of calculating the reliability test using the Alpha Cronbach technique, namely:

1. Calculate the variance value for each question item.

$$\sigma_1^2 = \frac{\Sigma X_i^2 - \frac{(\Sigma X_i)^2}{n}}{n}$$

Eq. (3)

2. Determine the total variance value.

$$\sigma_t^2 = \frac{\Sigma x^2 - \frac{(\Sigma x)^2}{n}}{n}$$

Eq. (4)

3. Determine the reliability of the instrument.

$$\sigma_t^2 = \frac{\Sigma x^2 - \frac{(\Sigma x)^2}{n}}{n}$$

Eq. (5)

The reliability test's decision-making premise is:

1. 0.80-1.0, then the reliability is said to be good.
2. 0.60-0.799, then the reliability is acceptable.
3. Less than 0.60, the reliability is said to be poor.

From the calculations made on the performance expectation variable, the value of r_{11} is 0.762. Because the value of $r_{11} = 0.762 > 0.6$, it can be concluded that the research instrument for the variable performance expectations is stated to be reliable. The reliability test was also carried out using SPSS 23.0 software to increase the accuracy of the test results, as shown in Table 2.

Table 2. Reliability

Cronbach's Alpha	*N* of items
0.762	5

With the same formula, a reliability test was carried out on the research instrument having a reliability value more significant than the specified value, 0.6. Thus, it can be concluded that all question instruments are declared reliable.

Results and Discussion

Data Analysis

a. Descriptive Test

Descriptive tests describe data statistics such as min, max, mean, standard deviation, range, etc.

1. Mean

1.1 Mean Formula

$$X = \frac{\sum_{i=1}^{n} X_i}{n} \quad \text{Eq. (6)}$$

The calculation result is based on Eq (6), as shown in Table 3.

Table 3. Results of Mean Calculation

Variable	Mean
Performance Expectation (X1)	4,786894587
Business Expectations (X2)	4,716524217
Social Influence (X3)	4,681623932
Facility Condition (X4)	4,613960114
Behavioral Intention (Y)	4,703703704

1.2 Interval Class

$$IC = \frac{Range\ (R)-1}{Category\ (C)} \quad \text{Eq. (7)}$$

where:

IC = Interval Calss
Range (*R*) = High score – Low Score
Category (*C*) = is the number of criteria arranged in the objective measures of a variable = 5

$$IC = \frac{5-1}{5} = 0.8$$

From the calculation above, the result of the interval class is 0.8. Table 4 is a summary of descriptive test calculation results. Thus, the following is a summary table of the descriptive mean (average) test calculation results.

Table 4. Summary of Descriptive Test Calculation Results

Variable	Mean	Description
PE	4,0297	Agree
EE	3,9578	Agree
SI	3,8792	Agree
FC	4,0697	Agree
BI	3,9804	Agree

From Table 4, it can be concluded that the results of the mean descriptive test calculation of respondents consisting of MSMEs active users of the BRILink application in Palembang, on average, stated that they strongly agreed with all question items

2. Standard Deviaton Formula

$$S = \sqrt{\frac{\sum_{i=1}^{n}(X_i - X)^2}{n-1}}$$

Eq. (8)

The calculation result is based on Eq (8), as shown in Table 5.

Table 5. Standard Deviation Calculation Results

Variable	Standard Deviation
PE (X1)	0,42
EE (X2)	0,50
SI (X3)	0,51
FC (X4)	0,58
BI (Y)	0,55

The analysis table includes the average, standard deviation, minimum, maximum, and total scores. The following is a picture of the results of data analysis for each construct, as shown in Table 6.

Table 6. Descriptive Test Results with SPSS 23.0 Tools

	N	Minimum	Maximum	Mean	Std. Deviation
PE	391	1.00	5.00	4.0297	0.54060
EE	391	1.50	5.00	3.9578	0.58382
SI	391	1.50	5.00	3.8792	0.53224
FC	391	1.50	5.00	4.0697	0.55537
BI	391	1.67	5.00	3.9804	0.56881
N (listwise)	391				

b. Classic Assumption Test

The regression method usually found several problems. Therefore, to detect whether there is a regression problem in this study, a classical assumption test is performed.

1. Residual Normality Test

The regression model's normality test determines if the regression's residual values are normally distributed. The residual values in a suitable regression model are regularly distributed (Priyatno, 2014). This study used the analysis and histogram plot methods, as shown in Figure 4.

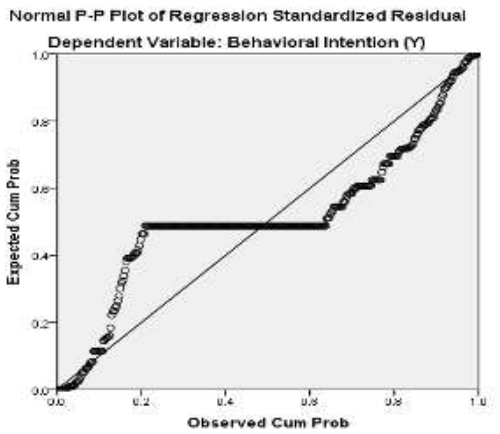

Figure 4. Normality Test with the Graphical Method

As seen in the visual depiction above, the dots spread along the line and follow the diagonal line. As a result, the residual values can be assumed to be regularly distributed.

2. Multi-Collinearity Test

The regression model's independent variables have a perfect or nearly perfect linear connection, called multi-collinearity (high correlation coefficient or even 1). A good regression model doesn't need a perfect or near-perfect correlation between the independent variables (Priyatno, 2014). Table 7 shows the analytical approach employed in this study, which looked at the regression model's tolerance value and inflation factor (VIF).

Table 7. Result of Multi-Collinearity Test

Model	Unstandardized Coefficient		Standardized Coefficient	*t*	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
Constant	-.194	.175		-1.106	.270		
PE (X1)	.494	.067	.373	7.400	.000	293	3..417
PE (X2)	-.069	.053	.063	-1.299	.195	318	3.146
SI (X3)	.271	.062	.251	4.528	.000	242	4.132
FC (X4)	.344	.049	.363	6.954	.000	273	3.563

Table 7 shows that the tolerance value for the four variables is greater than 0.10, and the VIF is less than 10, indicating no multi-collinearity between the independent variables.

3. Autocorrelation Test

The correlation between members of observations arranged by time or place is known as autocorrelation. A good regression model should not have autocorrelation (Priyatno, 2014). The Durbin-Watson test technique was employed for analysis in this study (DW Test).

The Durbin-Watson statistical tables can be used to calculate DU and DL values. Table 8 shows the results of the autocorrelation test using the Durbin-Watson test technique (DW Test).

Table 8. Result of the Autocorrelation Test

Model Summary [b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.962[a]	.743	.740	.28381	1.985

a. Predictors: (Constant), X4, X1, X2, X3

b. Dependent Variable: Y

With n = 391, and k = 4, the values for DL = 1.81834 and DU = 1.84933 are obtained. So the value of 4-DL = 2.18166 and 4-DU = 2.15067. From the output above, it shows the Durbin-Watson value is 1.951. Because the DW value lies between DU and 4-DU (1.84933 < 1.951 < 2.15067), no autocorrelation exists in the regression model.

4. Heteroscedasticity Test

Heteroscedasticity refers to the residual variance that is not the same for all data in the regression model. Good regression should not arise in heteroscedasticity (Priyatno, 2014). The Spearman's rho test technique was employed in this investigation, as indicated in Table 9.

Table 9. Heteroscedasticity Test Results

			PE (X1)	PE (X2)	SI (X3)	FC (X4)	Unstandardized Residual (UR)
Spearman's rho	PE (X1)	CC	1.000	.754[a]	.704[a]	.647[a]	.010
		Sig.		.000	.000	.000	.868
		N	351	351	351	351	351
	PE (X2)	CC	.754[a]	1.000	.693[a]	.702[a]	.104
		Sig.	.000	-	.000	.000	.052
		N	351	351	351	351	351
	SI (X3)	CC	.704[a]	.693[a]	1.000	.793[a]	.033
		Sig.	.000	.000	-	.000	.543
		N	351	351	351	351	351
	FC (X4)	CC	.647[a]	.702[a]	.793[a]	1.000	.028
		Sig.	.000	.000	.000	-	.605
		N	351	351	351	351	351
	UR	CC	.010	.104	.033	-.028	1.000
		Sig.	.858	.052	.543	.605	-
		N	351	351	351	351	351

[an] At the 0.01 level, correlation is significant (2-talled).

The output data in Table 9 above reveal a significant (Sig 22-tailed of greater than 0.05) association between performance expectations, effort expectations, social influence, and facility conditions with behavioral intents. Because the significance is greater than 0.05, it is possible to conclude that there is no heteroscedasticity problem. The computation is done by hand with the help of SPSS 23.0 software and the linear regression method with four predictors.

c. Individual Parameter Significance Test (T-Test)

This t-test aims to assess the partial (individual) influence of the independent factors, which are Performance Expectations, Business Expectations, Social Influence, and Facility Conditions, on the dependent variable, Behavioral Intentions.

The t-test in this study was performed by comparing the estimated t-value with the computed t-table value of 1.966. If -t table t count t table, Ho is approved; if -t table t count or t count > t table, Ho is refused.

Conclusions

This research aims to examine the behavior, adoption, and role of the BRILink application for MSME enterprises in Palembang. The UTAUT model was utilized in this study to assess the factors impacting user acceptability of the BRILink application. Multiple linear regression analysis was used to test hypotheses and evaluate the extent of the effect between components.

End users in Palembang have shown a high adoption and use of the BRILink application for MSME enterprises utilizing the UTAUT model approach. The descriptive test confirmed this since the average response from each respondent, meaning active MSME users in Palembang, revealed that they agreed on all variable items.

At UTUAT, performance expectations, social influence, and a conducive environment are important in implementing the BRILink application to MSMEs in Palembang. Meanwhile, it has been demonstrated that the variable effort expectation has no effect (Effort expectancy).

In Palembang, performance expectations had a 32.6% partial (individual) significant influence on BRILink application behavioral intention. A -14% percentage was achieved using the corresponding parameter significance test when the computed t value is smaller than the t table value. In Palembang, business expectation (effort expectations) does not significantly influence the choice to utilize the BRILink application (behavioral intention).

Social influence has a 28% partial (individual) significant impact on the intention to utilize the BRILink application in Palembang. In Palembang, Facilitating Circumstances have a 32% partial (unique) effect on the behavioral goal of the BRILink application. When performance expectancy, effort expectancy, social influence, and enabling conditions have a meaningful consequence, the application's behavioral intention BRILink in Palembang city is 71.9%.

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