

Branchless Banking Technology Adoption by Agen Brilink through UTAUT2 Model at PT Bank Rakyat Indonesia (Persero) Tbk

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Abstract: *PT. Bank Rakyat Indonesia (Persero) Tbk, or BRI has applied Branchless Banking technology since 2013 which known as BRILink. Since launched, BRILink's contribution due to BRI's management expectation hasn't come yet. The BRILink Agent must have minimum 200 transactions done or equal to Rp. 400.000 – Rp. 1.000.000 commission generated by each Agent a month to fulfill the breakevent calculation on business. This research aim is to investigate factors that influence use behavior of branchless technology by BRILink Agent. Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) approach applied in this research. The data collected by spreaded online quetionaires survey link to BRILink Agent population at Kanwil BRI Semarang and resulted 205 feedback from respondents. In order to get the significant result, only the datas from the agent who have minimum Rp. 1.000.000 comission a month used in the calculation. This research design is quantitative descriptive with cross sectional survey and the data was analyzed with structural equation model (SEM) running with SmartPLS v.3.2.7 program. The result show that effort expectancy and social significantly influence at 10% confident the use behavior of BRILink technology. Otherwise, the others factor such as performance expectancy, facilitating conditions, hedonis motivation, price and habit haven't significantly influence to the use behavior of BRILink technology. The author recommendation on this research is to have advanced research focusing at low transaction agen group. That can investigate more factors that affect slow adopting BRILink technology by the agent.*

Keywords: branchless banking, BRILink, UTAUT2, structural equation model

1. Introduction

Based on Otoritas Jasa Keuangan (OJK) survey in 2013 about Indonesian literacy stage to more than 8000 respondents, found that 21,84% Indonesian categorized as people who have and habitually use finance services and products (well literate society). About 75,69% have finance product but haven't actively use all feature in it (sufficient literate). The rest is 2,46% never have or use product or finance service (less & not literate). Furture more, well literate dominate to people who live at urban area. They at rural, doesn't have sufficient access to financial institution, because high cost and low business potential made player at finance see build a brick office at rural arena are less profitable.

In order to solve that financial inclusion problem, OJK and Indonesian Central Bank (BI) released rules about branchless banking. OJK named it with Layanan Keuangan Tanpa Kantor Dalam Rangka Keuangan Inklusif (Laku Pandai) and BI with Layanan Keuangan Digital (LKD). Both of them has a same goal, is to intensify the penetration of financial services and products to all Indonesia area by gather the role of society and use of technlogy in it. BRI as the largest bank in Indonesia has adopted branchless banking technology by launched BRILink services since 2013. BRILink combine the role of people (BRI's debtor/ the agent) and financial feature in Electronic Data Capture (EDC) machine to make financial services for them who haven't touch by conventional bank

services. For BRI, which has coperated with more than 120.000 agent spread all over Indonesia, BRILink business hasn't given a tremendous contribution as expected in the early. Several factors has predicted caused it happen, one of them might be the slow adoption of branchless technology by the agent.

The behavior to use and use intention agent of branchless banking technology in EDC machine become factors that needed to investigate. Low educational background of agent could make a slow technology adoption by agent. The Unified Theory of Acceptance and Use of Technology 2 could be use to ensure what factor that make branchless banking technology at BRILink Agent adoption success or not.

2. Method

This research use 205 respondents with assign as agent who constantly use branchless banking features in EDC machine for six month. The respondent spread all over Kanwil BRI Semarang supervising area where consist of Brebes Regency, Tegal Regency, Tegal City, Pemalang Regency, Pekalongan Regency, Batang Regency, Kendal Regency, Semarang City, Salatiga City, Demak Regency, Grobogan Regency, Kudus Regency, Jepara Regency, Pati Regency, Rembang Regency, and Blora Regency. This research use purposive sampling method.

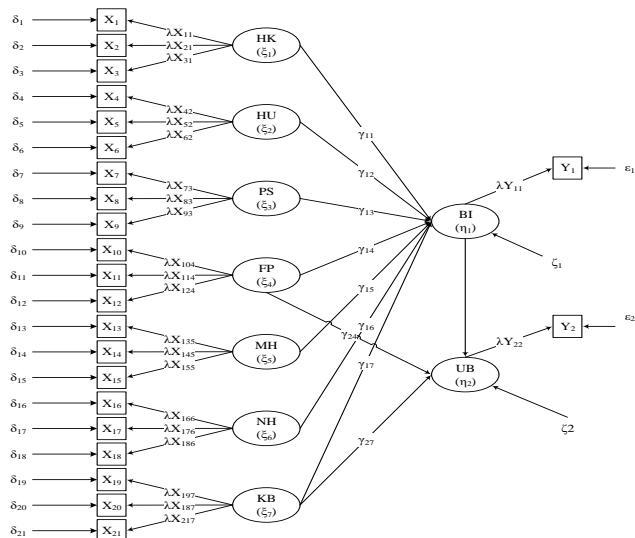


Figure 1: SEM Model Design

This research design to use quantitative descriptive method with cross sectional survey to gather the information of BRILink Agent habitual as primer data from population stated. The data analyzed by structural equation model (SEM) running with SmartPLS v.3.2.7 program. The result will show relationship between each factor of UTAUT 2 theory. The model design show at Figure 1. There are nine latent variables consist of seven exogenous latent variables and two endogenous latent variables in that model. These variables are performance expectancy, effort expectancy, social influence, facilitating condition, hedonic motivation, price, habit, behavioral intense to use and use behavior. To reflect the latent variable, there are 27 variables observed. The initial hypothesis in the study for the BRILink Agent user model is as follows.

Table 1: Research hypothesis

Hypothesis	Prediction
H ₁	performance expectancy affect the behavioral intention to use of BRILink Agent in using the BRILink feature on the EDC machine
H ₂	effort expectancy affect the behavioral intention to use of BRILink Agent in using the BRILink feature on the EDC machine
H ₃	social influences affect the behavioral intention to use of BRILink Agent in using the BRILink feature in the EDC machine
H ₄	facilitating condition affect the behavioral intention to use of BRILink Agent in using BRILink feature in EDC machine
H ₅	facilitating condition affect the use behavior of BRILink Agent in using BRILink feature in EDC machine
H ₆	hedonic motivation has an effect on the behavioral intention to use of BRILink Agent in using BRILink feature in EDC machine
H ₇	price effect on the behavioral intention to use of the BRILink Agent in using the BRILink feature on the EDC machine
H ₈	habits affect the behavioral intention to use of BRILink Agent in using the BRILink feature on the EDC machine

H ₉	habits affect the use behavioral of Agent BRILink in using BRILink feature in EDC machine
H ₁₀	behavioral intention to use effect on the use behavioral of Agent BRILink in using BRILink feature in EDC machine

3. Result

3.1 Characteristic of Respondents

The characteristic of respondent is one of the consideration in determination the sample size of data. The accuracy of selection of sample size is done to maintain the validity and reliability of each variable analyzed. Based on the survey results, the characteristic use of the BRILink feature is presented in Table 2.

Table 2: Characteristic of respondents

Characteristic	Frequency	Percentage (%)
Educational Background		
Bachelor	52	25,37
Diploma / equal	17	8,29
Seniot High School /equal	104	50,73
Junior High School / equal	28	13,66
Elementary Schhol	4	1,95
Age		
18 – 25 y.o	15	7,23
26 – 33 y.o	78	38,05
34 – 41 y.o	68	33,17
41 – 48 y.o	29	14,15
49 – 56 y.o	14	6,83
57 – 64 y.o	1	0,48
Gender		
Male	134	65,37
Female	71	34,63
Average Commission (Rp)		
<100.000	29	14,15
100.000 – 999.999	120	60,49
1.000.000 – 2.999.999	43	20,98
3.000.000 – 4.999.999	8	2,44
> 5.000.000	5	1,95
Membership period		
<3 month	17	8,29
3 – 6 month	12	5,85
6 month – 1 year	25	12,2
1 – 3 years	99	48,29
>3 years	52	25,37

This survey shows that respondents are dominated by agen who have become Agent BRILink between 1 to 3 years of 48.29%. From the composition of the sex of respondents dominated by men amounted to 65.37%. While the average commission generated per month, amounting to 60.49% of respondents claimed to produce a commission between Rp. 100,000 up to Rp 999,999 per month. Most of the respondents' educational background had high school education (equal to 50.74%) and majority respondents were in the range of 26 to 33 years, ie 38.05%. To know the factors

that influence the behavior of BRILink feature use to the respondents, then based on Table 2, only respondents who generate commission above Rp. 1,000,000 per month upwards to be used on the research model. It's because, there are indications of respondents with these categories have been using and understand the features of BRILink well, so as to be able to market BRILink services to its customers.

3.2 Outer Model Measurement

Outer model measurement aims to see the validity of the indicators and the reliability of each latent variable latent variable. The measured validity is convergent validity which is the loading factor value of each indicator with value > 0.6 for exploratory research with average variance extracted (AVE) value > 0.5. The initial test results through run algorithm in Smart PLS software for initial model of PLS SEM using BRILink features are presented in Figure 7 and Table 17. The test result on the initial model indicates that there are still indicators that have a loading factor < 0.7 ie X2, X7, X9, X11, X12, X14, X15 and X16, Y1 and Y4. In addition there are AVE values < 0.5 and CR < 0.6 for latent variables of social influence and hedonic motivation. Based on these results, it is necessary to retest by eliminating all indicator variables that do not meet the criteria (Latan & Gozali, 2012).

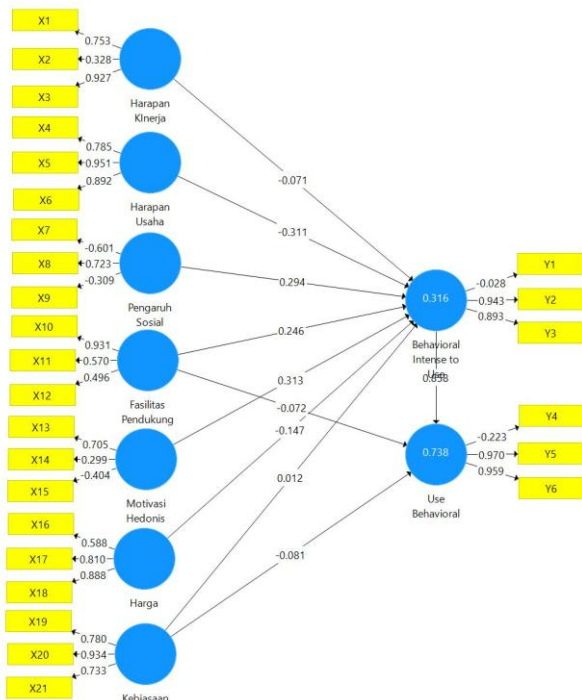


Figure 2: Outer model analysis

Table 3: Initial test of convergent validity and reliability

Eksogenous Latent Variable	Symbol	Loading Factor	Composite Reliability	Average Variance Extracted (AVE)
Performance Expectancy	X1	0,753	0.733	0.511
	X2	0,328		
	X3	0,927		
Effort Expectancy	X4	0,785	0.910	0.772
	X5	0,951		
	X6	0,892		

Social Influence	X7	-0,601	0.017	0.327
	X8	0,723		
	X9	-0,309		
Facilitating Condition	X10	0,931	0.719	0.480
	X11	0,570		
	X12	0,496		
Hedonic Motivation	X13	0,705	0.138	0.250
	X14	0,299		
	X15	-0,404		
Price	X16	0,588	0.812	0.597
	X17	0,810		
	X18	0,888		
Habit	X19	0,780	0.859	0.672
	X20	0,934		
	X21	0,733		
Endogenous Latent Variable	Symbol	Loading Factor	Composite Reliability	Average Variance Extracted (AVE)
Behavioral Intense to Use	Y1	-0,028	0.714	0.563
	Y2	0,943		
	Y3	0,893		
Use Behavior	Y4	-0,223	0.728	0.637
	Y5	0,970		
	Y6	0,959		

Retesting after eliminating the indicator variables that do not meet the criteria show significantly different results both validity and reliability are presented in Figure 8 and Table 18 so that these results can be used as final models.

Table 4: Final test of convergent validity and reliability

Eksogenous Latent Variable	Symbol	Loading Factor	Composite Reliability	Average Variance Extracted (AVE)
Performance Expectancy	X1	0,871	0,918	0,849
	X3	0,969		
	X4	0,784		
Effort Expectancy	X5	0,952	0.910	0.772
	X6	0,892		
	X8	1,000		
Social Influence	X10	1,000		
Facilitating Condition	X13	1,000		
Hedonic Motivation	X17	0,855	0,851	0,741
	X18	0,866		
	X19	0,765		
Price	X20	0,946	0,853	0,662
	X21	0,712		
	Habit	Y2		
Y3		0,895		
Y5		0,971	0,966	0,934
Y6	0,962			

3.3 Inner Model Measurement

Inner model test or structural test is performed to test the

relationship between exogenous and endogenous latent variables that have been hypothesized before. Test in inner model using test of coefficient of determination or known as R2 (R-square). The result of the SmartPLS run algorithm yields the R2 value as shown in Table 5.

Table 5: Coefficient test of R square determination

Variable	R square	R square adjusted
Behavioral Intense to Use	0,281	0,177
Use Behavior	0,743	0,728

Since this model has multiple independent variables, it is better to use adjusted R2. The BRILink feature use behavioral model has an adjusted R2 value of 72.8%, which means that attitude variation on the behavior of BRILink feature can be explained by exogenous factor of 72.8%, while the remaining 27.2% is explained by other factors in outside model. The behavioral intense to use model of BRILink features an adjusted R2 value of 17.7% meaning diversity of intentions using BRILink feature which can be explained by the model of 17.7%, while the rest of 82.3% is explained by other factors in outside model.

3.4 Hypothesis Test

Once the data meets the measurement requirements, then it can be continued by performing the bootstrapping method in the SmartPLS 3.2.4 application. The bootstrapping method is a new sample retrieval procedure as much as N new samples from n-sized origin data. For a new sample, sampling is taken from the originating data by one by one up n times with retrieval (Efron & Tibshirani, 1998). The simultaneous test used T-static test which is intended to test the significance of the effect of exogenous variables Xi overall on endogenous variables Y. This test is done by comparing the T value generated from T-statistic calculation with T value T. The null hypothesis will be accepted if the T-statistic value is less than the T-static value (T-static <T-table), this means the rejected alternative hypothesis. Conversely, the null

hypothesis will be rejected if the T-static value is greater than or equal to the T-table value (T-statistic> T-table), this means the accepted alternative hypothesis. T-table value can be known based on level of significance 0,1 with amount of observation 52, that is 1,672. Table 22 below is the result of the T-static test.

Table 6: The statistical test of the null hypothesis

hypothesis	ξ	η	T-statistic	P-value
H ₁	performance expectancy	behavioral intention to use	0,036	0,971
H ₂	effort expectancy	behavioral intention to use	1,699	0,090
H ₃	social influences	behavioral intention to use	1,998	0,046
H ₄	facilitating condition	behavioral intention to use	1,484	0,139
H ₅	facilitating condition	Use behavior	0,333	0,739
H ₆	hedonic motivation	behavioral intention to use	1,543	0,124
H ₇	price	behavioral intention to use	0,779	0,436
H ₈	habits	behavioral intention to use	0,818	0,414
H ₉	habits	use behavior	1,394	0,164
H ₁₀	behavioral intention to use	use behavior	21,822	0,000

3.5 Managerial Implication

The branchless banking model by utilizing EDC machines in which various financial service features are available more easily accepted by the public. Branchless banking still need to be socialized to all Indonesian people about the benefits and how to use them. From the results of the study found that factors of effort expectancy and social influences are factors that significantly affect the behavior of the use of BRILink feature by the respondents. The following managerial implications, especially related to marketing eg can be seen in Table 7 below:

Table 7: Result of research and managerial implications

Result	Product	Price	Place	Promotion
Effort Expentancy: Using the BRILink feature improves my productivity as a BRILink Agent.	Design new BRILink features to make it easier to use	The Commissions to BRILink agents are considered to be tailored to the business performed in serving the customer's financial transactions	The avaiability of EDC machine can be operated everywhere	Advertising and promotion in the media about the BRILink feature
Social influence Families have encouraged and suggested using the BRILink feature.	Provide socialization and education to all communities to facilitate the use of BRILink feature	Adjusting the registration requirements as a BRILink Agent so as not to burden the family finances	Education and socialization of the BRILink feature is done in public places, such as markets and schools	Family tour package program if it reaches certain target

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