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## Evaluation Information System Of The Core Banking System Using Method Delone And Mclean Model AT. PT. BPR.Sukawati Pancakanti

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## Abstrak

Core Banking System adalah sistem layanan pencatatan mulai dari front end hingga back end melalui proses yang terhubung langsung antar data. sistem perbankan yang menangani pencatatan transaksi perbankan. PT. BPR Sukawati Pancakanti atau BPR KANTI ingin menerapkan sistem baru karena selain manfaat dan keunggulan pelayanan terbaik, juga dapat membedakan karakteristik BPR KANTI dengan BPR lainnya. Suatu struktur organisasi dapat dikatakan kompetitif apabila mendapatkan informasi yang dibutuhkan secara cepat dan tanggap untuk dapat mengambil keputusan. Selain itu, agar lebih efisien dan efektif dalam melaksanakan suatu pekerjaan. Dalam penelitian ini, metode Model Sukses Sistem Informasi DeLone dan McLean bertujuan untuk mengidentifikasi faktor-faktor apa saja yang mempengaruhi tingkat penerimaan pengguna menggunakan CBS. Evaluasi juga dilakukan untuk menganalisis Aplikasi Core Banking System di BPR KANTI. Untuk memperoleh data dalam menganalisis peneliti menyebarkan kuesioner yang terdiri dari karyawan unit kerja. Hasil yang diperoleh menunjukkan bahwa 6 dari 9 hipotesis dapat diterima meliputi Information Quality, Service Quality, System Quality dan Net System Benefit. Hasil penelitian ini menambah pengetahuan terkini tentang Aplikasi Core Banking System sebagai aplikasi yang dibutuhkan oleh Bank khususnya BPR untuk kebutuhan sehari-hari dalam melakukan kegiatan pembukuan nasabah. Hal ini juga dapat digunakan untuk mengembangkan strategi yang tepat untuk meningkatkan kualitas aplikasi Core Banking dan meningkatkan efektivitas kinerja.

Kata Kunci: Evaluasi , Core Banking System (CBS), BPR, Delone dan Mclean

## Abstract

Core Banking System is a recording service system starting from the front end to the back end through a process that is directly connected to between data. of banking system that handles the recording of banking transactions. PT. BPR Sukawati Pancakanti or BPR KANTI wants to implement a new system because in addition to the benefits and excellence of the best services, it can also distinguish the characteristics of BPR KANTI from other BPRs. An organizational structure can be said to be competitive if it gets the information needed quickly and responsively to be able to make decisions. In addition, to be more efficient and effective in carrying out a job. In this study, DeLone and McLean's Information Systems Success Model method aims to identify what factors affect the level of user acceptance using CBS. Evaluation is also carried out to analyze the Application Core Banking System at BPR KANTI. To obtain a data in analyzing the researchers distributed a questionnaire consisting of employees of the work unit. The results obtained indicate that 6 out of 9 hypotheses can be accepted including Information Quality, Service Quality, System Quality and Net System Benefit. The results of this study add to the latest knowledge about the Core Banking System Application as an application needed by Banks, especially BPRs for daily needs in carrying out customer bookkeeping activities. It can also be

used to develop appropriate strategies to improve the quality of Core Banking applications and improve performance effectiveness.

Keywords: Evaluation , Core Banking System (CBS), Rural Bank, Delone and Mclean

#### INTRODUCTION

Business competition in the business world, especially banking, is getting tougher day by day, where technology and the ease of use of information technology require banking services to develop strategies in running their business. Basically, the strategy is aimed at creating service excellence, growth, and wellness and well-being of the company. The strategy that needs to be followed up is to make improvements to the CBS applications that now used to improved quality services to customers and improve the performance of the employee ethos from staff to top level, also having an impact on increasing profits company.

In creating good performance, the Bank cannot avoid the function of banking services to customers. The services provided to customers will reflect whether the bank is good or not in measuring quality improvement and service in maintaining community satisfaction, especially for customers.

	Nominal			qtq		уоу	
Indikator	Indikator Des '19 Sep '20 D		Des '20			Des '19 Des '20	
Total Aset (Rp milyar)	149,623	149,814	155,075	1.01%	1.51%	10.27%	3.64%
Kredit (Rp milyar)	108,784	110,305	110,770	-0.15%	0.42%	10.76%	1.83%
Dana Pihak Ketiga (Rp milyar)	102,538	102,113	106,151	1.05%	1.95%	11.51%	3.52%
- Tabungan (Rp milyar)	32,132	31,167	32,763	1.60%	♠ 5.12%	8.95%	1.96%
- Deposito (Rp milyar)	70,406	70,946	73,389	1.81%	1.44%	12.71%	4.24%
CAR (%)	28.88	30.88	29.89	8	(99)	553	101
ROA (%)	2.31	1.95	1.87	(3)	(8)	(17)	(44)
BOPO (%)	81.50	84.41	84.24	(37)	(17)	76	274
NPL Gross (%)	6.81	8.09	7.22	(35)	(87)	44	41
NPL Net (%)	5.22	6.18	5.33	(40)	(85)	47	11
LDR (%)	79.09	77.72	75.44	(137)	(227)	255	(365)
CR (%)	17.08	16.82	18.67	16	186	(176)	159

Figure 1. Rural Bank with indicator source in 2020

Rural Banks (BPR) is a banking service institution whose limits are only conventional business activities with a narrower scope of services compared to banks in general [2]. In 2020 the number of Rural Banks in Indonesia is 1.709 banks with details for Conventional Banks as many as 1.545 BPR and Syariah's services as many as 164 Banks as well as the number of offices of each bank with a total of 6.562 Bank's consisting of 5.943 conventional bank and 619 Syariah's service networks. Office, which Rural bank is the largest microservice sector bank in Southeast Asia. In 2020 the Rural Bank industry showed quite good conditions marked by good intermediation, with credit and Third-Party Funds (DPK) recorded growing despite a slowdown from the previous year due to the Covid-19 pandemic which is increasingly widespread in the world and has entered Indonesia. with the bank's prudent principle, the liquidity level of funds is maintained so that at any time during the pandemic when customers can make withdrawals. their funds.

PT. Sukawati Pancakanti or known as BPR KANTI is currently implementing an integrated Core Banking Application system where the Core Banking System aims to further maximize service to customers and keep abreast of developments in banking information technology. In addition, BPR KANTI has carried out various forms of information system innovation to realize banking automation in order to comply with Financial Services Authority Regulation Number 75/POJK.03/2016 concerning Information Technology Implementation Standards for Rural Banks and Sharia Rural Financing Banks and Financial Services Authority Regulation Number 25/POJK.03/2021 concerning the Implementation of Rural Bank Products and Sharia Rural Banks. This is indicated by the implementation of CBS (Core Banking System) in the Bank since 2011. The Core Banking System is the core application which is the heart of the Bank's system. Business competition in banking is getting tougher day by day, where technology and the convenience of information technology require banks to develop strategic ways of running and ways so that customers can trust these products. Basically, this strategy aims to create service excellence, growth, wellness and well-being for the company. One strategy that can be done is to improve the way the system in existing applications currently exists in order to improve services, especially to customers and also for employees to improve performance patterns and get creativity in order to increase profits for the company.

Before the company decides to update the information system used, the company needs to evaluate the information system first. Evaluation of information systems cannot only evaluate systems from one dimension because an information system does not only have one dimension but consists of several related dimensions [1] One of which is the Delone and McLean framework which identifies six dimensions of success of an information system.

#### Literature Review

#### **DeLone and McLean Information Systems Success Model**

There are numerous ways to measure information system success so a proper measurement model would be necessary. [2] One of the models is the DeLone and McLean Information Systems Success Model. [2], [3] The original model sees the benefit of information systems as organizational and individual impacts and is affected by system quality, information quality, use, and user satisfaction. [2]

As time progressed, DeLone and McLean revised the model in 2003 to elaborate use, simplifying organizational and individual impacts into one variable called net benefits, and service quality. This is done to cover the use when the system usage is mandatory, cover all system information implementation in various situations, and see the information system as a whole product. [3]

The model sees the success of information systems affected by these variables: Information Quality, System Quality, Service Quality, Intention to Use and the Use itself, User Satisfaction, and Net Benefits. [3]

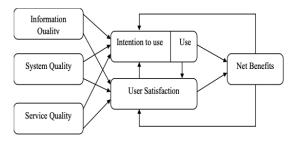


Figure 2: The DeLone and McLean Information System Success Model based on the 2003 version.

## Structural Equation Modeling's

In the quote Ghazali [4] Explains that SEM is "a combination of two statistical test methods which are divided by 2 types, namely the analysis of factors developed in psychology and psychometry and in the manufacture of simultaneous equation modeling based on the model being tested".

In the analysis of factors aims to be able to develop by testing the analysis model based on

factors. Regarding the research on the ability structure that the intercorrelation test = can determine the general ability factor as well as the special ability factor.

Researchers tested if several factors could describe the intercorrelation between variables. In the model, the structural equation is: "The combination of factor analysis and path analysis into a very comprehensive and structured statistical method". In general, the structural equation model consists of several parts:

- 1. A measurement model that connects the observed/manifest variables with the latent/unobserved variables through Confirmatory Factor Analysis (CFA).
- 2. Structural Model is where several variables in the relationship between latent variables through the system simultaneously using the Goodness of Fit Index (GOFI).

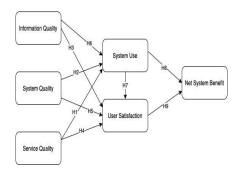
#### METHOD

#### **Data Collection**

PT BPR KANTI has implemented the Core Banking System, for respondents who will be examined by all employees who use Core Banking, both from the collector level and top management level (Division Head to the Board of Directors). In determining population using the CBS applications at BPR. there are 105 people. Sampling technique used are with total sampling, because, if the total population is used, the entire population can be used as a sample.[8]

#### **Research Model**

Based on the studies explained above, this study will use the DeLeon and McLean Information Systems Success Model as a base. All variables from the model will be used. They are Information Quality, System Quality, Service Quality, Intention to Use, Use, User Satisfaction, and eventually the Net Benefits.



Questions are distributed through questionnaires and presented through online questionnaires using Google Forms. Links are distributed via official memos to each structure involved in the activity.

The results of the questionnaire were then analyzed through Partial Least Square Structured Equation Modeling (PLS-SEM) using SmartPLS 3. Structured Equation Modeling is one of the many types of statistical methods to model relationships in each variable.

The first 2 stages of PLS-SEM are determining the structural model and measurement model. Structural model consists of how the relationship of each variable. This relationship is also known as a hypothesis. On the other hand, the measurement model describes the relationship between the variables and their indicators.

These variables are measured by their own indicators. These indicators are derived from several literatures and previous research for various scenarios. Table 1 shows the indicators to measure each variable/construct used in this study.

	Table 1 : Variables and Indicator					
No	Variable	Variable Indicator				
1		Reliability				
Т	System Quality	Sophistication	[5]			
		Intuitiveness	[5]			
		Accuracy	[1]			
2	Information Quality	Availability	[1]			
Z	Information Quality	Consistency	[1]			
		Timeliness	[1]			
		Assurance	[6]			
3	Service Quality	Empathy	[6]			
		Responsiveness	[6]			
4		Intention to use	[7]			
	Sustan Usa	Ease of Use	[8] [7]			
4	System Use	Extent of Uses	[7]			
		Dependence of Uses	[7]			
		<b>Overall Satisfaction</b>	[9]			
5	User Satisfaction	Enjoyable experience	[9]			
		Repeated visit	[9]			
		Enhance Learning	[10] [9]			
		Lack of contact	[11]			
6	Net System Benefit	Quality Concern	[11]			
		Perceived usefulness	[12]			
		Perceived Ease of Use	[12]			

#### **RESULTS AND DISCUSSION**

## Respondents

105 respondents responded to the questionnaire. Most of the respondents are at the staff level. There were also several employees from the top level who participated in answering the questionnaire. They can be actively involved in the use of the application or have previously been involved with the CBS application in table 2 the average age of using CBS is 26 to 35 years and the educational background is a bachelor who can understand applications and Information technology (IT).

	Demographic Profile	Frequency	Percentage (%)
Gender	Male	69	65,71
	Female	36	34,29
Age	< 25 years old	6	5,71
	26 - 35 years old	40	38,1
	36 -45 years old	18	17,14
	46 - 55 years old	46	38,1
	>55 years old	1	0,95
Length of	< 2 years	31	29,52
work	2 – 5 years	21	20
	5 – 10 years	46	43,81
	>5 years	7	6,67
last	SMA	30	28,7
education	D3	8	7,62
	S1	62	59,05
	S2	5	4,76
	S3	0	0

#### Table 2 Demographic Profile

#### **Inner Model Smart PLS**

After running the PLS algorithm in SmartPLS 3, we can see how valid and reliable the model and the indicators are. The validation process of PLS-SEM consists of two phases. They are:

- Convergent validity to see how measurement positively correlated to alternative measurement in a construct. This process is done with outer loading and average variance extracted (AVE). The outer loading value of an indicator should be above 0.7, and the AVE value of a construct should be above 0.5. [13]
- 2. Discriminant validity to see how a construct is distinctly different from another construct in an empirical standard. Usually, two tests are done to complete this phase. They are cross-loading and Fornell-Larcker Criterion. The cross-loading value of an indicator relative to its home construct should not be below the value of that indicator in the other construct. As for Fornell-Larcker Criterion, the value of construct correlation to itself should not below the correlation of a construct to another construct. [13]

Construct	Items	Loadings	CR	AVE
Information Quality			0,974	0,904
	IQ1	0,954		
	IQ2	0,937		
	IQ3	0,963		
	IQ4	0,950		
S	ystem Quality		0,940	0,839
	SYQ1	0,873		
	SYQ2	0,938		
	SYQ3	0,936		
S	ervice Quality		0,971	0,917
	SEQ1	0,937		
	SEQ2	0,960		
	SEQ3	0,976		
	System Use		0,942	0,803
	SYU1	0,874		
	SYU2	0,935		
	SYU3	0,917		
	SYU4	0,855		
U	ser Satisfaction		0,965	0,902
	US1	0,950		
	US2	0,965		
	US3	0,935		
Net System Benefit			0,982	0,917
	NSB1	0,958		
	NSB2	0,957		
	NSB3	0,964		
	NSB4	0,963		
	NSB5	0,945		

#### Table 3: Results The Measurement Model

As we can see in the table 3, the AVE values for all constructs are above the required value of 0.5. The variable is valid. And based on the results obtained in table 3. The Cronbach's Alpha required values of 0,60. so it can be concluded that the level of reliability variables is valid. Meanwhile, based on the composite reliability values for all constructs are above the required of 0,70 The variables is reliable.

As we can see in the table 4, In the discriminant phase, the validity shows that there is no correlation value of the indicator to another construct which is higher than the correlation value of the indicator to the original construct. This happened for both the cross-loading test before and after the test [8] The cross-loading value can be seen in Table 4.

	IQ	NSB	SEQ	SYQ	SY	US
					U	
IQ1	0.954	0.859	0.878	0.917	0.894	0.858
IQ2	0.937	0.840	0.860	0.948	0.873	0.841
IQ3	0.963	0.902	0.902	0.882	0.913	0.898
IQ4	0.950	0.865	0.878	0.843	0.850	0.871
NSB1	0.854	0.958	0.885	0.838	0.896	0.873
NSB2	0.883	0.957	0.871	0.853	0.879	0.872
NSB3	0.890	0.964	0.913	0.881	0.911	0.915
NSB4	0.898	0.963	0.911	0.879	0.913	0.928
NSN5	0.837	0.945	0.856	0.828	0.838	0.878
SEQ1	0.855	0.833	0.937	0.825	0.881	0.813
SEQ2	0.914	0.915	0.960	0.902	0.905	0.932
SEQ3	0.923	0.913	0.976	0.896	0.914	0.910
SYQ1	0.787	0.789	0.716	0.873	0.791	0.764
SYQ2	0.836	0.827	0.852	0.938	0.865	0.840
SYQ3	0.895	0.840	0.892	0.936	0.889	0.867
SYU1	0.819	0.773	0.800	0.830	0.874	0.727
SYU2	0.885	0.877	0.919	0.858	0.953	0.864
SYU3	0.863	0.906	0.881	0.861	0.917	0.898
SYU4	0.753	0.756	0.758	0.774	0.855	0.787
US1	0.901	0.884	0.882	0.898	0.896	0.950
US2	0.855	0.905	0.878	0.885	0.863	0.965
US3	0.841	0.870	0.878	0.782	0.855	0.935

Table 4: The Results Of Discriminant Validity

Variabel laten endogen	R <sup>2</sup>	Description
Net Benefit	0.903	Strong
System Use	0.917	Strong
User Satisfaction	0.886	Strong

According to Ghazali [4], from the results obtained in table 6 it is known that Net Benefit (NSB) gets a value of 0.903, system use (SYU) gets a value of 0.917 and user satisfaction gets a value of 0.886 which can be concluded that the variable is strong.

The model's out-of-sample predictive power and predict unused data in the model estimation, the Q2 value is used. If the Q2 value is 0, the model has predictive relevance in one or more certain endogenous constructs. [13] This procedure is done by running a blindfolding process. All endogenous constructs positively have predictive relevance for the endogenous construct under consideration. As we can see from Tabel 7, all endogenous constructs have predictive relevance since they all have more than Ovalues.

Faktor	SSO	SSE	Q² (=1- SSE/SSO)
IQ (Information Quality)	420.000	420.000	0
NSB (net system benefit)	525.000	95.986	0.817
SEQ (service quality)	315.000	315.000	0
SYQ (system quality)	315.000	315.000	0
SYU (system use)	420.000	121.497	0.711
US (user satisfaction)	315.000	69.632	0.779

Table 6 Predictive Relevance Value (Q<sup>2</sup>)

#### **Table 7: Hypothesis Test Result**

Hypothesis	Line Relationship	Original Sample (O)	T-Statistic	description
H1	IQ -> SYU	0,219	2,048	Significant
H2	SYQ -> SYU	0,337	3,516	Significant
H3	SEQ-> SYU	0,427	4,362	Significant
H4	IQ -> US	0,191	1,241	Not Significant
H5	SYQ -> US	0,166	1,347	Not Significant
H6	SEQ -> US	0,377	2,078	Significant
H7	SYU -> US	0,232	1,467	Not Significant
H8	SYU -> NSB	0,449	3,917	Significant
Н9	US -> NSB	0,521	4,469	Significant

In hypothesis testing, it is determined whether the previously proposed hypotheses can be accepted or rejected. To analyze whether the hypothesis is accepted or rejected. Standard used is the path coefficient values above 0.1 and t values should be larger than the critical value of 1,96 at a significance level of 5%. The p-value should be less than the significance level. The results can be described as below:

H1: Information Quality  $\rightarrow$  System Use

 $H_0$ : Information Quality (IQ) is not affecting System Use (SYU) positively.

H<sub>1</sub>: Information Quality (IQ) is affecting the System Use (SYU) positively.

On the evaluation of the model, we can see that the direction of the IQ to SYU path coefficient is positive. Because the t-stat value is still below the required value of 1.96 (2.048) and the Original Sample is 0.219. It means that sufficient evidence from the sample that SQ significantly affects SYU in a positive way. Therefore, reject H0 and accept H1.

**H2:** System Quality  $\rightarrow$  System Use

H0: System Quality(SYQ) is not affecting System Use (SYU) positively.

H1: Service Quality (SYQ) is affecting the System Use (SYU) positively.

On the evaluation of the model, we can see that the direction of the SYQ to SYU path coefficient is positive. Because the t-stat value is still below the required value of 1.96 (0,337) and the Original Sample is 3,516. It means that sufficient evidence from the sample that SEQ significantly affects SYU in a positive way. Therefore, reject H0 and accept H1

**H3:** Service Quality  $\rightarrow$  System Use

H0: Service Quality (SEQ) is not affecting System Use (SYU) positively.

H1: Service Quality (SEQ) is affecting the System Use (SYU) positively.

On the evaluation of the model, we can see that the direction of the SEQ to SYU path coefficient is positive. Because the t-stat value is still below the required value of 1.96 (3,516) and the Original Sample is 0,427. It means that sufficient evidence from the sample that SEQ significantly affects SYU in a positive way. Therefore, we reject H1 and accept H0.

H4: Information Quality  $\rightarrow$  User Satisfaction

H0: Information Quality. (IQ) is not affecting User Satisfaction (US) positively.

H1: Information Quality. (IQ) is affecting the System Use (US) positively.

On the evaluation of the model, we can see that the direction of the IQ to US path coefficient is Positive. Because the t-stat value is still below the required value of 1.96 (4362) and the Original Sample is 0,427. This means that there is not enough evidence from the sample that IQ significantly affects US in a positively. Therefore, we reject H0 and accept H1. Because the information presented in the core banking application is less attractive and human errors often occur which result in input errors so that it does not accommodate user needs, besides that, constraints in timeliness in presenting data are slightly hampered because new users receive end of day (EOD) data on the day The next one is where the data presented at several points is not really needed and the user has to take a long time to sort according to needs where the error rate (human error) will be high because the duplicate fund data is not balanced in accordance with the core banking system.

**H5:** System Quality  $\rightarrow$  User Satisfaction

H0: System Quality (SYQ) is not affecting User Satisfaction (US) positively.

H1: System Quality (SYQ) is affecting the System Use (US) positively.

On the evaluation of the model, we can see that the direction of the SYQ to US path coefficient is Positive. Because the t-stat value is still below the required value of 1.96 (1,347) and the Original

Sample is 0,166. This means that there is not enough evidence from the sample that IQ significantly affects US in a positively. Therefore, we reject H1 and accept H0. because in the real case when it was created it did not involve all users because the weakness of the core banking system was that it did not accommodate downloads using PDF so that if the user wanted to download data the system could only accommodate using csv, where the contents of csv contained many points that did not need to be displayed so the user had to throw away some points on the sheet. In terms of the sophistication of the system contained in the core banking system, the level of human error often occurs at the end of day (EOD), so the IT Support team must find the root cause and provide direction to the user to correct if the data is wrong or other things. which aims to make transactions from customers in accordance with what is printed on the customer's savings book.

**H6:** Service Quality  $\rightarrow$  User Satisfaction

H<sub>0</sub>: Service Quality (SEQ) is not affecting User Satisfaction (SU) positively.

H1: Service Quality (SQ) is affecting the User Satisfaction (SU) positively.

On the evaluation of the model, we can see that the direction of the SEQ to SU path coefficient is positive. Because the t-stat value is still below the required value of 1.96 (2,078) and the Original Sample is 0.377. This means that sufficient evidence from the sample that SEQ significantly affects SU in a positive way. Therefore, reject H0 and accept H1.

H7: System Use  $\rightarrow$  User Satisfaction

H<sub>0</sub>: System Use (SYU) is not affecting User Satisfaction (US) positively.

H<sub>1</sub>: System Use (SYU) is affecting the System Use (US) positively.

On the evaluation of the model, we can see that the direction of the SYU to US path coefficient is positive. Because the t-stat value is still below the required value of 1.96 (1,467) and the Original Sample is 0,232. This means that there is not enough evidence from the sample that SYU significantly affects US in a positively. Therefore, we reject H1 and accept H0. Cause Users do not get the benefits of using Application Core Banking to complete their work but need changes to make it better and the IT Support team must go back and forth to accommodate issues that use core banking applications.

**H8:** System Use  $\rightarrow$  Net System Benefit

H<sub>0</sub>: System Use (SYU) is not affecting Net System Benefit (NSB) positively.

H1: System Use (SYU) is affecting the Net System Benefit (NSB) positively.

On the evaluation of the model, we can see that the direction of the SYU to NSB path coefficient is positive. Because the t-stat value is still below the required value of 1.96 (3,917) and the Original Sample is 0,449. This means that sufficient evidence from the sample that SYU significantly affects NSB in a positive way. Therefore, reject H0 and accept H1.

**H9:** User Satisfaction  $\rightarrow$  Net System Benefit

H<sub>0</sub>: User Satisfaction (SU) is not affecting Net System Benefit (NSB) positively.

 $H_1$ : User Satisfaction (SU) is affecting the Net System Benefit (NSB) positively.

On the evaluation of the model, we can see that the direction of the SYU to NSB path coefficient is positive. Because the t-stat value is still below the required value of 1.96 (4,469) and the Original Sample is 0,521. This means that sufficient evidence from the sample that SU significantly affects NSB in a positive way. Therefore, reject H0 and accept H1.

#### CONCLUSION

Based on the discussion of the research on the evaluation CBS at PT. BPR Sukawati Pancakanti. (BPR KANTI), can be summary as below: With the theory and various measurement models that have been carried out by running using Smart PLS, the data has met convergent validity and discriminant validity. Based on outer loading values, Cronbach's alpha values, Composite Reliability values, are valid. The conclusions that can be drawn from this study are H1: IQ to SYU path coefficient is positive, the results are accepted, H2 : SYQ to SYU path coefficient is positive, the results are accepted, H3 SEQ to SYU path coefficient is positive, the results are rejected, H5 : the SYQ to US path coefficient is positive, the results are rejected, H6: SEQ to US path coefficient is positive, the results are accepted, H7 SYU to US path coefficient is positive, the results are rejected, H8 : SYU to NSB path coefficient is positive, the results are accepted.

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