The Journal of Social Sciences Research
ISSN(e): 2411-9458, ISSN(p): 2413-6670
Special Issue. 2, pp: 659-664, 2018
URL: https://arpgweb.com/journal/journal/7/special_issue
DOI: https://doi.org/10.32861/jssr.spi2.659.664

Academic Research Publishing Group

Original Research Open Access

Testing on Actual Use and User Satisfaction *Enterprise Resource Planning* on Banking Companies in West Sumatera

Dandes Rifa*
Faculty of Economics, Bung Hatta University, Indonesia

Siti Rahmi
Faculty of Economics, Bung Hatta University, Indonesia

Daniati Puttri
Faculty of Economics, Bung Hatta University, Indonesia

Abstract

This study aims to examine the level of real use and satisfaction of ERP users in banking companies in the West Sumatra region. The analysis was carried out by examining the effect of system quality, information quality and service quality on the level of real use and satisfaction of ERP users in banking companies in West Sumatra. Data acquisition was carried out by survey techniques through questionnaires to 140 employees from 4 government banks in West Sumatra (ERP users). A total of 89 data can be processed in this study. Multiple regression statistical tests are used to test hypotheses. Regression test results on model I indicate that there is no influence on the quality of information systems, information quality and service quality at the level of real use of Enterprise Resource Planning. While the test results in model II show that there is an influence of the quality of the information system, information quality and service quality on the satisfaction of users of Company Resource Planning.

Keywords: Corporate resource planning; Information system quality; Information quality and service quality.

1. Introduction

The development of information technology today has taken place very quickly and brought changes in many areas of life. One area that is very affected is business. Business has changed from manual to electronic business (e-business). E-business is the practice of implementing and managing key business processes such as planning, managing raw material supply, production processes (manufacturing), sales, order fulfillment and other service provision, carried out through the use of computerized data and computer communication technology . One form of business process management with the use of information technology is carried out by implementing Enterprise Resource Planning (ERP) applications. Today many integrated application system (ERP) providers offer reliable business solutions so they can produce best practices for their users.

Research on ERP applications is very important because we can understand the relationship between a company's IT investment and its capabilities and capabilities in competing. The use of appropriate technology will strengthen its business performance and competitive position.

2. Literature Review

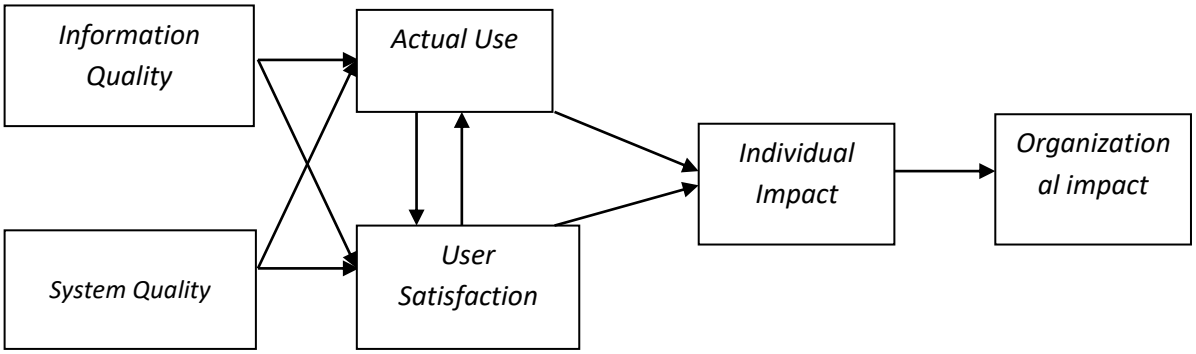
2.1. Delone and McLean Models

The Delone and McLean model is a test model for the success of information technology systems based on the causal processes and relationships of the model dimensions. This model does not measure the dimensions of measurement of information system success independently but measures it as a whole. Unlike the process model, the causal model (causal model) or also called the covariance model (variance model) attempts to explain the covariance (covariance) of the model elements to determine whether the variance of an element can be explained by the variance of other elements or in other words to determine whether there is a causal relationship between them (Harasis *et al.*, 2018; Jogiyanto, 2007).

The Delone and McLean Information Systems Success Model is described in simple terms (parsimony) as follows:

*Corresponding Author

Picture-1. Information System Success Model Delone and McLean (1992)



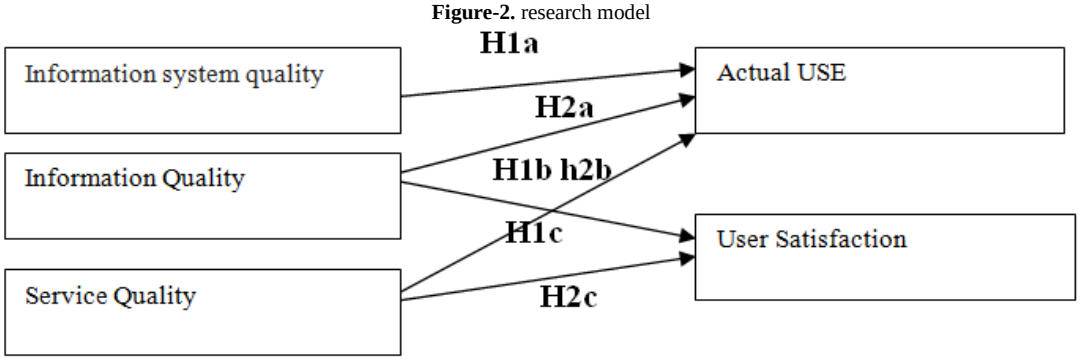
2.2. Enterprise Resource Planning (ERP)

Enterprise Resource Planning (ERP) is a way to manage company resources using information technology. Enterprise Resource Planning (ERP) is a software package with integrated applications for widespread use in organizations. ERP applications include transaction processing systems coupled with other integrated functional information systems. There is no standard definition of ERP, but in general it can be interpreted that ERP is a software system that is used to support and automate business processes, providing broad, accurate and real time information about the company to be used in the decision making process. ERP integrates all departments and functions in the company into a computer system that can serve the overall information needs of the company. The use of ERP is intended to coordinate and integrate data and information on each business unit (area business process) in order to produce more quality decision making because ERP provides financial reports and analysis more quickly, accurately and on time.

3. Research Model

The model in this study is as follows:

Figure-2. research model



3.1. Development of Hypotheses

Effect of Information System Quality, Information Quality and Service Quality on Real Use of Enterprise Resource Planning (ERP)

The concept of use of a system can be seen from several perspectives, namely actual use, perceived use and reported use. Because actual use cannot be observed by researchers who use a list of questions, much of this actual use is replaced with the name of perceived use (Jogiyanto, 2007) Because this study is an adoption of the Livari (2005) research model, the intended use of the system (use) is actual use.

Research shows that service quality is one of the determinants of information system success. The same thing was also studied by conducting a survey of 232 students. The results show that system quality, information quality and service quality have a significant influence on real use.

Based on the explanation of the quality of the system and the quality of information and the quality of service to the real use above, it can be concluded that the better the quality of the system, the quality of information and the quality of services, will result in increased use of information system users, so the quality of the system and information quality has a positive relationship towards the real use of the system. This is in line with the research conducted by Livari (2005) which involved 78 respondents and found a significant influence between the quality of the system and the use of the system (information use), as well as the study of Teng and Calhoun (1996) who found a significant relationship between information quality with system usage. Research on service quality can be seen from the updated success model of the information system Delone and McLean (2003) that includes service quality variables as one of the determinants of information system success. Besides that Teng and Calhoun (1996) found a significant relationship between information quality and system usage. Based on the description above, the following hypotheses are formulated:

H1a: System quality has a positive effect on the Use of Real ERP

H1b: Information quality has a positive effect on the Use of Real ERP

H1c: Service quality influences the Use of Real ERP

Effect of Information System Quality, Information Quality and Service Quality on Enterprise Resource Planning (ERP) User Satisfaction

User satisfaction is the user's response to the use of information system output (Jogiyanto, 2007). The attitude of users towards information systems is a subjective criterion of how users like

The model built by Delone and R (1992) states that the success of information systems is positively influenced by system quality (perceived system quality), which is a significant predictor of user satisfaction. Empirical research conducted by McGill *et al.* (2003) on the model of Delone and R (1992) resulted that system quality (perceived system quality) has a positive effect on user satisfaction user satisfaction. Livari (2005) also concludes that system quality has a positive influence on user satisfaction but not significantly on the intensity of system usage. These results are supported by Roldán and Leal (2003) who concluded that system quality has a positive effect on user satisfaction.

H2a: System quality has a positive effect on user satisfaction in Enterprise Resource Planning (ERP).

H2b: Information quality has a positive effect on user satisfaction in Enterprise Resource Planning (ERP).

H2c: Quality of service influences user satisfaction of Enterprise Resource Planning (ERP).

4. Research Methods

4.1. Research Sites

The study was conducted on banks in the West Sumatra region. Padang as the provincial capital will be the target location for West Sumatra because all banks in West Sumatra have branch offices operating in the city of Padang.

4.2. Research Population and Samples

The population of this research is employees who work for government and private banks in the city of Padang. The employee in question is an employee who works using an information system (user). Not included in the user are security personnel, driver, courier and office boy.

4.3. Research Method

In this study, to test the hypothesis using multiple linear regression (Multiple Regression analysis) with the help of the SPSS program.

5. Research Result

5.1. General Description of Respondents and Distribution of Questionnaires

In this study, data was obtained from respondents by distributing questionnaires directly to the target respondents. The intended respondents were government banking company employees (except security guards, drivers and office boys) who were in 7 cities in the province of West Sumatra. There are four government banks, namely Bank Mandiri, BNI, BTN and BRI. Each bank branch office in each city was sent 5 questionnaires, so the number of questionnaires circulated was 140 copies. From the number of questionnaires circulated, 119 questionnaires were returned, but 30 of them were not processed because they were not filled out (answered), or incomplete answers.

5.2. Data Quality Test Results

Data quality testing is done by validity and reliability testing. The validity of the indicator is seen from the results of the Kaiser Mayer Olkin (KMO) test, where if the KMO probability value (significance value) is smaller than Alpha (5%) then the indicator used is declared valid. Indicator reliability is seen from the cronbach's alpha value. If the cronbach's alpha value is greater than 0.60 then the indicator is declared reliable. The following are the results of the validity and reliability of the questionnaire used:

Table-1. Test results for the validity and reliability of the questionnaire

Research Variable	*KMO*	*Factor Loading*	*Cronbach's Alpha*	*Conclusion*
Quality of Information system	0,862	0,712 - 0,834	0,930	Valid and reliabel
System Quality	0,844	0.743 - 0,840	0,913	Valid and reliabel
Service Quality	0,777	0,774 - 0,846	0,873	Valid and reliabel
Actual Use*)	-	-	-	-
User Satisfaction	0,749	0,847 - 0,896	0,894	Valid and reliabel

5.3. Test results of Descriptive Statistics

From the results of processing data on 90 research samples obtained the following statistical test results:

Tabel-2. Based on the table above the data is explained that

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
KSI	89	12	77	61.80	8.824
KI	89	10	56	45.44	6.197
KP	89	5	35	27.78	4.560
AU	89	1	7	5.73	1.475
US	89	4	28	22.34	3.519
Valid N (listwise)	89				

1. Quality of information system (KSI), this variable has a theoretical range between 11 and 77, where the actual range is at least 12 and a maximum of 77. The average respondent's answer shows 61.80 with a standard deviation of 8.824. This means that respondents are more likely to answer strongly agree with statements about the quality of information systems.

2. The quality of the system (KI), this variable has a theoretical range between 8 to 56 while the actual range is at least 10 and a maximum of 56. The respondent's average answer is 45.44 with a standard deviation of 6.197. This means that respondents are more likely to answer strongly agree with the statement about the quality of information.

3. Service quality (KP), this variable has a theoretical range between 5 and 35, Respondents' answers indicate that the actual range is at least 5 and a maximum of 35. The respondent's average answer is 27.78 with a standard deviation of 4.560. This means that respondents are more likely to answer agree with statements about service quality.

4. Real Use (AU), this variable has a theoretical range between 1 to 7 while the actual range is at least 1 and maximum 7. The average respondent's answer shows 22.34 with a standard deviation of 1.475. This means that respondents tend to answer 3-4 hours per day working by using Enterprise Resource Planning.

5. User satisfaction (US), this variable has a theoretical range between 4 to 28 while the actual range is at least 4 and a maximum of 28. The average respondent's answer shows 22.34 with a standard deviation of 3.519. This means that respondents are more likely to answer very satisfied with statements about user satisfaction.

5.4. Classical Assumption Test Results

Classic assumption test is a test that is required in the use of multiple regression analysis. This test is done so that researchers can be more confident that the quality of the data used is good and has requirements. The following will be elaborated on the results of testing the classical assumptions that have been made, namely the normality test, the test for multicollinearity, the autocorrelation test and the heteroscedasticity test.

5.5. Data Normality Test Results

Data normality test was carried out using the non parametric statistical test Kolmogorov Smirnov test. This test is intended to find out whether the data used in the regression model are data that are normally distributed. Based on the tests conducted (table 4.5) it is known that the distribution of data for variables Information quality, information system quality, service quality and ERP user satisfaction are normal where asympt, sig (2-tailed) values are greater than Alpha values (5%), namely respectively: 0.122; 0,500; 0.369 and 0.061. Meanwhile for real use variables ERP is not normally distributed because of asimp. Sig (2 tailed) 0,000. This is because the variable is measured using only one item of question.

Table-3. Normality test results

One-Sample Kolmogorov-Smirnov Test

		KI	KSI	KP	AU	US
N		89	89	89	89	89
Normal Parameters [a,b]	Mean	45.93	63.09	28.56	5.73	22.38
	Std. Deviation	4.972	6.302	3.250	1.475	2.187
Most Extreme Differences	Absolute	.125	.088	.097	.235	.140
	Positive	.125	.088	.097	.195	.140
	Negative	-.101	-.056	-.095	-.235	-.138
Kolmogorov-Smirnov Z		1.182	.828	.918	2.221	1.320
Asymp. Sig. (2-tailed)		.122	.500	.369	.000	.061

a. Test distribution is Normal.

b. Calculated from data.

From the data in the table above, it can be seen that the regression model of this study is free from the symptoms of multicollinearity. This can be seen from the tolerance value of each information system quality variable, information quality and service quality greater than 0.10, which is 0.13; 0.174 and 0.228. Besides that the VIF value of each of these variables is 7.326; 5,759 and 4,394. This VIF number also shows a number smaller than 10. So it

can be concluded that there is no influence between independent variables so that they are free from the symptoms of multicollinearity.

5.4. Results of Model Regression I

In accordance with the research model with two dependent variables, the regression test was conducted twice in this study. The first regression test will be conducted to examine the effect of information quality, information system quality and service quality on real use of ERP (Model I). The second regression was conducted to examine the effect of information quality, information system quality and service quality on ERP user satisfaction (Model II).

The regression test results for model I can be seen in the following table:

Table-5. Model I regression test results

Variabel	B	T	sig	Keterangan
Constant	1,820	1,660	0,101	
System Quality	0,064	1,418	0,160	H_{1a} rejected
Quality of Information system	-0,024	-0,417	0,678	H_{1b} rejected
Service Quality	0,037	0,555	0,581	H_{1c} rejected
R square	0,158			
F	5,331			
Sig F	0,002			

Dependent variable: Use of real ERP

Based on the results of the regression test on Model I it can be concluded that:

1. The results of the F test show the results of testing on the research model I. The results of this test indicate the F value of statistics is 5.331 with a significance value of 0.002. This means that the proposed research model I can be accepted, where together the variable quality of information systems, information quality and service quality have an influence on the real use of Enterprise Resource Planning.

2. The results of the t test show partial testing of hiptesis. The test results on Hypotheses 1a, 1b, and 1c show the value of t statistics for the variable quality of information systems, information quality and service quality respectively are 1.418; -0.417 and 0.555 with a significance level of t of 0.160; 0.78 and 0.581. Based on the results of the t test, it can be concluded that hypotheses 1a, 1b, and 1c are rejected, meaning that there is no influence on the quality of information systems, information quality and service quality on real use of Enterprise Resource Planning.

3. The R square test is intended to test how much influence the variable quality of information systems, information quality and service quality on the real use of enterprise resource planning. From the test results, it can be seen that the R square value is 0.158, meaning that the variable quality of information systems, information quality and service quality has an influence of 15.8% on the variable real use of Enterprise Resource Planning.

5.5. Results of Model Regression II

After the regression test for model I, then for the second model the second regression test was carried out. The following are the results of the regression test on Model II:

Table-6. Model II regression test results

Variabel	B	t	Sig	Information
Constant	1,413	0,901	0,370	
Sustem Quality	0,132	2,058	0,043	H_{2a} accepted
Quality of Information System	0,149	1,829	0,071	H_{2b} accepted
Service Quality	0,215	2,223	0,028	H_{2c} accepted
R square	0,698			
F	65,390			
Sig F	0,000			

Based on the results of the regression test on Model II it can be concluded that:

1. The results of the F test show the results of testing on the research model II. The results of this test indicate a F value of 65.390 with a significance value of 0.000. This means that the proposed research model I can be accepted, where together the variable quality of information systems, information quality and service quality has an influence on user satisfaction Enterprise Resource Planning.

2. The results of the t test show partial testing of hiptesis. The test results on Hypotheses 2a, 2b, and 2c show the value of t statistics for the variable quality of information systems, information quality and service quality respectively are 2.05; 1,829 and 2,233 with a significance level t of 0,043; 0.071; 0.028. Based on the results of the t test, it can be concluded that hypotheses 2a, 2b, and 2c can be accepted, meaning that there is an influence of information system quality, information quality and service quality on user satisfaction of Enterprise Resource Planning.

3. The R square test is intended to test how much the influence of information system quality variables, information quality and service quality on real use of Enterprise Resource Planning. From the test results, it can be

seen that the R square value is 0.698, meaning that the three variables of information system quality, information quality and service quality have an effect of 69.8% on the real use variable of enterprise resource planning.

6. Conclusion

Based on the objectives and framework of the study, the researchers managed to obtain data through the distribution of questionnaires to 89 employees of four government banks in 7 cities in the province of West Sumatra. The results of the regression analysis conducted on model I show that there is no effect on the quality of information systems, information quality and service quality on real use of Enterprise Resource Planning (ERP). However, different things were found for regression tests on model II, that is, there was the influence of information system quality, information quality and service quality on user satisfaction of Enterprise Resource Planning (ERP).

6.1. Suggestion

Based on the limitations of this study, some suggestions can be raised including:

1. This study uses four bank employees as sample targets. This may have an impact on the answer to the questionnaire because the answers provided are relatively uniform because they have indeed worked with the same ERP everyday. Therefore it is recommended for the next researcher to use a more varied sample.

2. The next researcher is expected to be able to develop a research framework by examining the effect of system quality, information quality and service quality on individuals, units or companies.

References

Delone, W. H. and R, M. E. (1992). Information System Success : The Quest for Dependent Variabel. *Information System Research.*

Delone, W. H. and McLean, E. R. (2003). The delone and mclean model of information system success a ten year update. *Journal Of Information System*.

Harasis, A. A., Qureshi, M. I. and Rasli, A. (2018). Development of research continuous usage intention of e-commerce. A systematic review of literature from 2009 to 2015. *International Journal of Engineering & Technology,* 7(2.29): 73-78.

Jogiyanto, H. M. (2007). *Model kesuksesan sistem teknologi informasi.* Penerbit Andi: Yogyakarta.

Livari, J. (2005). *An empirical test of delone and mclean model of information system success, Database for advance in information system.* Proquest Company.

McGill, T., Hobs, V. and Klobas, J. (2003). User developed applications and information system success. *A test of Delone and McLean Model.*

Roldán, J. L. and Leal, A. (2003). Validation test of an adaptation of the delone and mclean's model in the spanish eis field. In critical reflections on information systems, A systemic approach *IGI Global*.: 66-84.

Teng, J. T. and Calhoun, K. J. (1996). Organizational computing as a facilitator of operational and managerial decision making, An exploratory study of managers' perceptions. *Decision sciences,* 27(4): 673-710.