# SUCCESSFUL IMPLEMENTATION OF ENTERPRISE RESOURCE PLANNING

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## ABSTRACT

*The purpose of this research was to analyze factors that influence a successful implementation of Enterprise Resource Planning (ERP) at PT Agung Sedayu Group. Measuring the success of ERP implementation was needed to find out what success factors influence the implementation process. The DeLone and McLean success model was used as a measurement tool with employees who actively used the ERP system as respondents. The research method used was a descriptive quantitative method with questionnaires as data collection techniques with the indicators on DeLone and McLean model. Data taken from the questionnaire were 187 samples from 350 active user population systems at PT Agung Sedayu Group. Questionnaire data were processed using the SPSS application to test the validity and reliability; then linear regression analysis was performed to test the hypothesis. From the results of the research, it is known that all variables of system quality, information quality, service quality, usage, user satisfaction, and net benefits have an influence on the successful implementation of ERP at PT Agung Sedayu Group. The conclusion presents that the successful implementation of ERP is more influenced by user satisfaction supported by the level of use, system quality, information quality, and service quality.*

***Keywords:*** *Enterprise Resource Planning, DeLone and McLean model, system quality, information quality, service quality*

## INTRODUCTION

Enterprise Resource Planning (ERP) is an investment that has high value and is not seen in a company (Simamora et al., 2015). ERP is a system that helps to organize business processes in an integrated unit such as marketing, production, purchasing and accounting, and storing all transactions in a database used by the company and providing management reporting tools (Brady, Monk, & Wagner, 2001). With the existence of an ERP system, the company's business processes will be more effective, mutually integrated into each division, improve company performance, and can assist management in managerial decision making (Wicaksono, Mulyo, & Riantono, 2015).

In Indonesia, many large companies have not integrated each company's business processes into computerized systems due to large costs and a long time. Moreover, in small companies, ERP implementation is difficult to implement even the thought of implementing an integrated system like that as if it is still new. ERP implementation also provides major changes in the company, therefore it is necessary to know the important aspects that must be considered such as user, commitment, software and hardware, training, and change in order to provide knowledge and assist stakeholders in developing relevant strategic steps and policies (Irfani, 2015). In addition, after the implementation of the ERP system, many questions arise mainly from management, such as how much influence the ERP implementation has on the performance and productivity of all employees towards the company. Another question arises; how much influence the ERP implementation has to make business processes

more effective, efficient, and support the company's performance to make decisions and increase profits.

Wijaya and Alianto (2012) have stated that an ERP system is an integration program application, with cross-functional from an organization and the main purpose of using an ERP system is to improve the more effective and efficient work methods of an organization. According to Alianto and Wijaya (2013), ERP systems will help related business units to share data and information, reduce costs, and improve business processes, which will have an impact on improving work outcomes (productivity) to be more efficient and effective. Anardani and Putera (2018) have also argued that an ERP system is a software package that is assigned to coordinate the company's internal strength so as to produce a management system that is more effective and efficient in processing data. The company performance growth can be seen in Figure 1.

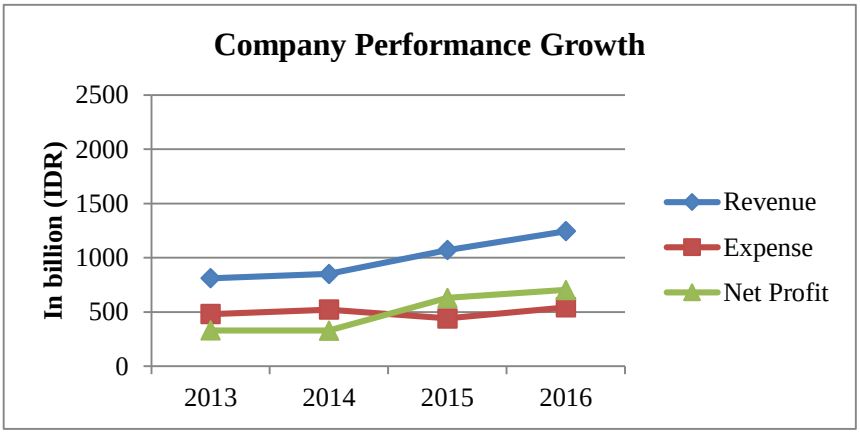


Figure 1 Company Performance Growth
(Source: PT Agung Sedayu Group)

Based on data in Figure 1 on the growth of company performance, since the ERP implementation in 2015, the company's revenue increases due to time efficiency that increases employee productivity and could reduce operational costs such as paperless which has an impact on increasing the company's net profit. Therefore, questions arise from the management of how much influence the ERP implementation has on employee productivity towards the company and how much influence the ERP implementation has on making business processes more effective and efficient.

Research to analyze the success of ERP implementation has been carried out by many researchers. Wisudiawan (2015) has analyzed the success factors of information systems using the DeLone and McLean model using parametric statistical methods that use interval ratio data. It finds that user satisfaction is determined by three factors, namely system quality, information quality, and service quality. Setyo and Rahmawati (2015) also have examined the problem of the influence of information quality and information system quality on the satisfaction and performance of users of information systems whose results find that information quality affects intention to use and user satisfaction. Saputro, Budiyanto, and Santoso (2016) have also analyzed the success of e-government using DeLone and McLean's success model case study in Pekalongan city government with the Slovin sampling method. It finds that information quality and system quality influence the intention user while information quality, system quality, and service quality have a positive effect on user satisfaction.

Based on the results of previous research studies, it is known that there are many researches on the success of ERP implementation. However, to analyze the success of ERP implementation in the implementation process which is only three years old, there is still no differences in population use, samples, time periods, and different methods as reasons for the authors to analyze the success of ERP implementation. In addition, this research is also asked directly by the ERP implementation manager to help evaluate the implementation process in order to focus on important factors so that it can save time and costs of implementing an ERP system. Regarding these problems, the purpose of this research is to analyze the factors that influence the success of ERP implementation and assist management in evaluating the implementation process.

From this research, the company will get benefits, namely; (1) It is expected that the management of the company can find out what variables can affect the success of the system being implemented. (2) It is expected that the management department can improve the quality of the system, the quality of information, and the quality of services that can affect the level of use and the level of user satisfaction so that it can ultimately increase the net benefits of the company.

## METHODS

This research is descriptive and explorative research with a quantitative approach. Explorative research is research conducted to obtain very general information about research problems, namely information about the success of enterprise resource planning implementation. The population of this research is Agung Sedayu Group employees who have used an enterprise resource planning business system of 350 people. Respondents are the operational, purchasing, warehouse, and finance accounting parts of the staff level, supervisor, manager, general manager, and director.

Based on the Slovin formula, the total sampling of the population of 350 users of the ERP information system is:

N = N / (1+ (N x e2))
N = 350 / (1+ (350 x 0,052))
N = 350 / (1+ (350 x 0,0025))
N = 350 / (1+ 0,875)
N = 350 / 1,875
N = 186,67

The value of N shows the number of samples of 186,67 rounded to 187. Therefore, the number of sampling required for this research is 187 sampling. This research uses one sampling technique, namely random sampling. This sampling technique can provide the most biased generalizations as investigations and randomly distribute in the population. Primary data in this research comes from questionnaires distributed to respondents either directly or via the internet. In this research, researchers obtained secondary data based on data obtained from supporting libraries and pieces of literature in libraries, journals, previous research, and websites or the internet.

The researcher is part of the ERP implementation system team so that it can make direct observations by observing the object of research in the company. To get the appropriate data, the researcher will make a question in the form of a questionnaire based on defined variables. Questionnaires are given to users of information systems within the company to get information and feedback on the use of information systems that have been implemented. So it is known to what extent the information system is in accordance with the wishes of the user, the duration of the use of information systems, the extent to which information systems help and facilitate the user in carrying

out daily work, and an analysis of the benefits obtained by the organization on system implementation. The data on the questionnaire regarding the evaluation of the success of the ERP implementation will be shared with random users, and the researcher receives the questionnaire again if it has been filled in by the respondent. Questionnaires are used to measure accurately the extent of the influence of variables.

Before the hypothesis test is carried out, the results of the questionnaire data will be tested for validity and reliability testing using the SPSS version 20 application. Validity test is used to measure whether the questionnaire questions have represented a picture of the intended variable. The Pearson correlation method is used to test the validity of question items with a significance value of 0,05%. This means that the level of trust in decision making to accept or reject the hypothesis is 95% with a margin of error of 5%. With the number of the sample as many as 187, then the R-Table obtained from the R product moment with a significance value of 0,05 is 0,148. Reliability test is used to measure whether the questionnaire questions are reliable for research. Reliability testing is done using Cronbach's alpha. Where if the Cronbach's alpha value >= 0,6 then the question is declared reliable. Conversely, if the Cronbach's alpha value is <0,6, the question is declared unreliable. After the quality of the data is declared valid and reliable, the researcher conducts linear regression analysis to test the hypothesis which aims to measure what factors influence the success of enterprise resource planning implementation. Variable measurements for the DeLone & McLean model will use a Likert scale from strongly disagree to strongly agree. This scale is indicated by the criteria; number 1 means strongly disagree, 2 means disagree, 3 means enough, 4 means agree, 5 means strongly agree (Sekaran & Bougie, 2009).

DeLone & McLean model is a framework used for measuring the success of IS (Information Systems). There are six dimensions for measuring the success of the IS model (Petter, DeLone, & McLean, 2008); (1) system quality is the desired characteristics of an information system, for examples easy to use, flexible, system reliability, easy to learn, and intuitive system features, sophistication, flexibility, functionality, data quality, portability, integration, importance, and response times. (2) Information quality is desired characteristics of system output, namely management reports and web pages, for example relevant, easy to understand, accurate, concise, complete, security, currency, timeliness, and usability. (3) Service quality is a service provided by the system to the user both directly and indirectly, for examples responsiveness, accuracy, reliability, technical competence, and empathy from staff members. (4) Intention to use; intention to use is an attitude (attitude) while use is a behavior (behavior) in the use of the system by the user. (5) User satisfaction is the level of user satisfaction with reports, web sites, and support services, for example, user behavior. (6) The net benefit is the expansion of IS in contributing to the success of individuals, groups, organizations, industries, and nations, for examples improving decision making, increasing productivity, increasing sales, reducing costs, increasing profits, market efficiency, user welfare, and economic development. Table 1 shows the definition of each variable.

Table 1 Definition Variabel

| No | Variabel | Definition | Indicator |
|---|---|---|---|
| 1 | System Quality (SQ) | Desired characteristics of information systems are reliable for everyday use. | - Easy to Use<br>- Easy to Learn<br>- Secure<br>- Response Time |
| 2 | Information Quality (IQ) | Characteristics generated from the output system for data processing are able to provide precise and complete information. | - Accuracy<br>- Relevance<br>- Reliable<br>- Completeness |

Table 1 Definition Variabel (Continued)

| No | Variabel | Definition | Indicator |
|---|---|---|---|
| 3 | Service Quality (LQ) | In the form of services provided by the system to users of the system either directly or indirectly. | - Responsiveness<br>- Reliability<br>- Competence |
| 4 | Use (U) | A behavior that the user shows for using the system. | - Dependency<br>- Frequency<br>- Intention to reuse |
| 5 | User Satisfaction (US) | User satisfaction level for system usage. | - Recommendation<br>- Expectation |
| 6 | Net Benefits (NB) | Benefits provided by the system to all users in all related parts. | - Effectiveness<br>- Efficiency<br>- Decision Making |

To show the relationship between variables with one another, the hypothesis used (H1) System Quality has a positive influence on Use. (H2) System Quality has a positive influence on User Satisfaction. (H3) Information Quality has a positive influence on Use. (H4) Information Quality has a positive influence on User Satisfaction. (H5) Service Quality has a positive influence on Use. (H6) Service Quality has a positive influence on User Satisfaction. (H7) Use has a positive influence on User Satisfaction. (H8) Use has a positive influence on Net Benefit. (H9) User Satisfaction has a positive influence on Net Benefit. The Research Hypothesis can be seen in Figure 2.

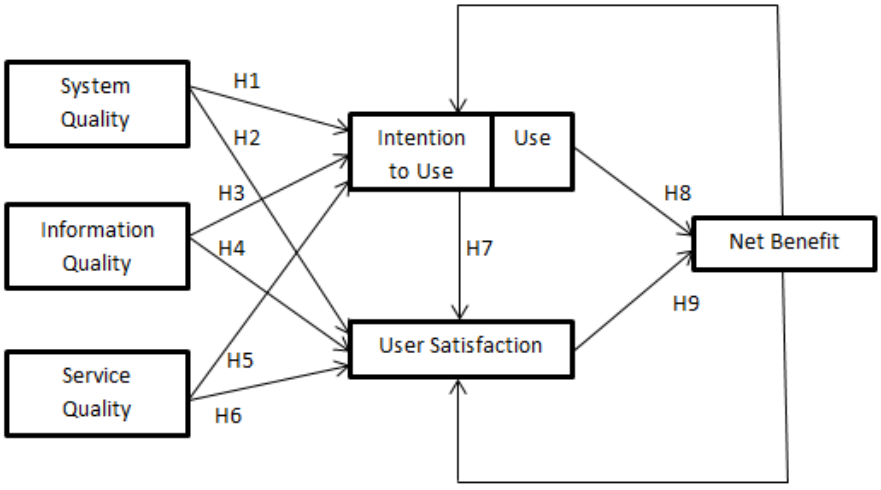


Figure 2 Research Hypothesis

## RESULTS AND DISCUSSIONS

The questionnaire is distributed randomly to the operational, purchasing, warehouse, and financial accounting departments that use ERP system by using Google form media with a domain address: https://goo.gl/forms/ESbrNj5hcr34uxsn2. Respondents have a diverse age range, but the largest users are in the age range 26-35. Respondents on average have undergraduate education levels. This shows that respondents are people who are quite educated and young. The profile distribution of the respondents can be seen in Table 2.

Table 2 Profile Respondent

| Based on Sex | | Based on Age | | Based on Education | |
|---|---|---|---|---|---|
| Male | (54.5%) | 26-35 | (57,2%) | S1 | (87,1%) |
| | | 36-45 | (17,1%) | SMA | (6,4%) |
| Female | (45.5%) | 18-25 | (13,9%) | <SMA | (4,3%) |
| | | 46-55 | (9,1%) | S2 | (2,2%) |
| | | >=55 | (2,7%) | | |

(Source: Questionnaire Data)

After distributing the questionnaire, the following are the results of each question asked. Based on the results of the system quality variable questionnaire data consisting of four indicators, most of the respondents agree on all indicators. This shows that employees have a perception that the system is easy to use and the information system is quite easy to learn but still needs program improvement so that the system is easier to learn by new system users. Table 3 is a description of the questionnaire data of system quality variable.

Table 3 Descriptive Questionnaire Data of System Quality Variable

| No | Variable | Indicator | STS (1) | TS (2) | RR (3) | S (4) | SS (5) | Average |
|---|---|---|---|---|---|---|---|---|
| 1 | System Quality (SQ1) | Easy To Use | 0% | 0% | 5,35% | 71,12% | 23,53% | 4,18 |
| 2 | System Quality (SQ2) | Easy To Learn | 0% | 0% | 3,74% | 72,73% | 23,53% | 4,20 |
| 3 | System Quality (SQ3) | Secure | 0% | 0% | 4,81% | 70,59% | 24,60% | 4,20 |
| 4 | System Quality (SQ4) | Response Time | 0% | 0% | 3,21% | 72,19% | 24,60% | 4,21 |

(Source: Questionnaire Data)

Based on the results of the questionnaire of variable data of information quality which consists of four indicators, most of the respondents agree on all indicators. This shows that employees have a perception that the system has produced complete information to help their daily work and the information system is quite easy to understand but still needs improvement to improve the information generated from the system. Table 4 is a description of the questionnaire data of information quality variables.

Table 4 Descriptive Data Questionnaire of Information Quality Variable

| No | Variable | Indicator | STS (1) | TS (2) | RR (3) | S (4) | SS (5) | Average |
|---|---|---|---|---|---|---|---|---|
| 1 | Information Quality (IQ1) | Accuracy | 0% | 1,07% | 10,16% | 66,84% | 21,93% | 4,10 |
| 2 | Information Quality (IQ2) | Relevance | 0% | 0,53% | 6,42% | 68,45% | 24,60% | 4,17 |
| 3 | Information Quality (IQ3) | Reliable | 0% | 1,07% | 8,02% | 70,05% | 20,86% | 4,11 |
| 4 | Information Quality (IQ4) | Completeness | 0% | 0% | 6,42% | 65,78% | 27,81% | 4,21 |

(Source: Questionnaire Data)

Based on the results of the questionnaire variable data service quality which consists of three indicators, most of the respondents agree on all indicators. This shows that employees have the

perception that they will easily get information from the system and the system is able to provide responses to system users, but the response from the system still needs to be improved to provide better service to users. Table 5 is a description of the questionnaire data of service quality variables.

Table 5 Descriptive Data Questionnaire of Service Quality Variables

| No | Variable | Indicator | STS (1) | TS (2) | RR (3) | S (4) | SS (5) | Average |
|---|---|---|---|---|---|---|---|---|
| 1 | Service Quality (LQ1) | Responsiveness | 0% | 0% | 4,81% | 69,52% | 25,67% | 4,21 |
| 2 | Service Quality (LQ2) | Reliability | 0% | 0% | 4,81% | 70,59% | 24,60% | 4,20 |
| 3 | Service Quality (LQ3) | Competence | 0% | 0% | 9,09% | 66,31% | 24,60% | 4,16 |

(Source: Questionnaire Data)

Based on the results of the questionnaire of data use variable which consists of three indicators, most of the respondents agree on all indicators. This shows that employees often use the system to conduct analysis to help their daily work and the system is quite often used to download data from the system. Table 6 is a description of the questionnaire data of use variables.

Table 6 Descriptive Data Questionnaire of Use Variable

| No | Variable | Indicator | STS (1) | TS (2) | RR (3) | S (4) | SS (5) | Average |
|---|---|---|---|---|---|---|---|---|
| 1 | Use (U1) | Dependency | 0% | 0,53% | 8,56% | 52,41% | 38,50% | 4,29 |
| 2 | Use (U2) | Frequency | 0% | 0% | 8,02% | 52,94% | 39,04% | 4,31 |
| 3 | Use (U3) | Intention to Reuse | 0% | 0% | 11,23% | 52,41% | 36,36% | 4,25 |

(Source: Questionnaire Data)

Based on the results of the questionnaire data of user satisfaction variable which consists of two indicators, most of the respondents agree on all indicators. This shows that employees are satisfied with the current system and will continue to use the existing system for the future and the system has produced informative information. Table 7 is a description of the questionnaire data of user satisfaction variables.

Table 7 Descriptive Questionnaire Data of User Satisfaction Variable

| No | Variable | Indicator | STS (1) | TS (2) | RR (3) | S (4) | SS (5) | Average |
|---|---|---|---|---|---|---|---|---|
| 1 | User Satisfaction (US1) | Recommendation | 0% | 0% | 12,30% | 61,50% | 26,20% | 4,14 |
| 2 | User Satisfaction (US2) | Expectation | 0% | 0% | 11,23% | 59,36% | 29,41% | 4,18 |

(Source: Questionnaire Data)

Based on the results of the questionnaire data of net benefit variable which consists of three indicators, most of the respondents agree on all indicators. This shows that the use of the system is able to provide high enough support to make decisions by decision-makers and the system is quite easy to use but still needs improvement in the future. Table 8 shows the description of the questionnaire data of net benefit variables.

Table 8 Descriptive Data Questionnaire of Net Benefit Variable

| No | Variable | Indicator | STS (1) | TS (2) | RR (3) | S (4) | SS (5) | Average |
|---|---|---|---|---|---|---|---|---|
| 1 | Net Benefit (NB1) | Effectiveness | 0% | 0% | 6,95% | 58,82% | 34,22% | 4,27 |
| 2 | Net Benefit (NB2) | Efficiency | 0% | 0.53% | 6,95% | 57,75% | 34,76% | 4,27 |
| 3 | Net Benefit (NB3) | Decision Making | 0% | 0% | 5,35% | 48,13% | 46,52% | 4,41 |

(Source: Questionnaire Data)

Researchers will test the validity and reliability of whether all questionnaire questions can be declared valid and reliable or not. Based on the validity test in Table 9, it appears that the value of R-calculate all indicators of each variable for the total indicators of each variable is >0,148 (R-table). It is decided that the whole question of all indicators of each variable is declared valid. The Cronbach alpha value for all indicator variables is >= 0,6. It is decided that all indicators of each variable are reliable. Validity and reliability test results can be seen in Table 9.

Table 9 Validity and Reliability Test Results

| Variable | R-Calculate | Validity Test Results | Cronbach's Alpha | Reliability Test Results |
|---|---|---|---|---|
| SQ1 | 0,729 | Valid | 0,662 | Reliable |
| SQ2 | 0,705 | Valid | | |
| SQ3 | 0,773 | Valid | | |
| SQ4 | 0,608 | Valid | | |
| IQ1 | 0,691 | Valid | 0,685 | Reliable |
| IQ2 | 0,759 | Valid | | |
| IQ3 | 0,697 | Valid | | |
| IQ4 | 0,725 | Valid | | |
| LQ1 | 0,908 | Valid | 0,839 | Reliable |
| LQ2 | 0,828 | Valid | | |
| LQ3 | 0,876 | Valid | | |
| U1 | 0,795 | Valid | 0,720 | Reliable |
| U2 | 0,794 | Valid | | |
| U3 | 0,813 | Valid | | |
| US1 | 0,851 | Valid | 0,623 | Reliable |
| US2 | 0,854 | Valid | | |
| NB1 | 0,831 | Valid | 0,766 | Reliable |
| NB2 | 0,845 | Valid | | |
| NB3 | 0,800 | Valid | | |

(Source: Data Processing)

After all data is declared valid and reliable (based on validity and reliability tests in Table 9), it can be said that the data is feasible to be processed in the next stage, namely testing the nine hypotheses using linear regression analysis in SPSS version 20 software.

Based on the model summary in Figure 3, the value of R (Correlation) between system quality and use is 0,224. While the value of R2 (Determination Coefficient) is 0,050 which means the influence of system quality with use is 5%. Based on the research of Saputro, Budiyanto, and Santoso (2016), it is found a positive relationship between system quality and information quality to use. Users will use the system by paying attention to the quality of the system. This can be due to the high concern of the user for the quality of the existing system. Users also feel that the system has helped them in working on their daily work processes. The training provided about the system is good and the user views the quality of the system as important as a reason for use. In this research, the relationship

between system quality and use gets positive results so that it is in accordance with previous research. The results of hypothesis testing (H1) can be seen in Figure 3.

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | 0,224[a] | 0,050 | 0,045 | 0,41489 |

a. Predictors: (Constant), SystemQuality

Figure 3 Hypothesis Test Result (H1)
(Source: Data Processing)

Based on the model summary in Figure 4, the value of R (Correlation) between system quality and user satisfaction is 0,298. While the value of R2 (Determination Coefficient) is 0,089 which means the influence of system quality with user satisfaction is 8,9%. Based on the research of Wisudiawan (2015), it is found a positive relationship between system quality, information quality, and service quality to user satisfaction. System quality affects user satisfaction. The better quality of the system, user satisfaction will increase. Users still feel satisfied even though the quality of the system is only categorized as good. This can be because the services provided by the IT team are good and the system helps users in completing operational work. In this research, the relationship between system quality and user satisfaction receive positive results in accordance with previous research. The results of hypothesis testing (H2) can be seen in Figure 4.

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | 0,298[a] | 0,089 | 0,084 | 0,39312 |

a. Predictors: (Constant), SystemQuality

Figure 4 Hypothesis Test Result (H2)
(Source: Data Processing)

Based on the model summary in Figure 5, the value of R (Correlation) between information quality and use is 0,260. While the value of R2 (Determination Coefficient) is 0,068, which means the influence of information quality with use is 6,8%. Based on the research of Saputro, Budiyanto, and Santoso (2016), it is found a positive relationship between system quality and information quality to use. Users use information systems by paying attention to the quality of information produced. This can be caused by the awareness of the user regarding the quality of the information generated from the system. In this research, the relationship between information quality and use gets positive results so that it is in accordance with previous research. The results of hypothesis testing (H3) can be seen in Figure 5.

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | 0,260[a] | 0,068 | 0,063 | 0,41105 |

a. Predictors: (Constant), InformationQuality

Figure 5 Hypothesis Test Result (H3)
(Source: Data Processing)

Based on the model summary in Figure 6, the R-value (Correlation) between information quality and user satisfaction is 0,229. While, the value of R2 (Determination Coefficient) is 0,053, which means the influence of information quality with user satisfaction of 5,3%. Based on the research of Wisudiawan (2015), it is found a positive relationship between system quality, information quality, and service quality to user satisfaction. The quality of information affects user satisfaction. The better the quality of information generated from the system, user satisfaction will increase. IT must provide good quality information, namely availability, up to date, reliable, and according to user needs, so that the information generated is useful in the management decision-making process and as input for management in determining the next strategic step. In this research, the relationship between information quality and user satisfaction gets positive results so that it is in accordance with previous research. The results of hypothesis testing (H4) can be seen in Figure 6.

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | 0,229[a] | 0,053 | 0,047 | 0,40082 |

a. Predictors: (Constant), InformationQuality

Figure 6 Hypothesis Test Result (H4)
(Source: Data Processing)

Based on the model summary in Figure 7, the value of R (Correlation) between service quality and use is 0,365. While, the value of R2 (Determination Coefficient) is 0,133, which means the influence of service quality and use is 13,3%. Based on the research of Caldeira & Ward (2002), it is found a positive relationship between service quality and usage. The IT team has provided satisfactory service and the quality of services provided by IT in accordance with what is expected by the user, causing this to affect the use of the system. Another thing that affects the use of the system is the obligation to use the system, and the system can help, accelerate, and simplify the completion of daily work so that the quality of service influences. In this research, the relationship between service quality and use gets positive results so that it is in accordance with previous research. The results of hypothesis testing (H5) can be seen in Figure 7.

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | 0,365[a] | 0,133 | 0,128 | 0,39637 |

a. Predictors: (Constant), ServiceQuality

Figure 7 Hypothesis Test Result (H5)
(Source: Data Processing)

Based on the model summary in Figure 8, the value of R (Correlation) between service quality and user satisfaction is 0,208. While the value of R2 (Determination Coefficient) is 0,043 which means the influence of service quality with user satisfaction of 4,3%. Based on the research of Wisudiawan (2015), it is found a positive relationship between system quality, information quality, and service quality to user satisfaction. The IT team has provided maximum service, this has a great effect on user satisfaction. Other things need to be improved to increase user satisfaction such as the quality of the system and the quality of the information provided by the system. Information or instructions and training are clear in order to help users complete their daily work. In this research, the

relationship between service quality and user satisfaction receive positive results in accordance with previous research. The results of hypothesis testing (H6) can be seen in Figure 8.

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | 0,208[a] | 0,043 | 0,038 | 0,40279 |

a. Predictors: (Constant), ServiceQuality

Figure 8 Hypothesis Test Result (H6)
(Source: Data Processing)

Based on the model summary in Figure 9, the R (Correlation) value between use and user satisfaction is 0,482. While the value of R2 (Determination Coefficient) is 0,233, which means that the use effect with user satisfaction is 23,3%. Based on the research of Petter, DeLone, and McLean (2008), it is found a positive relationship between use and user satisfaction. The high use of the system can ensure user satisfaction with the existing system. Users feel satisfied because there are many other factors that influence it such as services provided by a maximum IT team, good system quality, and a system that can generate information to support work. In this research, the relationship between use and user satisfaction gets positive results so that it is in accordance with previous research. The results of hypothesis testing (H7) can be seen in Figure 9.

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | 0,482[a] | 0,233 | 0,228 | 0,36074 |

a. Predictors: (Constant), Use

Figure 9 Hypothesis Test Result (H7)
(Source: Data Processing)

Based on the model summary in Figure 10, the value of R (Correlation) between use and net benefit is 0,426. While the value of R2 (Determination Coefficient) is 0,181 which means the use effect with net benefit is 18,1%. Based on the research of Petter, DeLone, and McLean (2008), it is found a positive relationship between system use and net benefits. The benefits perceived by users are obtained because it uses a system that can help, accelerate, and facilitate the user in completing day-to-day operational work. In this research, the relationship between use and net benefit received positive results so that it is in accordance with previous research. The results of hypothesis testing (H8) can be seen in Figure 10.

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | 0,426[a] | 0,181 | 0,177 | 0,47123 |

a. Predictors: (Constant), Use

Figure 10 Hypothesis Test Result (H8)
(Source: Data Processing)

Based on the model summary in Figure 11, the value of R (Correlation) between user satisfaction and net benefit is 0,435. While the value of R2 (Determination Coefficient) is 0,189 which means the influence of user satisfaction with net benefit is 18,9%. Based on the research of Setyo and Rahmawati (2015), it is found a positive relationship between user satisfaction and net benefits. Users feel satisfied with the existing information system that can guarantee users will use it continuously to support their work. This can be due to user expectations according to the desired system usability. In this research, the relationship between user satisfaction and net benefit receive positive results so that it is in accordance with previous research. The results of hypothesis testing (H9) can be seen in Figure 11.

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | 0,435[a] | 0,189 | 0,185 | 0,46890 |

a. Predictors: (Constant), UserSatisfaction

Figure 11 Hypothesis Test Result (H9)
(Source: Data Processing)

## CONCLUSIONS

Based on the results of research on the success of ERP system implementation, it can be concluded that in general, ERP systems have a positive influence on the effectiveness, efficiency, and decision making of users. Based on data processing results, ERP implementation has a positive effect on usage variables (how often users use the system), user satisfaction (level of user satisfaction in using the system), and net benefits (net system benefits to users and companies). The above components as a whole are affected positively by the implementation of ERP systems on the company. Then for system quality variables, information quality and service quality function some of the variables that must be improved in order to influence user usage and satisfaction.

Based on the conclusions, in the implementation of an ERP system, there are several very important things which are the keys to the success of implementing an ERP system and should be improved by companies and ERP system developers, namely management commitment and training in the use of ERP systems. Management commitment is needed so that the ERP system has been built and applied in the company to be used maximally as a whole so that the function of the ERP system can run properly. Then the training factor is important because users get information on how to use all functions in an existing ERP system to the maximum, so the purpose of implementing an ERP system is to improve the efficiency and effectiveness of existing business processes in the company.

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