The Impact Of System Quality And Information Quality On User Satisfaction And User Performance

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Abstract

This study aims to analyze the effect of system quality and information quality on user satisfaction and its impact on user performance.The sample selection technique uses purposive sampling is a technique of determining the sample based on specific considerations, which are based on certain characteristics that are considered to have a close relationship with the characteristics of the population that have been previously known in other words the sample units contacted are adjusted to specific criteria applied — based on research objectives. The testing of the hypothesis used is the Structural Equation Modeling (SEM) approach with variance-based structural equation testing, better known as Partial Least Square (PLS) v.3.0.The results of this study indicate that system quality has a significant positive effect on user satisfaction, information quality has a significant positive effect on user satisfaction, and user satisfaction has a significant positive effect on system user performance.

INTRODUCTION

Competition in the business world will inevitably become increasingly complex due to the globalization process in the international economy, and companies compete to improve excellence in various ways. The development and use of information technology play an important role in existing business processes (Olalla, 2000). Today almost all business sectors involve technology as an intermediary and the core of economic transactions that occur. Technology provides a variety of more benefits to support the survival of the company. One of the technological products is the information system. Even in some fields of industry, the use of information systems is a must. Information systems and information technology are fundamental structures that must be owned by a company to carry out operational activities. Information technology is a combination of computer technology and telecommunications with other technologies such as hardware, software, databases, network technology, and other telecommunications equipment.

For information technology companies in managing their daily business is "breath" to remain survived, and will not be able if the management base is still dependent on conventional systems. At this time Information technology can help create better business planning and strategies, can understand the complex business implications, be able to increase the competitive advantage of business globally, and speed in the data processing process. Therefore, many companies are now starting to develop and pay special attention to information systems as a source that facilitates the collection and use of information effectively (Maharsi, 2000). One form of attention is accounting information systems that have developed into computer-based accounting information systems. A computerized Accounting Information System allows users of financial statements to view financial statements at any time more quickly and accurately.

However, along with the many uses of the information system, a new problem arises, namely the increase in the amount of data that must be handled from the start of the inputting and processing of data starting from ordering goods, inventory, production, distribution, and finance or accounting. To overcome the problems caused by different information systems in an organization, companies must implement a system that

can integrate all their operating systems into a single system (Roni Kurniawan, 2013).

One accounting information system that is interrelated and connected that raises accounting information can ultimately be optimized for its use and is beneficial for all lines of companies, namely Enterprise Resources Planning (ERP) systems that can solve the problem as a whole and in one integrated system. Enterprise Resources Planning (ERP) is an integrated computerized information system technology that is used by world-class companies to improve their performance. ERP has evolved as an integration tool, with the aim of integrating all company applications or company core activities which include sales and marketing, maintenance, production / manufacturing, procurement / logistics, warehouse, human resources, general and financial to the data storage center (server) and can easily accessed by all work units in need (Velcu, 2010). However, to be able to adopt Enterprise Resource Planning ERP technology, a company often has to provide funds from hundreds of millions to billions of rupiah. Such funds must be available for investment in ERP application software packages, hardware in the form of servers and desktops, database and operating system software, high-performance networks, and consulting costs for implementation. Even though it is facing significant investment costs, many companies in the world and Indonesia are no exception as they are competing to adopt this information system. This condition is because an ERP application software package that will generate a "return" to investment that is feasible and fast. Examples of well-known ERP products are SAP, Oracle, JD Edwards, Microsoft Dynamics, Open Bravo. However, from the many ERP products, SAP has become the leader of the ERP product market (Bryan Septian 2014).

SAP (System Application and Product in data processing) as part of an ERP system has an essential role because SAP software is part of a system that is directly related to the user who plays a role in the success or failure of an information system implemented in an organization or company.

The delay in updating the data can affect the top management of decision making and determine the company's future strategies. However, for the process of fixing it, IT takes all day. IT did not rent from outside because of PT. Dahana has IT at the office.

Based on the background of the problem above, the purpose of this study is to determine the effect of system quality and information quality on user satisfaction and its impact on user performance of SAP (system application and product in data processing).

The success of a company's information system depends on the company in running the system. The ease of information systems for users and the use of technology used also affects the success of information systems (Goodhue, 1995).

According to Edberg and Bowman in McGill et al. (2003) said that the system quality in the DeLone and McLean information system success model contains two elements, namely subjective and objective. The measure used by DeLone and McLean to measure system quality is ease of use, functionality, reliability, flexibility, data quality, possibilities, integration, and importance.

Based on several previous studies proving that user information system satisfaction comes from the quality of the system and the quality of information. Besides, user satisfaction will affect the performance of information system users

Based on the description of the research on the effect of system quality and information quality on user satisfaction and its impact on the performance of users of SAP systems (System Applications Products in Data Processing), a framework as shown in Figure 1.1.
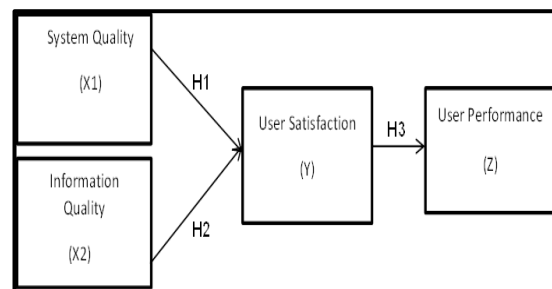

Figure 1. Research Framework

Effect of system quality on system user satisfaction

System quality is one of the first dimensions in DeLone and McLean's information system success model. "The quality of the system shows the quality of its production and is used to measure the quality of its information technology system" (Jogiyanto, 2007). System quality is a desirable characteristic of the quality qualities of the information system

itself. (DeLone & McLean, 1992 in Saleh, et al. (2012). The results of the study of Indriani & Reza (2009); Istianingsih & Wijayanto (2008); Wirahutama (2011) indicate that the quality of information systems affects user satisfaction.

DeLone & McLean (1992) in Wirahutama (2011) assume that system quality comes from the user's perception. Use and user satisfaction have reciprocal relationships that can have an impact on the individual in the organization. In other words, quality information systems that meet reliability will be able to satisfy users of information systems and optimize user performance.

Arreski (2014) states that system quality research has a positive and significant effect on system user satisfaction. Iranto (2012) System quality has a positive effect on user satisfaction of information systems, Luqman Habieb Prasojo, and Dudi Pratomo (2014) stated that the quality of the system has a significant and positive effect on user satisfaction and the research results of Karnita (2016) state that the quality of the system has a positive and significant effect on user satisfaction.

Based on the description above, the researcher wants to examine the relationship between system quality and user satisfaction. Then the first hypothesis is proposed:

H1: System quality has a significant positive effect on system user satisfaction

Effect of Information Quality on System User Satisfaction

The information system is a set of related resources to achieve specific goals. All interrelated resources in an organization will form a system within the organization (Bodnar & Hopwood, 2006: 3). Quality of information is the quality of output in the form of information generated by information systems and used in decision making. The quality of information has several characteristics, namely, relevant, timely, accurate, complete, and concise (Rai, Lang, Welker 2002, Irianto, 2012).

Fendini et al. (2013), in his study, concluded that the quality of information has a dominant influence on system user satisfaction. This statement means that the higher or, the better the quality of information produced by the system, the higher the level of satisfaction of system users. Measurement of the quality of information produced and its impact on user satisfaction needs to be done and evaluated. The success of the application of information systems and the effectiveness of the use of information systems will increase user satisfaction (Saleh et al. 2012).

Saleh, et al. (2012); Istianingsih & Wijayanto (2008); Wirahutama (2011) states that the quality of information influences user satisfaction, Luqman Habieb Prasojo, and Dudi Pratomo (2014) states that the quality of information has a significant and positive effect on user satisfaction, but in Karnita's research (2016) the quality of information has no effect on user satisfaction.

Information system users certainly hope that by using the system, they will get the information they need. Characteristics of information produced by a particular information system can be different from information from other information systems. Information systems that can produce information that is timely, accurate, as needed, and essential as well as fulfilling creativity and other measures of the quality of information, will affect the wearer's satisfaction. The results of the Istiningsih and Utami (2009) study provide empirical evidence that information quality has a positive and significant effect on user satisfaction. The higher the quality of information produced by an information system is predicted to affect the higher satisfaction of end-user information systems. The higher the quality of information, and following the needs, the satisfaction of users of information systems will increase.

Based on the description above, the researcher wants to examine the relationship between Information Quality and User Satisfaction. Then the second hypothesis is proposed:

H2: Information quality has a significant positive effect on system user satisfaction

Effect of User Satisfaction on System User Performance

Seddon (1997) states that the use of information systems is a behavior that arises due to the benefits of using the information system. The behavior generated from the use of this information system in the next process is expected to have an impact on individual performance (Istianingsih & Utami, 2009). Evaluation of the quality of information and quality of information systems must always be done to ensure that the information system used has been successful. The success of the application of information systems will increase user satisfaction, which

will ultimately improve employee performance (Saleh et al. 2012).

The relationship between end-user satisfaction of information systems and individual performance has been tested by DeLone and McLean (1992) in the model of the success of the information system they make. They stated that between the impact of the use of information systems on individual performance with the level of user satisfaction (user satisfaction) has a reciprocal relationship. Seddon (1997) states that the impact of the use of information systems in the form of increasing individual performance will affect the level of user satisfaction. Rai et al. (2002) examined the relationship between improving the performance of end-users of information systems and user satisfaction, and the results of their research showed that the benefits or effects of using this information system affect user satisfaction. Livari (2005), also researched the success of new information systems applied to users of information systems in a mandatory organization. The results of his research for the relationship of individual impact variables with user satisfaction indicate a positive influence of the two variables.

Research Irianto (2012); Istianingsih & Utami (2009) prove that user satisfaction can improve the performance of information system users. If the user of the information system believes in the quality of the information system used and feels that using the information system is very easy, then the user will be sure that the use of the system is useful. The benefits felt by users will improve the performance of users of Saleh et al. (2012).

This research focuses on seeing the extent of the impact of satisfaction of information system users on their performance. If someone is satisfied with the information system used, then they will tend to feel comfortable and safe while working by using the system so that they will feel helped in completing work. It means that the higher the level of user satisfaction for an information system, the higher their performance will be.

Based on the description above, the researcher wants to examine the relationship between user satisfaction and user performance. Then the third hypothesis is proposed

H3: User satisfaction has a significant positive effect on system user performance

RESEARCH METHODS

The research method used is a descriptive study with a case study approach. Descriptive research with a case study approach was carried out in order to obtain a more in-depth picture of the characteristics of the problems related to the background and current conditions of the subject under study, as well as their interactions with the environment (Inayah: 2010).

The type of data used in this study is quantitative data. Data sources used in this study are primary data. Primary data in this study are information collected based on respondents' answers to the questionnaire Primary data in this study obtained from the opinions or perceptions of SAP system users (System Application Products in Data Processing) at the head office of PT.DAHANA (Persero) Subang. The population of this research is active employees using the SAP system at the Head Office of PT.DAHANA (Persero) Subang. B The sample of this research is SAP system users as many as 60 people at PT. DAHANA (Persero) Subang.

The sampling technique used in this study is Non-Probability Sampling using the purposive sampling method. Purposive sampling is a technique of determining samples with specific considerations or criteria (Sugiyono: 2015: 126). The criteria used in determining the sample in this study are as follows. First, employees who are still bound by a contract. Second, active employees use the SAP (System Application Product in Data Processing) system in carrying out their duties.

The quality of the system is a measure of the processing of the information system itself Chen (2010: 310). Measured using 1-5 interval scales with indicators. First, ease of use, the information system can be said to be of quality if the system is designed to meet user satisfaction through ease in using the information system. Second, response time access speed is one indicator of the quality of information systems. If access to information systems has an optimal speed, it is appropriate to say that the information system applied is of good quality. Third, reliability of the system, a quality information system is a reliable information system. Fourth, the flexibility of an information system

shows that the applied information system has good quality. Fifth, security. An information system can be said to be good if the security of the system is reliable.

Quality of information is a function that concerns the value of output information generated by the system. Negash et al. (2003: 758). Measured using 1-5 interval scales with indicators. First, accuracy, information must be free from errors and not biased or misleading. The information must have absolute accuracy so that the truth is not doubtful. Second, timeliness, the information that comes to the recipient may not come too late, because the information that comes not on time is no longer valuable, because of the information in the decision-making process. Third, relevancy, existing information has a useful value following what is needed by the wearer. The information has a different level of relativity, depending on the level of user. Fourth, informativeness, Information produced by an information system is very informative. Information as needed.

User satisfaction is an overall evaluation of user experience in using information systems and the potential impact of information systems. Seddon & Kiew (1994). Measured using interval 1-5 with the Overall Satisfaction indicator (overall satisfaction), overall user satisfaction.

User performance is the result of work that can be achieved by an employee in an organization by using information system technology following their respective authority and responsibilities in order to achieve Muhammad's organizational goals (2015). Measured using 1-5 interval scales with indicators. First, effectivity shows success in terms of achieving the goals that have been set or not. Second, efficiency, a measure of success that is assessed in terms of the size of the source/cost to achieve the results of the activities carried out. Third, creativity a mental process that involves the emergence of new ideas or concepts (concepts), or new relationships between ideas and existing ones.

RESULTS AND DISCUSSION

In this study, researchers used data obtained by distributing questionnaires to respondents. Data collection obtain by visiting directly to the head office of PT. DAHANA (Persero) in Subang Regency. The number of questionnaires distributed was 60 questionnaires, 50 questionnaires were filled in and returned. The number of non-returned questionnaires was ten questionnaires. Then the response rate is 50/60 * 100 = 83.33%.

Verification Analysis Results

The measurement model is a combination of latent variables with indicators, variables in this study following the Effect of Quality System, Information Quality on User Satisfaction And Its Impact on User Performance of SAP Systems (System Application Product in Data Processing). The number of variables is 4 (four) with a total indicator of 13 (thirteen) and consists of 25 (twenty-five) statements. System Quality Variables consist of 5 (five) indicators of 10 (ten) statements, Information Quality variables consist of 4 (four) indicators 5 (five) statements, User Satisfaction variables consist of 1 (one) indicator 2 (two) statements, Performance variables Users consist of 3 (three) indicators 9 (nine) statements. The calculation results of all variables using SmartPLS v.3 are in Figure 1.2.
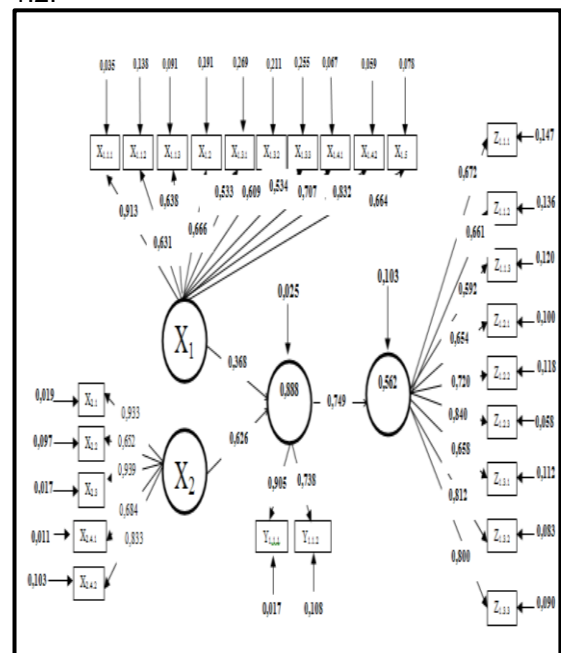

Figure 2. Calculation Result

Effect of System Quality on User Satisfaction

The results of the descriptive analysis of system quality have respondents' responses of 84.76% in the first category which means that the quality of the SAP system has been considered good enough for users at the head office of PT. DAHANA (Persero) Subang as the respondent. However, when viewed from the calculation of the correlation

coefficient, this first hypothesis testing produces a correlation coefficient between latent variables of 0.368 (36.8%), so the category is in the low criteria, with a positive direction. The direction of this positive relationship indicates that if the quality of the system rises / high, user satisfaction will also increase / high and vice versa if the quality of the system drops / lows, user satisfaction will also decrease. With a contribution of 36.8% of the quality of the system, the remaining 63.2% of user satisfaction comes other factors not examined by the researcher.

If seen from the results of t count, the first hypothesis testing shows the value of t count of 4.048 higher than t table (1.67866) and the coefficient of 0.368. It states that the system quality variable has a positive and statistically significant effect on user satisfaction with a moderate /coefficient value. The reason for system quality has a significant positive effect on user satisfaction because employees who use the SAP system at the headquarters of PT.DAHANA (Persero) Subang as respondents are satisfied with the quality of the SAP system, and it comes from the ease of use, speed of access, reliability, flexibility, and system security is pretty good.

Indicators that significantly affect the quality of the system in this study amounted to 36.8% regarding the ease of use of X1.1.1 (0.913), X1.1.2 (0.631), X1.1.3 (0.638), Access Speed X1.2 (0.666), Reliability X1.3.1 (0.533), X1.3.2 (0.609), X1.3.3 (0.534), Flexibility X.1.4.1 (0.707), X.1.4.2 (0.832), and Security X.1.5 (0.664).

The results of this study are in line with previous research conducted by Karnita (2016) that the quality of the system has a significant positive effect on user satisfaction. Research by Prasojo and Pratomo (2014) on system quality has a positive and significant effect on user satisfaction, Dwi Fitra Arreski (2014) stated that system quality research has a significant influence on system user satisfaction, and Iranto (2012) System quality has a positive effect on user satisfaction of information systems.

By knowing that the quality of the system affects user satisfaction, it is clear that the quality of the SAP system provided by PT. DAHANA (Persero) Subang as a system provider to employees using the SAP system as a user continues to be improved so that both DAHANA and employees using the SAP system feel the level of satisfaction that is following the needs through the SAP System. However, there are still other factors beyond the indicators of the system quality variable towards user satisfaction in this study of 63.2%.

Effect of Quality Information on User Satisfaction

The results of the descriptive analysis of the quality of information have respondents' responses of 81.6% in the first category, which means the quality of information The SAP system has been considered good enough for users at the head office of PT. DAHANA (Persero) Subang as the respondent. However, when viewed from the calculation of the correlation coefficient, testing the second hypothesis produces the results of the correlation coefficient between latent variables of 0.626 (62.6%) so it is in the criteria of moderate, with a positive direction. The direction of this positive relationship indicates that if the quality of information rises / high, user satisfaction will also increase / high and vice versa if the quality of the system drops / lows, user satisfaction will also decrease. With a contribution of 62.6% of the quality of information, the remaining 37.4% of user satisfaction comes from other factors not examined by researchers.

If seen from the results of t count, testing the second hypothesis shows the value of t count of 7.381 higher than t table (1.67866) and the coefficient of 0.626. It states that the information quality variable has a statistically significant positive effect on user satisfaction with a moderate coefficient value. The reason for the quality of information has a significant effect on user satisfaction because employees who use the SAP system at the head office of PT.DAHANA (Persero) Subang as respondents are satisfied with the quality of the SAP system information, and it comes from information accuracy, timeliness, relevance, and information it is good enough.

Indicators that significantly affect the quality of the information in this study amounted to 62.6% regarding the accuracy of information X2.1. (0.933), timeliness of X2.2 (0.652), relevant X2.3 (0.939), and informal X2.4.1 (0.684), X2.4.2 (0.833).

After the analysis, it is clear that the results of this study are not in line with the research conducted by Karnita (2016), which states that the quality of information does not affect user satisfaction. However, this research is in line with the research of Habieb Prasojo and Dudi Pratomo (2014) that the quality of information has a positive and significant effect on user satisfaction. It means that the

higher or better the quality of information produced by the system, the higher the level of system user satisfaction. The Istiningsih and Utami study (2009), provides empirical evidence that information quality has a positive and significant effect on user satisfaction.

By knowing that the quality of information affects user satisfaction, it is clear that the quality of information from the SAP system provided by PT. DAHANA (Persero) Subang as a system provider to employees using the SAP system as a user continues to be improved so that both DAHANA and employees using the SAP system feel the level of satisfaction that is following the needs through the SAP System. However, there are still other factors beyond the indicators of the system quality variable towards user satisfaction in this study of 37.4%.

Effect of User Satisfaction on User Performance

The results of the descriptive analysis of the quality of information have respondents' responses of 81.6% in the first category, which means the quality of information The SAP system has been considered good enough for users at the head office of PT. DAHANA (Persero) Subang as the respondent. However, when viewed from the calculation of the correlation coefficient, testing the third hypothesis produces the results of the correlation coefficient between latent variables of 0.749 (74.9%), so it is in the criteria of high, with a positive direction. The direction of this positive relationship shows that if user satisfaction rises / high, the user performance will also increase / high and vice versa if user satisfaction falls / lows, the user performance will also decrease / low. With a contribution of 74.9% of user satisfaction, the remaining 25.1% of user performance comes from other factors not examined by the researcher.

If seen from the results of t count, testing the third hypothesis shows the value of t count equal to 10.648 greater than t table (1.67866) and the coefficient value is 0.749. It states that the User satisfaction variable has a statistical effect on user performance with a "high" coefficient value. The reason for user satisfaction has a significant effect on user performance because users feel satisfied with the quality of the system and the quality of the information in the SAP system that is very helpful for their work so that their performance is getting better using the SAP

system. Indicators that significantly affect user satisfaction in this study amounted to 74.9% regarding overall user satisfaction Y1.1.1 (0.905), Y1.1.2. (0,738).

CONCLUSION

After analysis, it is clear that the relationship between end-user satisfaction of information systems with individual performance has been tested by DeLone and McLean (1992) in the model of the success of the information system they make. They stated that between the impact of the use of information systems on individual performance with the level of user satisfaction (user satisfaction) has a reciprocal relationship. The results of this study are in line with Irianto's Research (2012); Istianingsih & Utami (2009) prove that user satisfaction can improve user performance. The success of the application of information systems will increase user satisfaction, which will ultimately improve employee performance (Saleh et al. 2012). The results of this study are also following the findings of Doll and Torkzadeh, (1998) which states that the end user information system has benefited as a benchmark for the success or failure of the use of information systems.

By knowing that user satisfaction is very influential on user performance, it is clear that the quality of the system, the quality of information, and the SAP system will continue to be improved. So that both the DAHANA and the employees as SAP system users both get the benefits that match their needs. However, there are still other factors beyond the indicators of the variable user satisfaction with net benefits in this study of 25.1%.

Next, by the fourth indicator (flexibility) in the second statement, then the second indicator (access speed), then the fifth indicator (system security), then the third indicator (system reliability) in the second statement.

2. Quality of information influences user satisfaction Of the four indicators the most substantial results that affect the quality of information with the value of loading factor> 0.5 is the third indicator (relevant), then followed by the first indicator (information accuracy), then the fourth indicator (informative) on second and final statement the second indicator (timeliness of information).

3. User satisfaction affects user performance. From these indicators the most

substantial results that affect user satisfaction with the value of loading factor> 0.5 is the first statement that the overall user is satisfied with the SAP system used, then followed by the second statement that the SAP system can meet the need to obtain information used in carrying out work.

The limitations of this study are that the research conducted only involves one company, namely the Head Office of PT. DAHANA (Persero) Subang so that the conclusions described only apply to PT. DAHANA (Persero) only and cannot be generalized for all of Indonesia with different objects.

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