P-ISSN: 2808-0467
E-ISSN: 2808-5051
Homepage: https://iss.internationaljournallabs.com/index.php/iss

STATE TREASURY AND BUDGET SYSTEM ONLINE MONITORING (OM-SPAN) ON ORGANIZATION PERFORMANCE

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PAPER INFO

Received: *May 2023*
Revised: *June 2023*
Approved: *2023*

ABSTRACT

Backgrounds: Prior to the adoption of the OM-SPAN program and its implementation, treasury officials must go to State Treasury Service Office (KPPN) to review the liquidation process through a Payment Order (SPM) and Fund Deposit Order (SP2D).
Aim: This study aims to analyze and obtain empirical evidence on the effect of information quality, system quality, service quality, and trust on user satisfaction of the OM-SPAN application at the Treasury Officer of the Directorate General of Housing of the Ministry of PUPR. Furthermore, the effect of user satisfaction on organizational performance will also be analyzed.
Methods: The sample consisted of 95 Treasury officials of the Directorate General of Housing of the Ministry of PUPR spread across work units and centers in 38 provinces in Indonesia.
Findings: The findings and results of this study empirically show that user satisfaction with the OM-SPAN application is influenced by several factors, namely the information quality and system quality of the OM-SPAN application. The results of this study also concluded that user satisfaction with the OM-SPAN application has a positive effect on organizational performance. The findings and results of this study also make it clear that no empirical evidence explains the effect of service quality and trust as determinants of OM-SPAN application user satisfaction.

KEYWORDS *information quality, system quality, service quality, trust, OM-SPAN*

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INTRODUCTION

The information system is no longer just a necessary support system, but also determines the success of the organization. Rahayu et al. (2018) stated that if a system supported by information technology is made to form an information system that can work effectively and efficiently, then the system can provide value to the company. The Ministry of Finance's national information system for monitoring and managing the state budget (APBN) is the Online Monitoring System for the State Treasury and Budget (OM-SPAN). OM-SPAN is included in the type of web-based application, which can be viewed via the internet for planning and implementing the State Budget. The Directorate General of Treasury creates and manages OM-SPAN to meet the needs of SPAN partners in obtaining information from the Enterprise Resource Planning (ERP) database (Ramadhani & Nasrah, 2019).

Prior to the adoption of the OM-SPAN program and its implementation, treasury officials must go to State Treasury Service Office (KPPN) to review the liquidation process through a Payment Order (SPM) and Fund Deposit Order (SP2D). According to Nugroho et al. (2017), the issuance of regulations related to improving the process of the old system has made

significant progress by replacing the old system with the State Treasury and Budget System (SPAN).

SPAN is information that comes from an integrated government financial management system that can be accessed online and uses an integrated database. With the implementation of this SPAN information system, data is no longer recorded data that is repeatedly entered in work units and verticals. According to Anwar and Hadi (2022), SPAN is the largest public finance reform initiative in Indonesia in history, so the development of SPAN is the first step to implementing IFMIS.

Kusumastuti and Irwandi (2017) emphasized that users are an important emphasis in making information systems in terms of the effectiveness of information systems. All levels of work units (*Satker, Satuan Kerja*) are affected by the shift in systemic management of state finances. The Service Quality Utilization Process is a general assessment of service excellence that must be addressed by KPPNs to understand how much high-quality OM-SPAN information is available to system users and what system users want.

One of the phenomena is a request to the Ministry of Social Affairs which seeks to achieve prosperity through the Family Hope Program (PKH, *Program Keluarga Harapan*) program which is more economical, can run effectively and efficiently and is also transparent and responsible. This system has many positive effects, including a significant reduction in failed transfers. With this application, the distribution of PKH becomes more transparent and accountable so that the 6T principles can be applied in the distribution of social assistance. OM-SPAN is a solution to various upstream problems. However, this mechanism must be modified to function properly.

Research related to the identification of factors that influence the level of success in the use of information technology has been widely studied by several previous researchers. One of them is DeLone and McLean (1992) in their model which offers a model built in assessing the level of success of a use. This will then have an impact on an organization.

According to research conducted by DeLone and McLean (2003) there is an influence between system quality, information quality, and service quality on the level of use and user satisfaction, which then has an influence on net benefits. The use must be able to precede the level of satisfaction from the user, but with positive use it will have an influence on interest in use. Tests on success models in information systems conducted by Aldholay et al. (2018) support the model that has been developed, namely the D&M IS Success Model. The study was conducted to test online studied in Yemen. Different findings come from Afnan's research (2018) which states that the D&M IS Success Model is not fully proven. Thus, it is necessary to conduct an empirical study on the DeLone and McLean success models with different objects.

Many studies have been conducted in reviewing this model and have recommended it in developing and modifying IS. One of them is related to service quality, which is one of the measurement tools. An example is SERVQUAL which is used to measure the quality of Information Technology (IT) services. In addition, many studies have proposed modifications to revise or extend the scope of the model. Some modifications researchers aim to evaluate the success of certain frameworks. Therefore, further review and development of the DeLone and McLean model in this study can be carried out to ensure that the modified model takes into

account most of the previous suggestions for improvement to make it more applicable and accurate.

Previous research tends to use the appropriate size, resulting in a variety of IS measures. Several studies have examined the factors that can affect the level of user satisfaction from using the application. Ichsan (2017) in his research on the implementation of the OM-SPAN application found evidence that the quality of the information produced, the quality provided by the system and the quality of the service affect user satisfaction.

In the next development, Damabi et al. (2018) modified the new model using the success model whose initial development was described by DeLone and McLean (2003). In their study, researchers tried to investigate the impact of three main factors in DeLone and McLean's success model on the level of customer trust and satisfaction. The results of this study prove empirically that there is a positive impact of trust on the level of customer satisfaction. Thus, the novelty of the model described by Damabi et al. (2018) is that there is an additional trust variable which is thought to affect the level of customer satisfaction.

Furthermore, Ali et al. (2018) conducted research to investigate the factors that are important for attracting net benefits of e-commerce from individual perspectives rather than organizational perspectives by modifying DeLone and McLean (2003) IS success model with two additional variables namely privacy and trust. This study discusses four factors namely system quality, service quality, privacy, trust, which are important to achieve user satisfaction which in turn leads to achieving net benefits in e-commerce. In addition to service quality and system quality, trust and privacy are important factors that influence net benefits through user satisfaction. Therefore, a modified version of DeLone's IS success model and a modified version of Mclean's success from an individual perspective are proposed.

Based on the D&M IS Success model developed by DeLone and McLean (2003), further developments are modified through the model developed by Damabi et al. (2018) which adds the trust variable as one of the factors that influence mobile banking user satisfaction. Next, Ali et al. (2018) investigates that there is an impact on user satisfaction by adding the variables of trust and privacy which in turn leads to achieving net benefits in e-commerce.

Researchers conducted studies on other objects by modifying the IS success model by looking at the impact of user satisfaction on organizational performance as a novelty form of this research. The additional variable in this study is trust which is used as a reference from previous research by Ali et al. (2018) and Damabi et al. (2018). The researcher did not add the privacy variable used by Ali et al. (2018) because this variable was not effective in this study, because the OM-SPAN application is a system used by non-private organizations.

This study aims to analyze and obtain empirical evidence of the effect of information quality, system quality, service quality, and trust on user satisfaction of the OM-SPAN application at the Treasury Officer of the Directorate General of Housing of the Ministry of PUPR. Furthermore, the effect of user satisfaction on organizational performance was analyzed. The researchers expect this study to contribute to a deeper understanding of OM-SPAN implementation in organizations, specifically in Indonesia.

The hypothesis in this study are as follows:

1) H_1 : The quality of information has a positive effect on user satisfaction
2) H_2 : System quality has a positive effect on user satisfaction
3) H_3 : Service quality has a positive effect on user satisfaction

4) H_4 : Trust has a positive effect on user satisfaction
5) H_5 : User satisfaction has a positive effect on organizational performance.

METHODS

The use of data in this study is primary data. In obtaining data, the researchers used a survey based on quantitative approach. Respondents were treasurer officials signing a payment order who work for the Directorate General of Housing of the Ministry of PUPR. The researcher collected data from 8 February 2023 to 10 February 2023. The researcher distributed 100 questionnaires and the number of questionnaires returned was also 100 questionnaires. After the researchers examined the entire contents of the questionnaires, it was found that there were 5 questionnaires that did not meet the criteria for sample data because the data filled in was incomplete, so based on these results, the total number of questionnaires to be processed in this study was 95 questionnaires.

The majority of respondents in this study were undergraduate graduates with a percentage of 85.26% or a total of 81 respondents and the lowest level of education was high school with a total of 7 people or a percentage of 7.37%. Furthermore, if we observe the characteristics of the respondents from their length of service, it is known that the majority of respondents are those who work > 15 years with a total of 34 people or a total of 35.79%. All respondents in this study have used the OM-SPAN application, the average respondent has used the OM-SPAN application for > 6 years.

This survey consists of six dimensions. These dimensions include information quality, system quality, service quality, trust, user satisfaction and organizational performance. Respondents were asked to answer the questions by rating them on a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). The indicators used in viewing service quality are efficiency, effectiveness and satisfaction. The data obtained the analyzed by applying a series of tests from validity testing to hypothesis testing using SPSS.

The indicators used in viewing the quality of information are accuracy, timeliness, completeness, relevance and consistency (DeLone & McLean, 2003). Indicators for monitoring system quality are ease of use, reliability, response time, flexibility and security (DeLone & McLean, 2003). The indicators used in viewing trust are reliability, honesty, caring and credibility (Khana et al., 2020). While the indicators used in viewing organizational performance are increasing organizational productivity, increasing coordination and collaboration within the organization and increasing overall performance (Urbach et al., 2010).

RESULTS AND DISCUSSION

Evaluation of the Research Hypothesis Model

This study consists of six constructs used, namely, information quality, system quality, service quality, trust, user satisfaction and organizational performance. In evaluating the research model, it can be seen from two tests, namely the outer model and the inner model. To determine the level of validity and reliability of the data, the outer model was tested, while in looking at the relationship between latent variables, the inner model was used.

Demographically, the most dominant number of respondents when viewed from gender was female with a percentage of 64.21% and the rest were male respondents amounting to 35.79%. Furthermore, in terms of the age group it can be explained that as much as 3.16% is

the age group 17-25 years, then 32.63% is the age 26-35 years, the next 33.68% is the age group 36-45 years and the remaining 30, 53% are in the age group of 46-55 years.

Measurement Model Testing (Outer Model)

Outer model testing or also known as model testing is a measurement made with the aim of seeing the level of validity and reliability of the data.

Convergent Validity

Furthermore, the validity test can be done by conducting a convergent validity test by looking at the gain from the average variance extracted (AVE) value and the communality value. The value is said to be valid if it is greater than the number 0.5. Criteria in decision making if the squared value of the AVE of each construct is greater when compared to the correlation with other constructs, then the data can be declared valid (Hair et al., 2017). The results of convergent validity testing that have been carried out are as follows:

Table 1. AVE and Communality Values

Construct	AVE	Communality
KR	0.765	0.765
KP	0.835	0.835
KO	0.816	0.816
KI	0.646	0.646
KL	0.635	0.635
KS	0.561	0.561

Referring to the data presented in the table, it can be explained that the value obtained for AVE and communality of each construct has a value greater than 0.5.

Discriminant Validity

This test can be done by looking at the acquisition of cross loading values or Fornell-Larcker values for each indicator of the research variables individually. When using Fornell Lacker, the test is accepted if the AVE root value obtained is greater than the correlation value between valid constructs (Hair et al., 2017). The results of the discriminant validity test that has been carried out are explained as follows.

Table 2. AVE Root Value and Latent Variable Correlation

	KR	KP	KO	KI	K L	KS
KR	**0.875**					
KP	0.699	**0914**				
KO	0.680	0.570	**0.903**			
KO	0.627	0.684	0.583	**0.804**		
KL	0.727	0.666	0.679	0.582	**0.797**	
KS	0.789	0.750	0.668	0.714	0.761	**0.749**

Referring to the data presented in the table, it can be explained that the acquisition value and AVE roots obtained are greater than the acquisition value for the correlation between each construct, thus giving the conclusion that it has been declared valid.

Reliability Testing

This study will conduct a reliability test by looking at the acquisition of Cronbach's alpha and composite reliability scores, the higher the score will indicate the higher the level of reliability (Sekaran & Bougie, 2016). The decision-making criterion is that if the Cronbach's alpha value is obtained and the composite reliability value is greater than 0.7, it can be stated that the data is reliable. The results of the reliability testing that has been carried out are:

Table 3. Cronbach's Alpha and Composite Reliability Values

Construct	Cronbach's Alpha	Composite Reliability
KR	0898	0.929
KP	0.901	0.938
KO	0887	0.930
KI	0.862	0.901
KL	0.851	0.895
KS	0.804	0.864

Referring to the data presented in the table above, it can be concluded that the data meets the reliability testing criteria which can be seen from the acquisition of Cronbach's alpha and composite reliability scores which are at a number greater than 0.7. This data indicates that the measuring instrument used in this study can be said to be reliable.

Overall, the final conclusion that can be explained based on testing the outer model is that all constructs used as models in this study have fulfilled the validity and reliability tests. This conclusion is based on the results of the overall test, both convergent validity, discriminant validity and reliability testing that have met the established testing criteria.

Structural Model Testing (Inner Model)

The inner model is an equation that explains the relationship between constructs (Hair et al., 2017). The parameter in looking at the structural testing of the model is the R-square value (R^2), the higher the value obtained indicates that the variable is better at explaining the model. The results of data processing from testing using a structural model will be presented below.

R-Square Value (R^2)

R-square coefficient is a value that describes the magnitude of the effect that will be given by exoegenous latent variables on endogenous latent variables . The value of the coefficient of determination is between 0-1, the acquisition of a value close to one indicates that the level of correlation is getting stronger. The results of testing the R-square value that has been carried out will be explained as follows.

Table 4. R-Square Value (R^2)

Construct	R - Square
KP	0.636
KO	0.325

Obtaining the R-square value of the variable obtained user satisfaction of 0.636. This can explain that the intention to change in the variable user satisfaction is influenced by the intention to change in the variables of information quality, system quality, service quality and trust by 63.6%, while the remaining percentage of 36.4% is influenced by other variables that are not in the model. The R-square value of the organizational performance variable is 0.325. This can be explained that the intention to change in the organizational performance variable is influenced by the intention to change in the user satisfaction variable by 32.5%, while the remaining percentage of 67.5% is influenced by other variables that are not in the model.

Path Coefficient Value

The path coefficient value indicates a high level of relevance in evaluating the proposed hypothesis. Testing the significance of the SmartPLS program was carried out using the bootstrapping technique.

Table 5. Path Coefficient Value

Hypothesis	Construct	Original Sample (O)	T Statistics (|O/STDEV|)	P Values	Decision
H1	Information Quality -> User Satisfaction	0.267	2,310	0.021	**Accepted**
H2	System Quality -> User Satisfaction	0.298	2,352	0.019	**Accepted**
H3	Service Quality -> User Satisfaction	0.144	1,498	**0.135**	**Rejected**
H4	Trust -> User Satisfaction	0.192	1,497	**0.135**	**Rejected**
H5	User Satisfaction -> Organizational Performance	0.570	5,527	0.000	**Accepted**

Referring to the research results presented in table 5, it can be explained that the acquisition of the t-statistic value is 2.310 or greater than 1.662. In addition, it can also be seen from the acquisition of the beta (β) value which shows that the number is positive, namely 0.267. This data can be explained that there is a positive and significant influence between the quality of information and the satisfaction of OM-SPAN users. So it can be concluded that hypothesis 1 is accepted.

Referring to the research results presented in table 5, it can be explained that the acquisition of the t-statistic value is 2.352 or greater than 1.662. In addition, it can also be seen from the acquisition of the beta (β) value which shows that the number is positive, namely 0.298. This

data can be explained that there is a positive and significant influence between system quality on OM-SPAN user satisfaction. So it can be concluded that hypothesis 2 is accepted.

Referring to the research results presented in table 5, it can be explained that the acquisition of the t-statistic value is 1.498 or less than 1.662. In addition, it can also be seen from the acquisition of the beta (β) value which shows that the number is positive, namely 0.144. This data can be explained that there is an insignificant effect between service quality on OM-SPAN user satisfaction. So it can be concluded that hypothesis 3 is rejected.

Referring to the research results presented in table 5, it can be explained that the acquisition of the t-statistic value is 1.497 or less than 1.662. In addition, it can also be seen from the acquisition of the beta (β) value which shows that the number is positive, namely 0.192. This data can be explained that there is an insignificant effect between trust and OMSPAN user satisfaction. So it can be concluded that hypothesis 4 is rejected.

Referring to the research results presented in table 5, it can be explained that the acquisition of the t-statistic value is 5.527 or greater than 1.662. In addition, it can also be seen from the acquisition of the beta (β) value which shows that the number is positive, namely 0.570. This data can be explained that there is a positive and significant influence between user satisfaction on organizational performance. So it can be concluded that hypothesis 5 is accepted.

The purpose of this research is to see how information quality, system quality, service quality, and trust affect user satisfaction of the OM-SPAN application. This study also investigates the impact of user satisfaction levels on organizational performance. Based on the test findings, three of the five hypotheses previously proposed were approved, while the others were rejected. The following is a summary of the research findings.

The research findings prove empirically that there is a significant influence of information quality variables on user satisfaction. The findings of this study are consistent with the findings of previous research conducted by Sancoko et al. (2022) to determine the determinants of variables that influence user satisfaction in using HRIS applications, which shows that the quality of information has a substantial impact on user satisfaction. Other studies have found that there is a substantial and beneficial relationship between information quality and user satisfaction (Ali et al., 2018).

The better quality of information from an application system will also provide a good level of perception for its users, thereby making users more confident in using the application and further increasing user satisfaction. This is also related to the needs and requirements of information that can only be obtained through the operation of a particular system. This causes the quality of information in the OM-SPAN application to be one of the key factors that will affect user satisfaction. Measurement of the quality of the information itself can be seen from the accuracy of the information data produced, the timeliness in processing the results of the information issued, the completeness of the information presented according to user needs and the consistency of the information produced from a system. This indicator is also used by researchers in assessing the views of respondents on the quality of information produced by the OM-SPAN application. The better the indicator in question, the higher the satisfaction level of its users will be.

The results of this study also indicate that there is a positive and significant influence between system quality and user satisfaction of the OM-SPAN application. This leads to the conclusion that hypothesis 2 is accepted.

DeLone and McLean (2003) explain that the quality of a system is a combination of the quality of the program produced and the hardware of the system itself. The emphasis on system quality is on system performance, which refers to hardware and software capabilities, policies, and processes created in an information-based system to provide information to consumers. The quality of this application is the quality of the OM-SPAN application, including whether the application in question often fails or whether the OM-SPAN application needs to be restarted after a while of use, so that an excellent system quality can have a positive impact on user satisfaction.

The research results are supported by the research results of Widiastuti (2019) in her study of the variables that affect user satisfaction. The findings reveal that system quality has a substantial beneficial impact on user satisfaction of the BKD system. Other research conducted previously found that there is a beneficial relationship between system efficiency and user satisfaction (Pawirosumarto, 2016). This implies that by increasing the quality of the system, it will increase user satisfaction.

The quality of the system resulting from the OM-SPAN application is related to the overall quality of the system that can be produced, such as the ease that will be felt by users in operating the OM-SPAN system. The quality in question is also related to the resilience of the system to things that will cause damage to the system, as well as related to minimizing errors that could occur. Another thing that can be considered is the flexibility in its users and the speed with which a system can be accessed by its users. In addition, how a system can maintain the data privacy of its users also reflects the quality level of the system.

The findings of this study explain that there is no significant relationship between service quality and user satisfaction of the OM-SPAN application. This leads to the conclusion that hypothesis 3 is rejected.

The results of empirical studies in this study explain that service quality has no significant effect on user satisfaction. This means that if perceptions related to service quality go up or down, it will not have an impact on the ups and downs of user satisfaction. This is because users are more focused on the quality of the system and the quality of the information provided by the OM-SPAN application.

The results of this study do not support the proposed hypothesis, nor are these results in line with previous research, namely research by Sancoko et al. (2022) which investigated the relationship between HRIS applications and factors that influence user satisfaction. DeLone and McLean's information systems success paradigm became the intellectual basis for this research. The findings in this study indicate that service excellence has a significant impact on user satisfaction. This may be because the OM-SPAN application is mostly used to obtain information needed by users, not as a tool to obtain services.

The findings in this study support the empirical results by Komala and Selvi (2021) who conducted a study to see the level of customer satisfaction using online motorcycle taxi transportation services. The results of this study concluded that there was no significant influence between service quality and customer satisfaction levels.

The results of the empirical study in this study explain that trust does not have a significant effect on user satisfaction. This means that if the perception related to trust goes up or down it will not have an impact on the ups and downs of user satisfaction. This is because users who have confidence in the OM-SPAN application cannot be interpreted that users can feel

satisfaction with the application, so that trust is not the reason for users to feel satisfied with the use of the OM-SPAN application.

The hypothesis proposed is not accepted, this is also not in line with the findings of Ali et al. (2018) e-commerce success factors using the adapted DeLone and Mclean models. According to the study findings, trust in using online-based shopping applications has a significant impact on customer satisfaction. According to the results of other studies, trust has a good influence on consumer satisfaction (Damabi et al., 2018).

The results of this study are in line with research by Meida et al. (2022) who conducted a study with its findings which explained that there was no significant influence between trust and customer satisfaction. Other studies that support this study are studies conducted by previous researchers, the results of these studies conclude that trust is not enough to provide customer satisfaction (Mawey & Tumbel, 2018). The research explains that there are things or other factors that influence satisfaction for customers, which cannot be explained by the level of trust. Furthermore, these findings indicate that there is a beneficial and substantial influence between user satisfaction and organizational performance. This leads to the conclusion that hypothesis 5 is accepted.

Satisfaction of the OM-SPAN application users in the form of responses generated after using the information system and reuse of the application for the benefits generated by its users after implementing the information system. For example, to enable more detailed planning so that organizational goals are achieved, and so that user satisfaction with the OM-SPAN application has a beneficial impact on organizational performance.

The findings in the study are supported by the research results of Sabeh et al. (2021), the results of the empirical study show that there is a large impact and positive value from user satisfaction on organizational performance. The results of his research also resulted in a conclusion that the implementation of the use of accounting-based information systems has a significant influence and has a positive impact on organizational performance (Baridwan, 2012). The results of these studies strengthen empirical evidence which shows that there is a significant influence between the level of user satisfaction on organizational performance.

CONCLUSION

The results of this study can be used as an additional reference in helping to develop the OM-SPAN application in government circles. Practitioners and developers of technology-based applications can view and consider factors that can encourage and increase user satisfaction in using the OM-SPAN application. Through this, it is hoped that the OM-SPAN application can continue to be developed and be increasingly well received by every user. Another implication is that the findings from this research will serve as evaluation and monitoring material for the government in implementing the OM-SPAN application so that it can have a positive influence and impact on organizational performance.

Some of the limitations in this study are well aware of the researchers. First, the number of population in this study can be said to be relatively small, so that in carrying out the sample selection technique, the researcher used a saturated sample selection technique. Thus, suggestions for future researchers who will conduct studies in the same scope can carry out research development by conducting studies in a larger population and carrying out the appropriate sample selection stages.

Related to the second limitation of research is in terms of returning research questionnaires that are not filled in completely. Researchers did not distribute questionnaires through Google forms, but by conducting direct research using research questionnaires that were ready to be filled in by respondents. This questionnaire distribution technique was carried out directly in the hope of a high rate of return. However, there were several questionnaires that were not completely filled in so they could not be used as research data. As a suggestion for future researchers is to provide and utilize the Google form in returning questionnaires. So that follow-up can be done using the contact person obtained when giving the research questionnaire.

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