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RESEARCH ARTICLE

INDIVIDUAL AND ORGANIZATIONAL IMPACTS: INFORMATION AND SYSTEM QUALITY INFLUENCE ON ATTITUDE TOWARDS USE AND USER SATISFACTION OF AGENCY-LEVEL FINANCIAL APPLICATION SYSTEM

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ABSTRACT

Agency-level financial application system (SAKTI) at Directorate General of Budget (DJA) - The Ministry of Finance of the Republic of Indonesia was built to provide benefits in the form of increased integration, efficiency, planning processes, implementation, and accountability of the state budget rather than the previous system. But the fact is, the implementation of SAKTI still causes problems related to users and their impact on individuals and organizations, thereby reducing these benefits. The purpose of this study is to test the influence of information and system quality of SAKTI on attitude towards use and user satisfaction and its impact on individual of SAKTI's user and organizational impact of DJA. This is a quantitative study using primary data from SAKTI's operational user as respondent that was collected using paper & pencil method. The population in this study was 60 people. Using purposive sampling technique with access frequency criteria, a sample size of 55 users was obtained. Data analysis using Structural Equation Modelling (SEM) - Partial Least Square (PLS). The result proved that both system information and system quality positively of SAKTI affect both attitude towards use and user satisfaction, both attitude towards use and user satisfaction of SAKTI positively affect each other and both of them positively affect individual impact of SAKTI's user, and individual impact of SAKTI's user positively affect organizational impact of DJA. The results of the study still do not adequately represent the overall perception of SAKTI users. In this regard, further research is needed covering the scope of which has not been studied in the Echelon I environment at the Ministry of Finance in addition to the DJA. Research on the risks of SAKTI implementation that does not run smoothly as well as the risks of negative impacts on the performance of individuals and organizations has never been done, especially in the work unit at the DJA – The Ministry of Finance of the Republic of Indonesia.

KEYWORDS

system quality, information quality, user satisfaction, individual impact, and organizational impact.

1. INTRODUCTION

The Ministry of Finance of the Republic of Indonesia has developed an application-based information system used in the planning, implementation and accountability of the state budget which has been running since 2005. The application consists of the Ministry / Institution Budget Work Plan Application (RKA-K/L), Work Unit Application System (SAS), Agency Accounting System Application Based on Accruals (SAIBA), Application of Management and Accounting Information Systems for State Property (SIMAK-BMN), and Inventory Applications [1].

The applications above each have their own databases and are not connected to each other even though they constitute a series in the planning, implementation and accountability of the state budget. The data entry process, which should be integrated, must be repeated repeatedly to different applications with inputs and outputs that need to be adjusted if they are to be forwarded to the next application. This problem raises the risk of human error and / or system error. Human error can occur when users input into each application with inconsistent data entry so that the resulting data is invalid when heading for the next accounting process through the application. System errors can occur when the process of converting an application's output into another application's input is not compatible. In addition to the risk of errors, the information system application above has an offline database system, so the database is only stored on the application operator's computer. This will become an obstacle when the database is to be accessed through another computer both to continue the entry process and for real-time monitoring. This also becomes an obstacle when the above application is not directly integrated with the system that has been built to support the automation of the system from budget users in each Ministry/ Institution, so that the required process takes longer.

In order to increase the effectiveness and efficiency of the application system that has been built, it is necessary to make an effort to integrate these applications into an online-based application system with a centralized database and connected with the application of the Treasury and State Budget System (SPAN). The effort was realized by developing the application of the Agency Level Financial Application System (SAKTI). SAKTI is a financial application that is used at the level of the Work Unit (Satker) that can carry out all the main functions of budgeting starting from planning, implementation, to the accountability process. SAKTI itself consists of a budgeting module, a commitment module, a payment module, a treasurer module, a fixed assets module, an accounting and reporting module. Based on the Minister of Finance Regulation No. 223/ PMK.05/ 2015 concerning the Implementation of SAKTI Piloting, the definition of SATKER in this case is an organizational unit line of the State Ministry/ Institution or Regional Government organizational unit that carries out State Ministry activities/ Institutions and have the authority and responsibility for using the budget.

In addition to an integrated system, SAKTI application is expected to be able to reduce costs and accelerate the process of planning, implementation, and accountability of the state budget than the previous system. Built with the principle of less paper, SAKTI is planned to be able to make a payment system only by application without having to print many hardcopy of payment orders and supporting data and visit the State Treasury Service Office. The principle of less paper can reduce the cost of using paper and accelerate the payment process that will later be applied to all work units in Indonesia.

The SAKTI application has been implemented at the Directorate General of Budget (DJA) for 18 months since January 2018. Over time, the SAKTI application underwent many improvements from 2018 to June 2019 so that the problems in the initial implementation of SAKTI in the DJA had greatly diminished. However, there are still some constraints/ features that are still not in accordance with the expectations felt by SAKTI users at DJA, namely access to the SAKTI application must still use the Ministry of Finance's internet connection so it is less flexible when needing to use SAKTI but not in the office, the time required SAKTI takes a long time to process data, the compatibility of Computer Data Archive (ADK) is inconsistent, some old system application features are not available in the SAKTI application, and the actual data drawn from the SAKTI application cannot be detailed.

This problem shows that there is a risk that the SAKTI application will not run smoothly due to usage and user satisfaction factors. It is feared that this could have a negative effect on the performance of SAKTI application users (individual impact) and organizational performance related to the financial management of the Satker (organizational impact). The risk of implementing information systems that are not running smoothly as well as the risk of negative impacts on the performance of individuals and organizations makes this issue important for further investigation given that the SAKTI application is currently undergoing the final piloting phase within the Ministry of Finance before it is ready to be applied in approximately 25,000 Satker in Indonesia.

In addition to the need to be accepted by prospective users of the system, the existence of a system should also have a positive influence on individual impacts and also the organizational impact of users. A researcher has conducted research related to factors that influence the success of information systems [2]. These factors are: (1) system quality; (2) the quality of the information; (3) usage; (4) user satisfaction; (5) individual impact; and (6) organizational impact. A researcher states that the quality of the system and the quality of information separately or jointly influence (positive or negative) on the level of use and the level of user satisfaction. The level of use and the level of user satisfaction can influence each other (positive or negative). The level of use and level of user satisfaction influences individual impacts and individual impacts should have some effect on organizational impacts.

There are several models for measuring the success of information systems, the most frequently used of which are the Technology Acceptance Model (TAM), the Unified Theory of Acceptance and Use of Technology (UTAUT), and The Delone and Mclean Model of Information Systems Success (D&M IS Success). Among the three models, two of them, TAM and UTAUT, assess the success of information by focusing on the use variable so that both models are more appropriate to assess the success of information systems that are voluntary to use.

D&M IS Success is considered more appropriate to assess the implementation of mandatory information systems because this model not only emphasizes the use assessment but also focuses on user satisfaction where the SAKTI application is mandatory. This study adopts the success model of the DeLone & McLean information system (1992) to measure the successful implementation of the SAKTI application with 6 (six) variables, namely (1) information quality, (2) system quality, (3) attitude towards use, (4) user satisfaction, (5) individual impacts, and (6) organizational impacts.

Based on the description above, the purpose of this study is to examine: the effect of information quality and system quality on user satisfaction; the effect of information quality and system quality on attitudes towards use; the effect of user satisfaction on attitudes toward use; the effect of attitude towards use on user satisfaction; the effect of user satisfaction on individual impacts; the effect of attitudes towards use on individual impacts; and the effect of individual impacts on organizational impacts.

2. LITERATURE REVIEW

2.1 Information Quality

DeLone & McLean (1992) defines information quality as a measure of the output of an information system. According to a study, high quality decision making requires high quality information [3]. Both statements from this researcher indicate that an information system must produce quality information to provide quality decision making. A group of researchers concluded that there were 4 (four) dimensions in measuring information quality, namely: (1) accuracy, (2) completeness, (3) up-to-date, and (4) format (reliability) [4]. Accuracy is defined as the truth of information in accordance with reality. Completeness refers to the level at which all statements that are relevant to the user population are mentioned in the stored information. Up to date refers to the level at which the information generated reflects the current situation. Format refers to the level at which information is presented in an ethic that is understandable and can be interpreted by users and helps in completing work.

2.2 System Quality

DeLone & McLean (1992) defines system quality as a measure of the performance of systems that process information. Measurement of system quality is more focused on measuring system performance technically. While a study defines the quality of the system as the desired characteristics of an information system [5]. The statement supports Nelson, Todd, and Wixom (2005) which states that the dimensions of system quality present perceptions of interactions with the system over time and suggest dimensions in measuring the quality of the system namely (1) accessibility, (2) flexibility, (3) integration, and (4) response time. Accessibility shows the capabilities of the system where the system and information can be accessed easily. Flexibility is related to the ability of the system to adapt to various user needs and the ability to adapt to conditions. Integration refers to the ability of the system to facilitate the combination of information from various sources to support decision making. Response time refers to the ability of a system that offers a speed of response to requests for information or action.

2.3 Attitude towards Use

A study found that the relationship of the quality system and the information system to actual use and from actual use to individual impacts was not significant [6]. This can occur because of mandatory system implementation policies that can result in a number of significant increases in actual use. Related to the difficulty in interpreting the dimensions of use, one of which is the implementation of the mandatory versus voluntary system, a previous researcher provides an alternative intention to use variable instead of the use variable, where intention to use is an attitude while use is a behavior [7]. Research related to the use of intention to use as a variable in measuring the success of information systems using the TAM model has been conducted by a group of researchers [8]. They find that user's attitude towards system use plays a very important role while intention to use loses a lot of the power of explanation in a mandatory system. Based on the description, the researcher changed the usage variable in this research model with the attitude towarsd use variable. Attitudes to use according to a researcher can be measured in 2 (two) dimensions, namely (1) perceived usefulness and (2) perceived convenience [9].

2.4 User Satisfaction

When the use of the system is mandatory, DeLone & McLean (1992) states that the measurement of the level of use will be less useful, and the success of the interaction by management of the information system can be measured by user satisfaction. Petter and McLean (2008) define user satisfaction as acceptance or preference for an information system and its output. According to Nelson, Todd, & Wixom (2005), user satisfaction can be influenced by 2 (two) factors, namely (1) information satisfaction and (2) system satisfaction.

2.5 Individual Impact

DeLone and McLean (1992) define individual impact as an indication that an information system gives its users a better understanding of decision making, increases the productivity of decision-making of its users, or

changes the perceptions of decision makers regarding the importance and usefulness of the information system. Livari (2005) defines individual impact as the system user experience related to individual impact in terms of its effect on user performance.

2.6 Organizational Impact

DeLone and McLean (1992) define organizational impact as the effect of information systems on organizational performance. Whereas Al-Mamary, Shamsuddin, and Aziati (2014) define organizational impact as the accumulation of the final results of the entire process of organizational performance and activities. Measurements commonly used to measure organizational performance are organizational productivity and organizational effectiveness. Organizational productivity is a measure of how efficient their employees are at work. Organizational effectiveness is a measurement of how precise organizational goals are and how well an organization achieves those goals.

2.7 Hypotheses

2.7.1 Effect of Information Quality and System Quality on User Satisfaction

Several previous studies have proven that information quality has a positive impact on user satisfaction, but several studies stated that information quality has no effect on user satisfaction [10-16]. Several previous studies have also proven that the quality of the system has a positive impact on user satisfaction, but the results of research by another researcher state that the quality of the system has no effect on user satisfaction.

Based on the description above, then there are 2 (two) hypotheses proposed. First, the quality of information has a positive effect on user satisfaction as H_1. Second, the quality of the system has a positive effect on user satisfaction as H_2.

2.7.2 Effect of Information Quality and System Quality on Attitude towards Use

Some previous studies have proven that information quality has a positive impact on usage found that information quality had no effect on usage. Some previous studies have also shown that the quality of the system has a positive impact on usage, but several studies found that the quality of the system had no effect on usage.

Based on the description above, then there are 2 (two) hypotheses proposed. First, the quality of information has a positive effect on attitude towards use as H_3. Second, the quality of the system has a positive effect on attitude towards use of the system as H_4.

2.7.3 Effect of User Satisfaction on Attitude towards Use and Effect of Attitude towards Use on User Satisfaction

Some previous studies have proven that user satisfaction has a positive impact on attitude towards use, but several studies found that user satisfaction had no effect on attitude towards use. Some previous studies have also shown that attitude towards use has a positive impact on user satisfaction, but several studies found that attitude towards use had no effect on user satisfaction.

Based on the description above, then there are 2 (two) hypotheses proposed. First, user satisfaction has a positive effect on attitude towards use as H_5. Second, the attitude towards use has a positive effect on user satisfaction as H_6.

2.7.4 The Effect of User Satisfaction and Attitude towards Use on Individual Impacts

Several previous studies have proven that user satisfaction has a positive effect on individual impacts, but research of Azwar, Amriani, and Subekan (2016) found that user satisfaction has no effect on individual impacts. Several previous studies have proven that attitude towards use have a positive effect on individual impacts, but several studies found that attitude towards use had no effect on individual impacts.

Based on the description above, then there are 2 (two) hypotheses proposed. First, the attitude towards use has a positive effect on individual impacts as H_7. Second, user satisfaction has a positive effect on individual impact as H_8

2.7.5 Effect of Individual Impacts on Organizational Impacts

DeLone & McLean (1992) suggested that the impact of individual performance should have some organizational impact. The statement was supported by Al-Mamary, Shamsuddin, and Aziati (2014) which stated that organizational performance is measured in terms of organizational productivity, where organizational productivity is a measure related to how efficient their employees are at work. This can be interpreted that if an information system is able to improve the work efficiency of its users (individual impact), then that right will increase the productivity of its user organization (organizational impact).

Several previous studies have proven that individual impacts have a positive influence on organizational impacts and no studies have been found that individual impacts has no effect on organizational impact to the best of the researcher's knowledge.

Based on the description above, then there is one hypothesis proposed. The hypothesis is that individual impact positively influences organizational impact as H_9.

3. METHODOLOGY

3.1 Population and Sampling

The population in this study is the user of the piloting III SAKTI application at the Directorate General of Budget agencies which is still active until 2019. Decree of the Budget User Authority of the Directorate General of Budget (KPA DJA) Number 4/ AG.1/ KPA/ 2019 sets 60 officials/ employees as users who are given responsibilities in accordance with their respective duties during the 2019 fiscal year. Based on the decree it is known that the total population in this study is 60 people which can be seen in Table 1 as follows.

Table 1: SAKTI User of Directorate General of Budget

No.	SAKTI User Position	Amount
1	Budget User Authorization	1 *user*
2	Unit Budgeting Module	1 *user*
3	Examining and Signing Officer (ESO)	1 *user*
4	Inventory Approver	1 *user*
5	Budget Validator	1 *user*
6	Fixed Asset Validator	1 *user*
7	Commitment Making Official (CMO)	11 *user*
8	Operators (Treasurer, Budget, Payments, etc.)	43 *user*
	Totals	60 *user*

Source: Decree of DJA KPA Decree Number 4/ AG.1/ KPA/ 2019 (processed)

Based on the SAKTI DJA application administrator, not all types of SAKTI application users are operated with high / frequent frequency levels. It is feared that the type of user who has a low level of access to SAKTI applications cannot provide an objective assessment related to SAKTI applications. To mitigate the risk of responding to respondents who are less objective, the researcher applies purposive sampling to the study population with the criteria that the selected respondents are respondents who have access to the SAKTI system at least every 5 working days in a month. The research sample criteria are shown in Table 2 as follows:

Table 2: Research Sample Criteria

No.	SAKTI User Position	Frequency of Access per Month	
		≤5 days	>5 days
1	Budget User Authorization		√
2	Unit Budgeting Module		√
3	Examining and Signing Officer (ESO)	√	
4	Inventory Approver		√
5	Budget Validator		√
6	Fixed Asset Validator		√
7	Commitment Making Official (CMO)	√	
8	Operators (Treasurer, Budget, Payments, etc.)	√	

Based on the information above, the types of SAKTI users who meet the frequency criteria are ESO, CMO, and Operator positions (Treasurer, Budget, Payment, etc.). Based on Table 1 and Table 2, researchers get a sample of 55 users. The number of samples is considered sufficient for research using the Partial Least Square (PLS) based Structural Equation Modeling (SEM) method as recommended by a researcher, which is 30-100 of sample size [17].

3.2 Data Sources and Data Collection Techniques

This research is a quantitative study with data sources derived from primary data directly obtained from respondents using a questionnaire. Data collection techniques using a survey with paper & pencil techniques with face to face with the respondent.

3.3 Variable Operationalization

This study uses 6 variables referring to D&M IS Success (1992) with adjustments to D&M IS Success (2003), namely (1) information quality (IQ), (2) system quality (SQ), (3) attitude toward use (ATU), (4) user satisfaction (US), (5) individual impact (II), and (6) organizational impact (OI). All research variables use measurement indicators adopted from studies of previous researchers [18-21]. The indicators determined are indicators that are considered relevant to the use of the SAKTI application. All indicators set in this study were measured using a Likert scale of 1-5 consisting of Strongly Agree (point 5), Agree (point 4), Neutral (point 3), Disagree (point 2), Strongly Disagree (point 1).

The following are the variables, dimensions, and indicators used in the study described in Table 3.

Table 3: Variable Operationalization

Variables	Dimensions		Indicators
Information Quality (X_1) (DeLone & [2]	Accuracy	IQ1	Availability of information in accordance with reality
	Completeness	IQ2	Availability of complete information
	Up to date	IQ3	Availability of information that reflects the current situation
	Reliability	IQ4	Availability of reliable information
	[4]		[6, 19, 21]
System Quality (X_2) [2]	Accessibility	SQ1	Ease of access in use
	Flexibility	SQ2	Availability of repair facilities in case of failure / erro
	Integration	SQ3	The ability of the system to interact with other information technology systems
	Response time	SQ4	The speed at which the system responds to requests for information
	[4]		[6, 21]
Attitude towards Use (Y_1) [18]	Perception of Use	ATU1	Effective use of the system
		ATU2	Efficient use of the system
	Ease Perception	ATU3	Ease of system to operate
		ATU4	Comfort system to operate
	[18]		3, 21]
User Satisfaction (Y_2) [2]	Satisfaction with the Information	US1	Satisfaction with the quality of output (information)
	Satisfaction with the System	US2	Satisfaction with t quality of the system
	Satisfaction with the information and system	US3	Satisfaction of the quality of the system and information related to the Budget implementation process
		US4	Satisfaction of the overall system usage
	[4]		[6, 19, 21]
Individual Impact (Z_1) [2]	Performance speed	II1	Speed of completion of work
	Usefulness of performance	II2	Performance improvement
		II3	Increased work effectiveness
		II4	Increased productivity
	Ease of performance	II5	Increased ease of work
	[18]		[6, 21]
Organizational Impact (Z_2) (DeLone & Mclean 1992)	Usefulness of performance	OI1	Increased performance achievement
	Use of costs	OI2	Decreasing operational costs
	Ease of performance	OI3	Increased convenience in budget oversight
		OI4	Improving the quality of decision making
	[18]		[6, 21]

3.4 Data Analysis Method

The data analysis method in this research uses Structural Equation Modeling (SEM) based on Partial Least Square (PLS) with SmartPLS software version 3.0. Researchers assess the use of PLS-based SEM models in accordance with the conditions of the study because this model does not require many assumptions, the data do not have to be multivariate normally distributed, and the number of samples does not have to be l e (Ghozali & Latan, 2015, recommends between 30-100 of sample size). PLS recognizes two types of components in the causal model, namely the measurement model or often called the outer model and the structural model or often called the inner model. Following are the stages in conducting analysis using PLS-SEM then proceed with hypothesis testing.

3.4.1 Outer Model

Outer model analysis is used to assess the reliability and validity of research variables or the relationship between indicators and latent variables. Tests carried out in the outer model are:

1. Convergent Validity. Convergent validity aims to assess the validity of each relationship between the indicator and its latent variable. Convergent validity value is the value of the loading factor on latent

variables with the indicators. According to Ghozali & Latan (2015), convergent validity is related to the principle that the measures of a variable should be highly correlated. The rule of thumb that is usually used to assess convergent validity is that the loading factor value must be more than 0.7 for confirmatory research.

2. Discriminant Validity. Discriminant validity is used to determine whether constructs have adequate discrimination, with proof that latent constructs predict the size of their block better than the size of the other blocks. Based on Fornell and Larcker in Ghozali & Latan (2015), the method of measuring discriminant validity is by comparing the square root of AVE. Good discriminant validity is shown from the square root AVE for each construct greater than the correlation between constructs in the model.
3. Reliability Test. According to a scholar, reliability testing is a process carried out to test data reliability. The reliability test was carried out by two methods, namely Croncbach's alpha and composite reliability [22]. Based on Ghozali & Latan (2015), the Rule of Thumb commonly used to assess construct reliability is that the composite reliability value must be above 0.7 and / or croncbach's alpha above 0.7 for confirmatory research.

3.4.2 Inner Model

The inner model is a structural model for predicting causality between latent variables, as seen from the R-Square (R2) value. According to Ghozali & Latan (2015), the value of R2 is used to measure the level of variation of changes in exogenous variables (independent) to endogenous (dependent) variables. According to Chin in Ghozali & Latan (2015), the limit of R2 value of 0.67 means strong, 0.33 means moderate / sufficient, and 0.19 means weak.

3.4.3 Hypothesis Testing

Hypothesis testing can be assessed from the estimated value of the structural path coefficient (estimate for path coefficients). This value is the value of the path coefficient which shows the amount of influence of the variable (construct). According to Ghozali & Latan (2015), this value is evaluated using the t-statistic test through the bootstrapping process, with the Rule of Thumb if a t-statistics ≥ 1.96 and / or p-value ≤ 0.05 (α = 5%, two-tailed), then concluded significant and vice versa.

3.5 Research Model

This study uses the D&M IS Success (1992) model to determine the successful implementation of the SAKTI application at the Directorate General of Budget Institution by adjusting the use variable that becomes an attitude towards using in relation to the mandatory SAKTI application. Variable replacement is a suggestion from previous research, namely Livari (2005) which states that the use variable cannot be measured effectively on mandatory information systems, DeLone & McLean (2003) which provides alternative interest in the use (intention to use), and Koh, Prybutok, Ryan & Satker (2010) who suggest changing interests to use (intention to use) to attitudes toward use that have stronger explanatory power in information systems that are applied mandatoryly. Then the whole research model is explained in Figure 1.

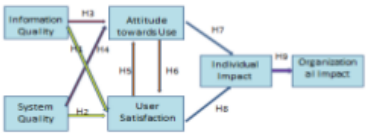

Figure 1: The Whole Research Model

The model above shows the direction back and forth between the attitude variables on usage with user satisfaction. In Livari's research (2005), the mutual influence cannot be tested simultaneously so the research model needs to be broken down into 2 models, into model 1 to illustrate the effect of user satisfaction on actual use and model 2 which illustrates the effect of actual use on user satisfaction. Based on this research, this study divides the research model above into 2 models. Model 1 in Figure 2 illustrates the effect of attitude towards use on user satisfaction (H_6) and Model 2 in Figure 3 illustrates the effect of user satisfaction on attitude toward use (H_5).

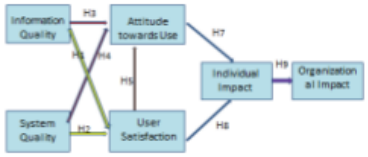

Figure 2: The Research Model 2

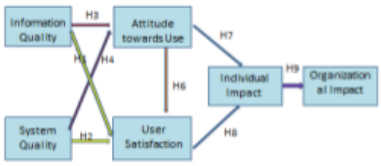

Figure 3: Research Model 1

4. RESULT AND DISCUSSION

4.1 Outer Model Testing Results

4.1.1 Convergent Validity Test Results

The rule of thumb that is usually used to assess convergent validity is that the loading factor value must be more than 0.7 for confirmatory research. This study has 6 (six) variables with loading factor results which can be seen in Figure 4 for model 1 and in Figure 5 for model 2.

Source: Output of SmartPLS 3.2.8 (2019)

Figure 4: Value Loading Factor of Model 1

Source: Output of SmartPLS 3.2.8 (2019)

Figure 5: Value Loading *Factor* of Model 2

Information quality variables have indicators that are all significant with a loading factor above 0.7 in both model 1 and model 2. Then the system quality variable has a significant indicator with a loading factor above 0.7 for indicators SQ1, SQ3, and SQ4 both at model 1 and model 2. While the SQ2 indicator is not significant because it has a loading factor below 0.7 both in model 1 and model 2. Then the attitude variable towards use has a significant indicator with a loading factor above 0.7 for the indicators ATU2, ATU3 , and ATU4 in both model 1 and model 2. While the ATU1 indicator is not significant because it has a loading factor below 0.7 both in model 1 and model 2.

The variable user satisfaction has indicators that are all significant with a loading factor above 0.7 both in model 1 and model 2. Then the individual impact variable has an entirely significant indicator with a loading factor

above 0.7 both in model 1 and model 2. Then Organizational impact variables have significant indicators with loading factors above 0.7 for OI1, OI3, and OI4 indicators in both model 1 and model 2. While the OI2 indicator is not significant because it has a loading factor below 0.7 both in model 1 and model 2.

Based on the Rule of Thumb, the loading factor must meet values above 0.7. Constructions that do not meet the loading factor more than 0.7 need to be ignored or dropped from the model. Based on the explanation above, the indicators SQ2, ATU1, and OI2 do not meet the loading factor requirements so they need to be ignored from the model. This causes the model to be modified by only involving constructs that meet the requirements. Following is the loading factor of the modified model seen in Figure 6 for model 1 and Figure 7 for model 2 [23-27].

Source: Output of SmartPLS 3.2.8 (2019)

Figure 6: Loading Factor Value of Modified Model 1

Source: Output of SmartPLS 3.2.8 (2019)

Figure 7: Loading *Factor* Value of Modified Model 2

4.1.2 Discriminant Validity Test Results

Discriminant validity is used to determine whether the construct has adequate discrimination. Based on Fornell and Larcker in Ghozali & Latan (2015), the method of measuring discriminant validity is by comparing the square root of AVE. Good discriminant validity is shown from the square root AVE for each construct greater than the correlation between constructs in the model. The square root value of AVE with the Fornell & Larcker criteria can be seen in Table 4 for model 1 and Table 5 for model 2.

Table 4: Output of Discriminant Validity Criteria of Fornell & Larcker Model 1

	Individual Impact	Organizational Impact	User Satisfaction	Information Quality	System Quality	Attitude towards Use
Individual Impact	**0,920**					
Organizational Impact	0,672	**0,901**				
User Satisfaction	0,725	0,696	**0,860**			
Information Quality	0,662	0,712	0,614	**0,828**		
System Quality	0,652	0,607	0,610	0,540	**0,808**	
Attitude towards Use	0,679	0,536	0,653	0,620	0,618	**0,925**

``Source: Output SmartPLS 3.2.8 (2019)

Table 5: Output of Discriminant Validity Criteria of Fornell & Larcker Model 2

	Individual Impact	Organizational Impact	User Satisfaction	Information Quality	System Quality	Attitude towards Use
Individual Impact	**0,920**					
Organizational Impact	0,672	**0,901**				
User Satisfaction	0,725	0,696	**0,860**			
Information Quality	0,662	0,712	0,614	**0,828**		
System Quality	0,652	0,607	0,610	0,540	**0,808**	
Attitude towards Use	0,679	0,536	0,653	0,620	0,618	**0,925**

Source: Output SmartPLS 3.2.8 (2019)

Based on the two tables above, it appears that the Average Variance Extracted (AVE) square root value for all variables is higher than the correlation value, so that all variables meet the validity requirements of both model 1 and model 2.

4.1.3 Reliability Test Results

According to Sekaran & Bougie (2013), reliability testing is a process carried out to test data reliability. The reliability test was carried out by

two methods, namely Croncbach's alpha and composite reliability. Based on Ghozali & Latan (2015), the Rule of Thumb commonly used to assess construct reliability is that the composite reliability value must be above 0.7 and / or croncbach's alpha above 0.7 for confirmatory research. Croncbach's alpha value and composite reliability for all indicator variables in this study have values above 0.7 which can be seen in Table 6, so that all indicator variables have met the reliability test of both model 1 and model 2.

Table 6: Nilai Croncbach's Alpha and Composite Reliability

Variabel	*Croncbach's Alpha*		*Composite Reliability*	
	Model 1	**Model 2**	**Model 1**	**Model 2**
Information Quality	0,846	0,846	0,897	0,897
System Quality	0,736	0,736	0,849	0,849
Attitude towards Use	0,916	0,916	0,947	0,947
User Satisfaction	0,883	0,883	0,919	0,919
Individual Impact	0,954	0,954	0,965	0,965
Organizational Impact	0,885	0,885	0,928	0,928

Source: Output SmartPLS 3.2.8 (2019)

4.2 Inner Model Testing Results

The inner model is a structural model for predicting causality between latent variables, as seen from the R-Square (R2) value. According to Ghozali & Latan (2015), the value of R2 is used to measure the level of variation of changes in exogenous variables (independent) to endogenous (dependent) variables. According to Chin in Ghozali & Latan (2015), R2 value of 0.67 means strong, 0.33 means moderate / sufficient, and 0.19 means weak. The R2 value of each variable in both model 1 and model 2 can be seen in Table 7.

Table 7: R-Square Value

Variables	*R-Square*	
	Model 1	**Model 2**
Attitude towards Use	0,599	0,598
User Satisfaction	0,452	0,452
Individual Impacts	0,538	0,487
Organizational Impacts	0,498	0,548

Source: Output of SmartPLS 3.2.8 (2019)

Table 7 shows that in Model 1, the highest value of R2 was in the construct of attitude towards use of 0.599 (moderate) and the lowest was in the construct of user satisfaction of 0.452 (moderate). The value of R2 in the attitude construct toward the use of 0.599 means that variations in the change in the construct attitude toward the use are able to be explained by the construct of the system quality and information quality by 59.9% (moderate) while the remaining 40.1% is explained by other factors not included in this study . R2 value on the construct of user satisfaction attitude of 0.452 means that variations in changes in the construct of user satisfaction can be explained by the construct of system quality and information quality by 45.2% (moderate) while the remaining 54.8% is explained by other factors not included in this study. The same thing happened to the R-Square value for Model 2.

4.3 Hypothesis Testing Results

Hypothesis testing can be assessed from the estimated value of the structural path coefficient (estimate for path coefficients). This value is the value of the path coefficient which shows the amount of influence of the variable (construct). According to Ghozali & Latan (2015), this value is evaluated using the t-statistic test through the bootstrapping process, with the Rule of Thumb if a t-statistics ≥ 1.96 and / or p-values ≤ 0.05 (α = 5%, two-tailed), then concluded significant and vice versa. The results of the path coefficient test are presented in Table 8.

Table 8: Path Coefficient Test Results

	Original Sample		*T-Statistics*		*P-Value*	
	Model 1	**Model 2**	**Model 1**	**Model 2**	**Model 1**	**Model 2**
Information Quality → User Satisfaction	0,272	0,400	2,655	3,504	0,008	0,001
System Quality → User Satisfaction	0,266	0,395	2,136	3,170	0,033	0,002
Information Quality → Attitude towards Use	0,405	0,279	4,104	2,217	0,000	0,027
System Quality → Attitude towards Use	0,399	0,275	3,617	2,077	0,000	0,038
User Satisfaction → Attitude towards Use	N/A	0,314	N/A	2,081	N/A	0,038
Attitude towards Use → User Satisfaction	0,320	N/A	3,551	N/A	0,000	N/A
Attitude towards Use → Individual Impact	0,358	0,360	2,409	2,374	0,016	0,018
User Satisfaction → Individual Impact	0,491	0,488	4,098	3,982	0,000	0,000
Individual Impact → Organizational Impact	0,672	0,672	10,003	9,767	0,000	0,000

Source: Output of SmartPLS 3.2.8 (2019)

Based on the data in Table 8 above, it can be concluded that all hypotheses are accepted because they meet the criteria of t-statistics ≥ 1.96 and / or p-values ≤ 0.05 (significant).

4.4 Discussion of Research Results

This study aims to evaluate the implementation of the SAKTI application from the viewpoint of the user (operator) of the SAKTI application and its influence on individual and organizational impacts. From the explanation in the previous section, it can be seen that all initial hypotheses were accepted, both for model 1 and model 2. The results of the hypothesis test can be briefly seen in Table 9.

Table 9: Summary of Hypothesis Testing Results

Hypotheses		Model 1	Model 2
H1	Information quality has a positive effect on user satisfaction	Accepted	Accepted
H2	System quality has a positive effect on user satisfaction	Accepted	Accepted
H3	Information quality has a positive effect on attitudes towards use	Accepted	Accepted
H4	System quality has a positive effect on attitudes towards use	Accepted	Accepted

H5	User satisfaction has a positive effect on attitudes towards use	*N/A*	Accepted
H6	Attitude towards use has a positive effect on user satisfaction	Accepted	*N/A*
H7	Attitudes towards use has a positive effect on individual impacts	Accepted	Accepted
H8	User satisfaction has a positive effect on individual impacts	Accepted	Accepted
H9	Individual impacts have a positive effect on organizational impacts	Accepted	Accepted

Source: Output of SmartPLS 3.2.8 (2019)

Based on the table above, all hypotheses in this study can be proven empirically.

5. CONCLUSION

The results of the study concluded that information quality and system quality have a positive effect on user satisfaction. Information quality and system quality have a positive effect on attitude towards use. User satisfaction has a positive effect on attitude towards use. Attitude towards use has a positive effect on user satisfaction. Attitude towards use has a positive effect on individual impacts. User satisfaction has a positive effect on individual impacts. Individual impacts have a positive effect on organizational impacts. This shows that the higher the performance of individual users of the SAKTI application, the organizational performance also increases and applies vice versa, that the lower the performance of individual users of the SAKTI application, the organizational performance also decreases.

Thus, it can be concluded that the implementation of the SAKTI application at DJA in 2019 ran successfully based on the 1992 D&M IS Success approach from the perspective of the user/ operator of the SAKTI application. These results support the readiness of the SAKTI application to be implemented in approximately 25 thousand work units in Indonesia.

The results of the study still do not adequately represent the overall perception of SAKTI users. In this regard, further research is needed covering the scope which has not been studied in the Echelon I environment of the Ministry of Finance in addition to the Directorate General of Treasury and the Directorate General of Budget. The expansion of the scope of research within the Ministry of Finance is considered important to provide development input for the application of SAKTI before it is implemented in all work units in Indonesia.

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ABBREVIATION

SAKTI : Sistem Aplikasi Keuangan Tingkat Instansi

RKA-K/L: Rencana Kerja Anggaran Kementerian/Lembaga

SAS: Sistem Aplikasi Satker

SAIBA: Sistem Akuntansi Instansi Berbasis Akrual

SIMAK-BMN :Aplikasi Sistem Informasi Manajemen dan Akuntansi Barang Milik Negara

SPAN: Sistem Perbendaharaan dan Anggaran Negara

ADK: Arsip Data Komputer

Satker: Satuan Kerja

DJA: Direktorat Jenderal Anggaran

SPAN: Sistem Perbendaharaan dan Anggaran Negara

ADK: Arsip Data Komputer

KPA: Kuasa Pengguna Anggaran

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