

Antecedents and Consequences of User Satisfaction in Measurement of The Successful Implementation of Institution Level Financial Application System (SAKTI)

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Abstract. This research aims to measure the level of success in implementing SAKTI in the Work Unit Office which is one of the vertical units of the Directorate General of Treasury, Ministry of Finance. The procedure is carried out by analysing the factors that influence the success of information system implementation based on TAM theory and referring to the [1] information system success model. The type of data in this research is primary data using a questionnaire method. The subjects of this research are implementing employees who use the SAKTI application in the Special Region of Yogyakarta Province. The sampling method in this research used a purposive sampling technique. This research derived four hypothesis which were tested using the SEM-PLS analysis tool via the smartPLS v4.0 application. The results of this research show that information quality and service quality have a positive effect on user satisfaction, while system quality has no effect on user satisfaction. Then user satisfaction has a positive effect on net benefits.

1 Introduction

In the current digital era, timely, accurate and reliable financial information can be obtained through the use of Information Systems (SI) which are supported by reliable Information Technology (IT) [2]. Information systems are currently the main tool for the private sector to increase company profits, as well as for the public sector in its efforts to improve the quality of service perceived by the public [3].

Currently, the government is promoting a new policy that adopts Information Systems (SI) as a form of Information Technology (IT) in an effort to realize the principles of good government governance or good governance of the Indonesian government [4]. This policy is implemented through implementing one of the activities in the form of electronic services or often called E-Government [5]. In managing state finances, e- government is implemented

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in the form of an Integrated Financial Management Information System (IFMIS) which is the embodiment of modern public financial management [6].

In an effort to meet these demands, the Directorate General of Treasury (DJPb) and the Ministry of Finance have developed an integrated application system that is applied to all work units (Satker) of central government agencies that manage the planning, budgeting, implementation and accountability processes of the Revenue and Expenditure Budget. State (APBN) throughout Indonesia which is called SAKTI or Agency Level Financial Application System [7]. This system is designed to support the principles of orderly, efficient, effective, economical, transparent, integrated, accountable and performance-based financial management [8].

According to [9], SAKTI is an application used as a means for work units (Satker) to support the implementation of the State Treasury and Budget System (SPAN). SAKTI's main features include database integration, single entry point, using accrual-based accounting and ensuring data security [4]. To see how effective SAKTI is in supporting financial performance, according to [10], the SAKTI application is believed to be able to avoid risks and increase satisfaction with service use as an effectiveness of the Management Information System in decision making.

According to Harwanto, Head of the PSAPP Section of the Regional Office of the Directorate General of Treasury Special Region of Yogyakarta, he said that the phenomenon that occurred in 2022 was that the implementation of SAKTI had been rolled out to all work unit offices (Satker) in the D.I. Yogyakarta province under the auspices of Directorate General of Treasury no longer in testing or piloting stage. Using this application has several advantages, namely that it uses a centralized database, has higher security with the Computer Data Archive (ADK) encryption process, is web-based, and is user friendly.

Even though it has been prepared as a form of innovation in managing state finances, of course it will present various kinds of challenges that must be faced in its implementation. This challenge must of course be followed by real action, thorough preparation is needed, step by step must be carried out according to procedures to support the smooth implementation of the SAKTI application. The successful implementation of an information system is influenced by various complex factors. Meanwhile, failure to implement information systems usually occurs because the elements of simplicity, certainty and stability in the system are inadequate. Apart from that, this failure was also caused by low support from human resources and competence of the organization's managerial staff in system development [4].

Various studies have been carried out to determine the level of success in implementing SAKTI. Most of the models used by researchers are the DeLone and McLean Information System Success Model which was introduced in 1992. This is because this model provides a more complete, coherent and conceptual explanation of the various interrelated components of effectiveness in an information system [11].

Meanwhile, research on information technology acceptance is based on the Technology Acceptance Model (TAM) introduced by [12]. In this regard, the author chooses to use TAM theory and refers to the model approach used as a solution to identify failure or success of information systems, namely the [1] model. This is because the model is considered suitable and relevant to the topic raised by the author.

Apart from the research mentioned previously, researchers found inconsistencies in the results from other studies. Research regarding the implementation of SAKTI conducted by [13] states that system quality has a positive effect on user satisfaction, which means that the higher the system quality, the higher the user satisfaction. It is also stated that user satisfaction has a positive effect on net benefits, which means that the higher the user satisfaction, the higher the net benefits of SAKTI on the individual performance of its users. Meanwhile,

information quality and service quality do not have a significant effect on integrated SAKTI user satisfaction.

Research by [7] provides empirical evidence that system quality does not have a positive effect on user satisfaction. Meanwhile, research by [14] stated that system quality, information quality and service quality have a significant and strong effect on user satisfaction.

This research refers to previous research conducted by [15] regarding the Level of User Satisfaction with the Implementation of the SISKEUDES Application. The difference with previous research is the difference in the application system used. Previous research used the SISKEUDES (Village Financial System) application, while this research uses the SAKTI (Institution Level Financial Application System) application.

Furthermore, differences with previous research can also be seen in the model used to measure the level of user satisfaction. Previous research used the Green-Pearson satisfaction level model, while this research uses the DeLone and McLean satisfaction level model. Previous research did not use techniques to analyze data, whereas in this study researchers added techniques to analyze the data to make it more valid. Apart from that, the research subjects and locations are different, in this research it is the Ministry of Finance Work Unit Office located in the Special Region of Yogyakarta.

In connection with the above phenomenon, the author is motivated to find out how successful the implementation of SAKTI is in government agencies within the Regional Office of the Directorate General of Treasury which also oversees the Work Unit Office in DI Yogyakarta Province. The author also wants to know whether or not the implementation of the SAKTI application has been well integrated. Departing from this, it is hoped that it will be a starting point for how far the implementation of SAKTI can be accepted by users so that it can be further developed in supporting the success of public services at Work Unit Offices in D.I. Yogyakarta Province.

This research is important to analyze and measure the success of the implementation of the SAKTI application to date. This research is based on the user's perspective as a mandatory system. Departing from the background description above, the author is interested in raising the problem in the form of research with the title "**Antecedents and Consequences of User Satisfaction in Measuring the Success of Implementing Financial Application Systems at the Institutional Level**".

2 Literature review

2.1 Technology acceptance model (TAM)

Based on theory from [12], he explains that the Technology Acceptance Model (TAM) is a model to predict and explain how technology users accept and use technology related to the user's individual work [16]. TAM is considered the best contributor in predicting and explaining user acceptance of computer technology in an organization [17]. This model is also one of the valid models and is most widely used in research to test the acceptance of Information Systems (IS), because it is simpler and easier to implement [18]. This model proposes that when users are offered to use a new system, a number of factors will influence their decisions regarding how and when to use the system, specifically based on two beliefs, namely perceptions related to usefulness (Perceived Usefulness) and perceptions related to ease of use (Perceived Ease of Use), this component is part of a trust [3].

Usability (Perceived Usefulness) is defined as the level of user confidence that using the system will be able to improve user performance, while ease of use (Perceived Ease of Use)

is defined as the level of user confidence that a system can be used easily and can be studied independently [19].

2.2 DeLone and McLean's information systems success model

According to [20], the success factors for implementing an information system can be seen in the following illustration.

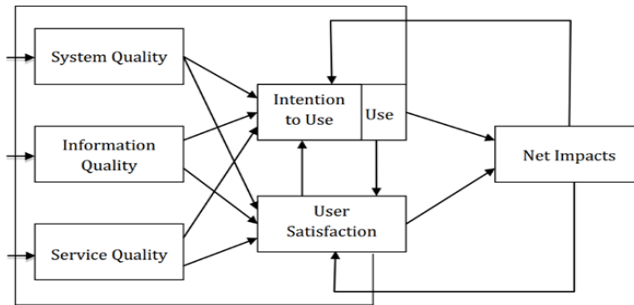


Fig. 1. Source: [20]

Based on this success model, [20] explained that this model has three main dimensions, namely system quality, information quality, and service quality. Each dimension singly or together will influence the next dimension, namely user use and satisfaction. In the usage dimension, there are difficulties in interpreting multidimensional aspects. In this regard, [20] suggest intensity of use as an alternative to be a useful measure in some contexts.

However, in this case, intensity of use is considered an attitude, while use is considered a behavior. In this research, the dimensions of intensity of use and usage were not included considering that there are difficulties if these dimensions are used as a measure of the success of an information system implemented in a mandatory environment [1].

Measurement of system use in previous research was carried out on the application of information systems mandatory shows inconsistent results. Like research conducted by [21], when system use is mandatory, the level of system usage provides little information about the success of the system. In this case, SAKTI is a special system whose use is the duty of state civil servants which is mandated in accordance with the Minister of Finance Regulation [4]. Therefore, the usage dimension cannot accurately reflect users' reactions to information systems mandatory [22].

The user satisfaction dimension will produce net benefits. When the net benefit is positive, for example an information system will continue, this will influence or increase the satisfaction of subsequent users. Conversely, if the net benefit is negative, the lack of positive benefit may be due to reduced use or discontinuation of the system [1]. So, the relationship between these dimensions is related to each other as illustrated by the arrows in the illustration above.

2.3 Review research

Various studies related to SAKTI have been carried out. The research began with the aim of testing the acceptability of SAKTI. In 2017, in research conducted at the DKI Jakarta Province Regional Office of the Directorate General of Treasury using the TAM approach, [23] concluded that perceived usefulness and perceived ease of use partially had a significant and positive effect on SAKTI acceptance.

In addition, perceived usefulness and perceived ease of use simultaneously have a significant influence on the acceptance of SAKTI by users. This shows that there are several

factors that influence SAKTI acceptance. Research by [24] with five variables in Satker in East Java Province shows that all hypotheses are accepted. This indicates that system quality, information quality and SAKTI service quality have a positive effect on user satisfaction and user satisfaction has a positive effect on SAKTI's net benefits. However, research conducted by [4] with the same five variables at BPPK Makassar produced slightly different conclusions. The research results show that all the hypotheses proposed are unacceptable and unproven. In the research, system quality influences user satisfaction, and user satisfaction also influences net benefits. Meanwhile, integrated information quality and service quality have no effect on SAKTI user satisfaction.

Then, other research conducted by [5] with four variables at the North Sumatra KPPN shows that the empirical implementation of SAKTI has been successful. All proposed hypotheses are proven and accepted. This research shows that the service system influences the highest value. This research also indicates that there is a positive effect of system quality, service quality and information quality on SAKTI user satisfaction. However, research conducted by [8] with the same four variables at the Ministry of State Secretariat gave slightly different results. Of the four hypotheses proposed, not all of them are proven and acceptable. This research shows that system quality and information quality have a significant positive influence on user satisfaction, whereas in this study service quality has no effect on SAKTI web user satisfaction.

Furthermore, research conducted by [10] using six variables located at the Regional Office of the Ministry of Religion of Bali Province gave different results. Of the nine hypotheses proposed, not all of them are proven and acceptable. This research shows the results of the analysis that the four main constructs, namely system quality, information quality, service quality to users and users to net benefits, are declared unacceptable based on test results which indicate that these constructs are unable to assess the success of the implementation of the SAKTI application. However, for the other five constructs, namely system quality, information quality, service quality, user satisfaction and user satisfaction with net benefits, they were declared acceptable based on test results which indicated that these constructs were able to assess the success of the implementation of the SAKTI application.

2.4 Hypothesis development

2.4.1 System quality

System quality is a benchmark in application use where each user will see the good or bad side of the application system, so that it will influence daily performance. Users will hope that a system is easy to use, so that it can help and save time in completing tasks. This is in line with the TAM theory that researchers use, this theory defines perception as the extent to which a person believes that using the system does not require a lot of effort. So it can be concluded that the perception of ease of use is closely related to the way users operate a system.

The [1] model reveals that system quality is a comprehensive measure of the performance of the software and hardware in an information system. Good system quality will meet the criteria, which include ease of use, system flexibility, system reliability, ease of learning, system features, and integration [14]. [25] emphasized that the higher the quality of an information system, the higher the user satisfaction of the system will be.

Many studies support this statement and find a strong relationship between system quality and user satisfaction, such as research conducted by [26, 27, 28, 29, 4, 5]. The research results from [8] also prove empirically that system quality has a positive influence on user satisfaction.

If the system quality perceived by users meets good criteria, then information system users tend to feel satisfied with the system. Therefore, the higher the system quality, the more positive and significant it will have on SAKTI application user satisfaction. Based on the description presented, the first hypothesis proposed in this research is:

H₁: System quality has a positive effect on user satisfaction

2.4.2 Information quality

Information quality is a measure of the output produced by an information system [25]. Information quality relates to the benefits, value, relevance and urgency of the information produced by an information system [24]. According to [25], information quality has a positive effect on user satisfaction, meaning that the higher the quality of information produced by an information system, the more user satisfaction it will increase. On the other hand, if the information produced by the system is inaccurate, it will result in feelings of disappointment and even dissatisfaction.

Therefore, quality information is very important. Someone will feel more satisfied when they receive quality information. This is in line with the TAM theory used by researchers, this theory argues that users' understanding of the quality of the information they use will be closely related to their perception of the usefulness of that information. So it can be concluded that good understanding will encourage the user's perception that the information obtained is useful both in meeting needs and completing tasks.

Furthermore, [1] also consistently reveal that information quality has a positive influence on user satisfaction. Several previous studies support this statement and found a strong relationship between information quality and user satisfaction, such as research conducted by [30, 31, 29, 24, 4, 32]. The results of research from [7] also empirically proves that information quality has a positive influence on user satisfaction and states that the higher the quality of information contained in the information system, the higher the user satisfaction.

If the quality of information perceived by users meets good criteria, then users of the information system will feel satisfied with the system. Therefore, the higher the quality of the information will have a positive and significant effect on user satisfaction of the SAKTI application. Based on the description that has been presented, the second hypothesis proposed in this research is:

H₂: Information quality has a positive effect on user satisfaction

2.4.3 Service quality

The definition of service quality according to [33] is the quality of assistance or support received by users from the information systems department which is related to the level of accuracy, reliability of support, responsiveness, and technical competence and empathy from the information technology provider. [1] revealed that service quality has a positive influence on information system user satisfaction, which means that the higher the quality of service produced by an information system, the greater the user satisfaction will be. According to [34], service quality is the result of the user's assessment of how far the difference is between expectations and the perceived reality of a service received from the service provider, whether the assessment is in part or as a whole.

Based on TAM theory, perceived usefulness is the result of evaluating the consequences of using a system on job performance and giving rise to positive or negative feelings towards using an information system, which will ultimately influence expectations and satisfaction when using a system. This perception will be closely related to the user's attitude. If the user's perception of the service meets expectations, then the quality of the service is considered good. However, on the other hand, if the user's perception of the service does not match

expectations, then the quality of the service is considered poor. Therefore, whether the service quality is good or not depends on the service provider's ability to consistently meet the expectations of its users.

Many studies support this statement and find a strong relationship between service quality and user satisfaction, such as research conducted by [26, 35, 29, 5, 6]. The research results from [10] also prove empirically that service quality has a positive influence on user satisfaction.

If the service quality perceived by users meets good criteria, then information system users will feel satisfied with the system. Therefore, the higher quality of service from, in this case the Regional Office of the Directorate General of Treasury and several State Treasury Service Offices which are responsible for the implementation of SAKTI, will have a positive and significant influence on user satisfaction of the SAKTI application. Based on the description that has been presented, the third hypothesis proposed in this research is:

H₃: Service quality has a positive effect on user satisfaction

2.4.4 User satisfaction

According to [1], the term net benefit is used to describe the characteristics of the expected results from the implementation of an information system. Net benefit implies a more positive meaning and is used to replace the term impact which can have good or bad connotations [4]. User satisfaction is considered one of the most important measures in determining the success of an information system by evaluating user or customer opinions [1]. Therefore, the measurement of net benefits in this research focuses on the impact or consequences of information system implementation on individual user performance. According to [10], the higher the level of user satisfaction with the SAKTI application, the higher the net benefits, thus the system is considered successful if the system used has a fast response and is of good quality.

Several previous studies support this statement and found a strong relationship between user satisfaction and net benefits, such as research conducted by [24, 4, 32, 7]. The research results from [6] also prove empirically that user satisfaction has a positive influence on net benefits.

In the TAM theory used by researchers, this theory explains that encouragement of use creates confidence in the user that the SAKTI application provides benefits when used as a form of perceived usefulness. Apart from confidence in usability, the SAKTI application also creates a perception of ease of use which will encourage user self-satisfaction and the intensity of user interaction with the application. So, it can be concluded that if SAKTI application users are satisfied with the capabilities of the application system, they will tend to think that using the system helps them do their work more quickly and easily, as well as improving work performance. Therefore, increasing user satisfaction will have a positive and significant influence on the net benefits of SAKTI in terms of the individual performance of its users. Based on the description that has been presented, the fourth hypothesis proposed in this research is:

H₄: User satisfaction has a positive effect on net benefit

2.5 Research model

The research model to test the influence of system quality, information quality, and service quality on user satisfaction, as well as user satisfaction on net benefits is shown as follows:

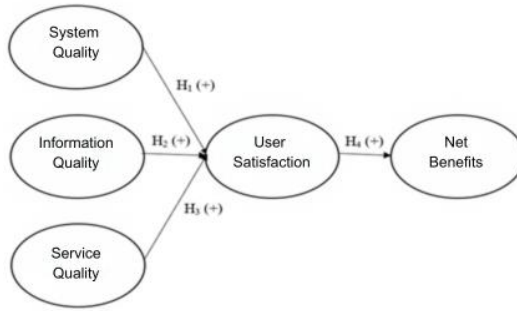


Fig. 2. Research model.

3 Research methods

The research object in this research is the Work Unit Office located in the Special Region of Yogyakarta Province. The subjects in this research consisted of the population and research samples that were relevant to the research being conducted. The population in this study were all SAKTI application users in the Yogyakarta Special Region Province.

Meanwhile, the samples in this study were section heads, division heads, sub-division/sub-sector heads, as well as implementing employees who used the SAKTI application in all Work Unit Offices in the Yogyakarta Special Region Province which fell within the specified criteria. The object of this research is used as the aim of distributing questionnaires which aims to determine the factors that influence the successful implementation of the SAKTI application.

This research data is quantitative data and the type of data used is primary data. Primary data is a type of data where the data collection technique is carried out directly using a questionnaire which is distributed directly to respondents who have met the researchers' criteria. The sampling method used in this research is the purposive sampling method. Purposive sampling according to [36] is a sampling technique where samples can be obtained by setting certain criteria.

3.1 Research instrument

Research instruments are used to measure indicators/variables in order to collect data in order to obtain a good research instrument. This research uses a questionnaire in the form of statements related to the variables in the research. The variables studied used a Likert scale measurement of 1 to 5 which has five alternative answers, namely as follows: Strongly Disagree (STS), Disagree (TS), Neutral (N), Agree (S), Strongly Agree (SS).

The questionnaire for the variables net benefit, user satisfaction, system quality, information quality, and overall service quality was developed from the questionnaire of [37] and [6]. The measurement indicators for all variables in this study were adapted using references from research conducted by [20].

3.2 Data analysis technique

The author uses tools in the form of computer programs, namely SPSS and Smart PLS v 4.0.

3.2.1 Descriptive statistical analysis

Descriptive statistical analysis of research variables was carried out using SPSS to provide an overview or description of data seen from the Mean, Medium, Standard Deviation, Minimum and Maximum values of all objects for each variable.

3.2.2 Model evaluation

3.2.2.1 Measurement model (outer model)

Outer Model shows the relationship between latent variables and indicators [38]. There are two types of checks on the outer model, namely reliability checks and validity checks. Checking validity in this research uses indicators of convergent validity and discriminant validity, while checking reliability uses composite reliability and cronbach's alpha.

3.2.2.2 Structural model (inner model)

Inner Model a structural model is used to show the strength of estimates between constructs or latent variables [38]. In evaluating this structural model, we use coefficient of determination (R^2) and path coefficient(β).

1) Hypothesis test

A hypothesis can be said accepted if it meets two criteria, namely:

1. If value **t-statistics** > **t-table 1.66** for directional hypotheses (one tailed) and **probability value (p-value) < α ($\alpha = 0.05$) or 5%**.
2. If the direction of the variable relationship is in line with the direction of the hypothesis being built. The direction of the variable can be seen from the value Original Sample on the path coefficient output.

4 Result and discussion

This research is quantitative data with the type of data in the form of primary data. The data collection technique uses a survey method by distributing questionnaires directly. Of the many Work Unit Offices in Yogyakarta, only a few populations were taken based on predetermined criteria using purposive sampling techniques.

The research subjects in this study are implementing employees who use the SAKTI application in all Work Unit Offices in the Special Region of Yogyakarta Province. Which consists of the Regional Office of the Directorate General of Treasury for the Special Region of Yogyakarta Province which also oversees the Yogya State Treasury Services Office, the Wates State Treasury Services Office, the Wonosari State Treasury Services Office, the Yogyakarta State Wealth and Auction Services Office, the One Stop Investment and Integrated Services Service, DIY Department of Cooperatives and Micro, Small and Medium Enterprises.

Specifically, the number of questionnaires distributed to respondents was 110 or 100%. However, there were 8 questionnaires that were not returned. So that the number of questionnaires that were returned and could be processed was 102 or the equivalent of 93%.

4.1 Descriptive statistics

Table 1. Descriptive statistics test results

	N	Actual Range			Theoretical Range			Std. Deviation
		Min	Max	Mean	Min	Max	Mean	
KS	102	17	30	25,77	6	30	18	3,477
KI	102	15	25	22,09	5	25	15	2,607
KL	102	11	20	17,13	4	20	12	2,440
KP	102	12	20	17,62	4	20	12	2,212
MB	102	15	25	22,25	5	25	15	2,479
Valid N (listwise)	102							

Table 1 shows the results regarding the range of respondents' answers, mean or average, and standard deviation. Descriptive statistical analysis in the table shows that the mean or average results for each variable are greater than the standard deviation.

4.2 Data and instrument quality test

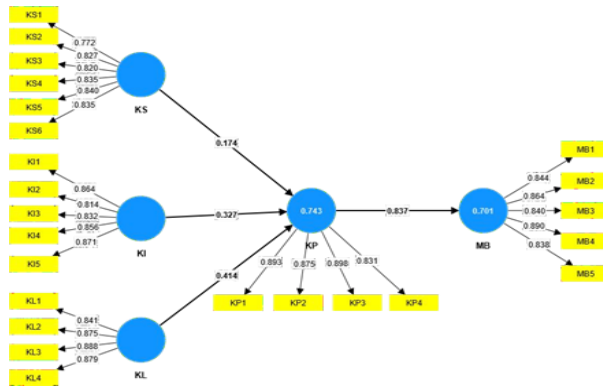


Fig. 3. Data and instrument quality.

4.2.1 Convergent validity test

Table 2. Outer loading.

	KI	KL	KP	KS	MB
KI1	0,864				
KI2	0,814				
KI3	0,832				
KI4	0,856				
KI5	0,871				
KL1		0,841			
KL2		0,875			
KL3		0,888			
KL4		0,879			
KP1			0,893		
KP2			0,875		
KP3			0,898		
KP4			0,831		
KS1				0,772	
KS2				0,827	
KS3				0,820	
KS4				0,835	
KS5				0,840	
KS6				0,835	
MB1					0,844
MB2					0,864
MB3					0,840
MB4					0,890
MB5					0,838

Based on the results of the data output in table 2, it can be concluded that all indicators for each variable show an outer loading value > 0.7. So, it can be said that all of these indicators are valid.

Table 3. AVE (average variance extracted).

	<i>Average Variance Extracted (AVE)</i>
Information Quality	0,718
Service Quality	0,759
User Satisfaction	0,765
System Quality	0,675
Net Benefits	0,732

Based on table 3 above, it can be concluded that each variable construct has an AVE (Average Variance Extracted) value > 0.5. Thus, all variables in this research can be said to be valid.

4.2.2 Discriminant validity test

Table 4. Fornerr-Larcker criterion.

	KI	KL	KP	KS	MB
KI	0,848				
KL	0,795	0,871			
KP	0,804	0,822	0,875		
KS	0,851	0,848	0,804	0,822	
MB	0,827	0,768	0,837	0,790	0,856

Based on the results in table 4, it can be concluded that all variables have the highest correlation values for each construct compared to the correlation with other constructs. So that all variables in this study have good discriminant validity or can be declared valid.

Table 5. Cross Loading.

	KI	KL	KP	KS	MB
KI1	0,864	0,673	0,681	0,770	0,716
KI2	0,814	0,687	0,613	0,689	0,684
KI3	0,832	0,651	0,705	0,634	0,684
KI4	0,856	0,686	0,674	0,769	0,672
KI5	0,871	0,675	0,726	0,727	0,746
KL1	0,698	0,841	0,595	0,740	0,622
KL2	0,657	0,875	0,673	0,754	0,633
KL3	0,743	0,888	0,772	0,754	0,732
KL4	0,673	0,879	0,792	0,715	0,676
KP1	0,764	0,786	0,893	0,754	0,743
KP2	0,702	0,710	0,875	0,694	0,757
KP3	0,654	0,746	0,898	0,710	0,756
KP4	0,695	0,623	0,831	0,650	0,671
	KI	KL	KP	KS	MB
KS1	0,608	0,694	0,618	0,772	0,521
KS2	0,728	0,707	0,638	0,827	0,701
KS3	0,678	0,680	0,650	0,820	0,627
KS4	0,706	0,723	0,668	0,835	0,627
KS5	0,768	0,672	0,650	0,840	0,709
KS6	0,707	0,707	0,728	0,835	0,702
MB1	0,694	0,627	0,760	0,609	0,844
MB2	0,687	0,641	0,799	0,669	0,864
MB3	0,708	0,638	0,689	0,702	0,840
MB4	0,740	0,709	0,660	0,751	0,890
MB5	0,714	0,678	0,649	0,658	0,838

Based on table 5 above, it can be concluded that the indicators have the highest correlation with their respective constructs compared to the correlation with other constructs and each variable indicator in this research has a cross loading value of > 0.7. This means that the discriminant validity of the construct indicators of each variable is good or can be declared valid.

4.2.3 Reliability test

Table 6. Cronbach’s alpha and composite reliability.

	<i>Cronbach's Alpha</i>	<i>Composite Reliability</i>
Information Quality	0,902	0,927
Service Quality	0,895	0,926
User Satisfaction	0,897	0,929
Service Quality	0,904	0,926
Net Benefits	0,909	0,932

Based on table 6 above, it can be seen that all variables in this study have Cronbach's Alpha and Composite Reliability values above 0.6. Thus, it can be said that all constructs in this research are reliable.

4.2.4 Coefficient of determination (R2) test

Table 7. Coefficient of determination (R²).

	<i>R-Square</i>	<i>Adjusted R-Square</i>
User Satisfaction	0,743	0,735
Net Benefits	0,701	0,698

The Adjusted R-Square value in table 7 for the user satisfaction variable is 0.735 or 73.5%. This means that the ability of the variables system quality, information quality, and service quality to explain variations in user satisfaction variables is 73.5%, while the remaining 26.5% is explained by other variables outside this research model.

Meanwhile, the Adjusted R-Square value for the net benefit variable is 0.698 or 69.8%. This means that the ability of the user satisfaction variable to explain variations in the net benefit variable is 69.8%, while the remaining 30.2% is explained by other variables outside this research model. So in general it can be concluded that this research model has a moderate or moderate level of accuracy because the Adjusted R-Square value is in the range of 0.50 – 0.75.

4.2.5 Hypothesis testing

Table 8. Path coefficient.

Hypothesis		<i>Original Sample (O)</i>	<i>t-Statistics</i>	<i>p-Values</i>	Explanation
KS -> KP	H1	0,174	1,114	0,133	Not Supported
KI -> KP	H2	0,327	2,571	0,005	Supported
KL -> KP	H3	0,414	3,457	0,000	Supported
KP -> MB	H4	0,837	27,707	0,000	Supported

Hypothesis testing 1

Based on the information in table 8, it can be seen that the relationship between system quality and user satisfaction has a t-statistic value of 1.114 < 1.66 and a p- value of 0.133 > 0.05. Then the value of the original sample on the relationship between system quality and user satisfaction shows a positive number of 0.174. Thus, H1 is not supported. So it can be said that system quality has no effect on user satisfaction.

Hypothesis testing 2

Based on the information in table 8, it can be seen that the relationship between information quality and user satisfaction has a t-statistic value of $2.571 > 1.66$ and a p-value of $0.005 < 0.05$. Then the value of the original sample on the relationship between information quality and user satisfaction shows a positive number of 0.327. Thus, H2 is supported. So it can be said that information quality has a positive effect on user satisfaction.

Hypothesis testing 3

Based on the information in table 8, it can be seen that the relationship between service quality and user satisfaction has a t-statistic value of $3.457 > 1.66$ and a p-value of $0.000 < 0.05$. Then the value from the original sample on the relationship between service quality and user satisfaction shows a positive number of 0.414. Thus, H3 is supported. So it can be said that service quality has a positive effect on user satisfaction.

Hypothesis testing 4

Based on the information in table 8, it can be seen that the relationship between user satisfaction and net benefits has a t-statistic value of $27.707 > 1.66$ and a p-value of $0.000 < 0.05$. Then the value from the original sample on the relationship between user satisfaction and net benefits shows a positive number of 0.837. Thus, H4 is supported. So it can be said that user satisfaction has a positive effect on net benefits.

4.3 Discussion

4.3.1 System quality on user satisfaction

The results of this hypothesis testing show that the system quality variable has no effect on user satisfaction. This shows that the higher the system quality will not affect the increase or decrease in satisfaction of SAKTI application users. So, the quality of the system still needs to be improved and developed in this application. Based on respondents' responses, the assessment of system quality indicators can show that there are still various system problems that need to be resolved so that users get satisfaction when using the mandatory SAKTI application.

Several indicators in it are that the application is reliable, but users still feel that there are many errors occurring in the SAKTI application. Then the indicators are easy to use and learn, but it is also not easy and fast for users to learn the SAKTI system which is classified as a new system. Furthermore, there is an indicator of system flexibility. Flexibility here is meant by the ability of a system to respond to or respond to user needs, the same as the response time indicator used in this research. However, users still feel that there is limited flexibility and response times that take a long time or are unsatisfactory, so the system created must be able to easily change or add features.

Then there are indicators of system sophistication in this research, but from user responses, users still feel the impact of the sophistication of the SAKTI application is lacking, due to a lack of evaluation of the technical skills of application developers so that the design and system that users expect is still not in accordance with user needs. Therefore, it can be concluded that it is necessary to maintain the system's strengths and improve its weaknesses to increase user satisfaction of the SAKTI application.

The results of this research do not support the findings of the IS success model by [20] which states that system quality is one of the dimensions that has a significant influence on determining the success of an information system. This research is also not in line with TAM theory which explains that in a new system, a number of factors will influence the user's

decision about how to use the system. However, because this application is mandatory, users in carrying out their duties and responsibilities are still unable to ensure a reliable system in this SAKTI application.

The results of this study support the results of research conducted by [7, 10, 6] which state that system quality has no effect on user satisfaction. However, the results of this study contradict the results of research conducted by [24, 4, 5, 14], they stated that system quality has a positive effect on user satisfaction.

4.3.2 Information quality on user satisfaction

The results of this hypothesis testing show that the information quality variable has a positive effect on user satisfaction. This shows that if users feel that the information produced from the system is of high quality, then user satisfaction will increase. Therefore, quality information is very important. Based on respondents' responses, SAKTI application users feel that the data, information or reports produced from SAKTI meet the characteristics of being accurate, complete, relevant, easy to understand and consistent. Overall, the quality of the SAKTI system information is considered very good and meets user expectations. However, there are still several things that need to be improved. Suggestions for improvement submitted by SAKTI users related to the quality of information, namely regarding adding information by monitoring application usage activities for each application user.

The results of this hypothesis testing found that information quality has a large and strong driving force on user satisfaction. The quality of this information can make a positive contribution in increasing SAKTI user satisfaction with stakeholders at the Yogyakarta Special Region Provincial Work Unit Office. So it is necessary to develop a system to produce the information needed by SAKTI users to increase user satisfaction.

The results of this research support the findings of the IS success model by [20] which states that information quality is one of the dimensions that has a significant influence on determining the success of an information system. These results are in line with research conducted by [28, 27, 31, 8, 7, 15], which states that the higher the quality of information found in an information system, the higher the user satisfaction. However, the results of this study contradict the results conducted by [4, 14], they stated that information quality has no effect on user satisfaction.

4.3.3 Service quality on user satisfaction

The results of this hypothesis testing show that the service quality variable has a positive effect on user satisfaction. This shows that if users feel that the services provided by the system provider are of high quality, then user satisfaction will increase. Based on respondents' responses, SAKTI users feel that the system service provider or officer is accurate, competent and reliable in accordance with their expectations so that users can increase their efficiency, effectiveness and productivity.

Users assess that the overall quality of the services provided meets the criteria as very good. However, SAKTI users feel that service providers are not always responsive to helping user problems. This must be corrected so that user satisfaction with SAKTI does not decrease. Suggestions for improvements submitted by users regarding service quality include service providers being more responsive if application users experience problems. And there is certainty of service response time, perhaps by providing service via telephone so that problems are resolved quickly. It is very important to consider suggestions for improvements related to the quality of services provided to support the SAKTI system in order to increase user satisfaction.

The results of this research support the findings of the IS success model by [20] which states that service quality is one of the dimensions that influences user satisfaction. These results are in line with research conducted by [10, 6, 15], which states that service quality has a positive effect on user satisfaction. However, the results of this research contradict the results conducted by [4], [8], they stated that service quality has no effect on user satisfaction.

4.3.4 User satisfaction on net benefits

The results of this hypothesis testing show that the user satisfaction variable has a positive effect on net benefits. User satisfaction with SAKTI has a major impact on the net benefits felt by users. These results are influenced by satisfaction with the perception of application users regarding the ability to provide usefulness and effectiveness of SAKTI web capabilities which results in increased work performance, productivity, ease and speed of completing work, user welfare, and the effectiveness of decision making. So it can be concluded that the higher the satisfaction of SAKTI application users, the higher the net benefits felt by SAKTI application users.

Based on respondents' responses, user satisfaction with SAKTI is generally included in the very high category. System quality, information quality and service quality together influence SAKTI user satisfaction. Thus, user satisfaction itself can make a positive contribution in increasing the net benefits of the SAKTI application at the Treasury Office and Yogyakarta Special Region Provincial Work Unit Office. Apart from that, these results prove that user satisfaction is very important to measure the success of an information system, especially the SAKTI application.

The results of this research support the findings of the IS success model by [20] which states that user satisfaction and net benefits are dimensions in measuring the success of information system implementation, in this case SAKTI. These results are in line with research conducted by [26, 24, 39, 7, 14], which states that user satisfaction has a positive effect on net benefits. However, the results of this study contradict the results of [40], which states that user satisfaction has no effect on net benefits.

5 Conclusions, limitations, suggestions, and research implications

5.1 Conclusions

This research was conducted to test and obtain empirical evidence regarding the success factors for implementing the SAKTI application, namely system quality, information quality, service quality on user satisfaction and net benefits. This research proxies variables into the Technology Acceptance Model (TAM) theory and the DeLone and McLean Information Systems Success Model. This research was conducted at the Work Unit Office in the Special Region of Yogyakarta Province.

Based on the results of testing and data analysis that has been carried out, it can be concluded as follows:

1. System Quality has no effect on User Satisfaction.
2. Information Quality has a positive effect on User Satisfaction.
3. Service Quality has a positive effect on User Satisfaction.
4. User Satisfaction has a positive effect on Net Benefits.

5.2 Limitations

In this research there are several limitations, namely as follows:

1. This research only uses questionnaire data, without interviews so the results obtained are less than optimal.
2. The samples used in the research were only Work Unit Offices in the form of agencies and departments in the Special Region of Yogyakarta Province, and the number of respondents needed in this research was uncertain and very limited to each office.
3. The variables examined in this research are only system quality, information quality, service quality, user satisfaction and net benefits. There are many other variables that can influence the success factors of information system implementation.

5.3 Suggestions

With the various limitations contained in this research, suggestions for further research development are:

1. This data collection technique through a questionnaire is better accompanied by interviews to increase the accuracy of the data obtained.
2. Expanding the scope of the research sample area so that it can explain the population as a whole so that the results of this research can be developed.
3. Adding other independent variables that can influence user satisfaction and the net benefits of an application or information system.

5.4 Implications

5.4.1 Theoretical implications

1. The results of this research indicate that the factors that influence user satisfaction and the net benefits of the success of an information system are caused by system quality, information quality, and service quality. Thus, the results of the discussion in this research become explanatory implications in the Technology Acceptance Model (TAM) theory and the DeLone and McLean Information Systems Success Model.
2. On the other hand, although system quality, information quality, and service quality are not in proportion to user satisfaction and net benefits. Theoretically, it is hoped that each Work Unit Office will be able to improve performance and user satisfaction to achieve predetermined goals or targets.

5.4.2 Practical implications

Based on this research, the researcher recommends that Regional Offices of the Directorate General of Treasury and Work Unit Offices can use it as a guide or material for consideration to further increase user satisfaction for all Work Unit Offices in the aspects of system quality, information quality, service quality, user satisfaction and net benefits. So as to increase user performance to the maximum.

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