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Determinant Analysis of SAKTI Implementation (Delone and Mclean Information System Success Model Approach)

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ABSTRACT
Currently,the process of budgeting, expenditure budget execution and reporting the state revenue and expenditure budget in ministries/agencies uses an integrated information system. Using an integrated system, all data is available in an information system and can be accessed easily, faster and more safely. This study aims to analyze how successful the implementation of web-based SAKTI pilot project. The data used comes from a questionnaire on the number of respondents who obtained 244 samples from 10 ministries/ government agencies. Data analysis used descriptive statistical analysis and Structural Equation Model-Partial Least Square (SEM-PLS) using R-Studio and WarpPLS 7.0 software. According to the findings, system quality, information quality, service quality all had a positive significant effect on user satisfaction and user satisfaction had a significant and positive effect on net profit. Based on the results of the hypothesis, it can be concluded that the implementation of the SAKTI piloting has been going well and according to user expectations.

INTRODUCTION

Information technology systems that are developing rapidly in Indonesia have great potential benefits in various fields, including in the field of accounting. The use of information technology systems in the government sector in the field of accounting can be seen by the emergence of various innovations, one of which is Sistem Aplikasi Keuangan Tingkat Instansi (SAKTI) initiated by the Directorate General of Treasury (DJPB).

Utilization of information technology systems in the government sector is in line with Presidential Instruction of the Republic of Indonesia (Instruksi Presiden RI) Number 3/2003 concerning National Policy and Strategy for E-Government Development. The Presidential Instruction(2003) states that the use of information and communication technology in government processes will increase transparency, effectiveness, efficiency and accountability of governance.

SAKTI is an application that is used to support the implementation of Sistem Perbendaharaan dan Anggaran Negara (SPAN) in government agencies which consists of several modules, namely module budgeting, commitment module, payment module treasurer module, inventory, fixed asset module, accounts receivable module, and accounting and reporting module (Kementerian Keuangan Republik Indonesia, 2018). SAKTI was developed through the Integrated Financial Management Information System (IFMIS) approach. IFMIS has been developed in Indonesia since the last decade. IFMIS development is still ongoing because of the dynamics of information technology development which aims to simplify business processes so that they are more efficient, fast and transparent (Sudarto, 2019)

The use of SAKTI is mandatory, but in the implementation process, it is carried out in stages starting from the working unit (satuan kerja) in a small scope to all working units in ministries/ government agencies (Kementerian Negara/ Lembaga), from SAKTI which is desktop based and then developed into web-based. The use of the SAKTI aims to realize orderly, efficient, economical, effective, transparent, and responsible state financial governance (Kementerian Keuangan Republik Indonesia, 2018). The use of the SAKTI starts from the budget planning process, recording transactions, and preparing financial reports. Among SAKTI's outputs are in the form of payment request letters (surat permintaan pembayaran/ SPP), payment orders (surat perintah membayar/ SPM) to financial reports.

The use of information technology systems has an impact on its users, both internal and external users. Internal users consist of employees and the organization itself, while external users consist of the public and other organizations outside the application user organization. The use of information technology systems has an impact on organizations in the form of organizational productivity, increased organizational effectiveness, increased organizational quality, increased organizational creativity, and problem-solving. As for the impact on employees, the use of information technology systems can increase employee productivity and increase effectiveness in their work. It is hoped that the SAKTI can help the work of users become more efficient and effective, so that it will affect user satisfaction and ultimately improve the performance (net benefit) of users.

Implementation of information technology systems in organizations creates interaction between humans as users and the information technology system. This interaction certainly creates a perception from the user regarding the failure or success of the information technology system. According to Jogiyanto (2007), one of the factors causing the failure of information technology systems implementation is the resistance factor of human resources who refuse or do not want to use them for various reasons. SAKTI as a system, cannot be separated from its strengths and weaknesses, so evaluation is needed as a means of improvement. Chau and Hu in (Mohamadali & Garibaldi, 2010) revealed that success factors can be seen from the individual dimensions, technological systems, and the organization. Analysis or evaluation of web-based SAKTI implementation is necessary because in 2022 there will be a rollout or full implementation in all ministries/government agencies (Direktorat Jenderal Perbendaharaan Negara, 2021).

Evaluation of the implementation of the application that is being run is needed to keep the application running properly. Evaluation of success is measured using the perception of user satisfaction and its effect on performance. Zmud (1979) states that the success of information

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systems can be seen from three things, namely user performance, information system utilization, and user satisfaction. Factor user satisfaction as an indicator of the success of an information system becomes very useful if the information system is mandatory (Urbach & Muller, 2012).

Previous research regarding the implementation of SAKTI conducted by Prabowo (2017), Pambudi and Adam (2018) and Amriani & Iskandar (2019) produce different conclusions regarding the implementation of SAKTI. This study aims to analyze the success of SAKTI implementation using a modified Update Delone and McLane Information System Success Model (Update D&M ISSM). The difference between this and previous research is that this research uses SAKTI user respondents in working units in 10 K/L who have used SAKTI. Another difference between this study and previous research is related to the use of the platform, previous research used the desktop version of SAKTI while this study used the web version of SAKTI.

The use of the Update ISSM D&M as a theory or model in research is due to several reasons. First, this study aims to analyze the successful implementation of information technology systems and their impact on user satisfaction and performance so that they are in accordance with the D&M IS Success Model. Second, the use of SAKTI which is mandatory, the factors or antecedents that influence the acceptance of the information system become less relevant, because whether we like it or not, it is easy or not easy for the information system or application to be used. Thrid ISSM D&M are parsimony models. The parsimony model is a simple but complete(Jogiyanto, 2007). The research respondents were users of the SAKTI in 10 ministries/ government agencies that had fully implemented it (already used all the modules on the SAKTI web).

Currently, the implementation of SAKTI is in the fifth phase of piloting, roll out of the full implementation of SAKTI in all ministries/ government agencies is planned to be carried out in 2022, therefore it is important to obtain feedback, evaluation, and input at this stage. It is hoped that this research will be able to provide an overview regarding the implementation of SAKTI which is currently being carried out and provide input to related units, namely the Directorate General of Treasury (DJPb) as the system maintenance administrator, central administrator, and SAKTI system developer.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT.

Update Delone & Mclean Information System Success Model.

DeLone and McLean created the Delone and McLane Information System Success Model (D&M ISSM) in 1992(DeLone & McLean, 1992). This model reflects the dependability of six measures of information system success. System quality, information quality, use, user satisfaction, individual impact, and organizational effect are the six components or variables of this approach (Jogiyanto, 2007). D&M ISSM is a parsimony model. The parsimony model is comprehensive but simple. The D&M ISSM as seen in Figure 1

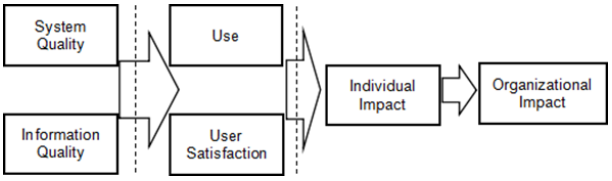

Figure 1. D&M ISSM (DeLone & McLean, 1992)

DeLone & McLean (2003) updated the existing model with several things, namely adding service quality variables, simplifying individual and organizational impact variables into net benefits, and fixed measurements, and adding the intention to use a variable before the use variable as an alternative for mandatory information systems. Updating Delone and Mclean Information System Success Model ((Update D&M ISSM) is the name of the revised model. The updated D&M ISSM is shown in Figure 2

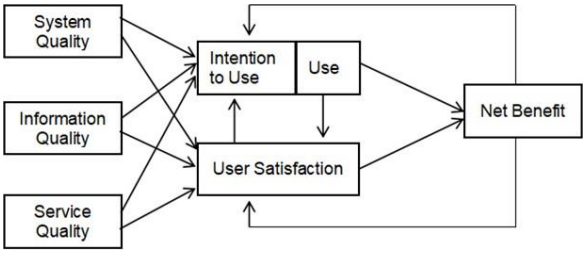

Figure 2. Update D&M ISSM (DeLone & McLean, 2003)

Sistem Aplikasi Keuangan Tingkat Instansi (SAKTI)

SAKTI (Sistem Aplikasi Keuangan Tingkat Instansi) is part of the existing elements of Public Financial Management (PFM) in terms of budget and treasury modernization. The SAKTI is an application used to support the implementation of the SPAN. SPAN and SAKTI are the backbone core of integrated state financial management applications (DJPB, 2020). SAKTI consists of several modules namely budgeting modules, commitment modules, payment modules, treasurer modules, inventory modules, fixed assets modules, receivables modules, and accounting and reporting modules (Kementerian Keuangan Republik Indonesia, 2018). Besides the eight modules, the SAKTI application is also equipped with an administrator module to manage reference data and system configuration.

The business processes on SAKTI start from budgeting, and expenditure budget execution to accountability or reporting. SAKTI integrates existing applications used by working units that are standalone into one accrual and cash-based accounting application. In the future, SAKTI will replace the existing application used by the working unit. The existing applications replaced by SAKTI are the RKAKL DIPA, SAS, Silabi, Aplikasi Persediaan, SIMAK BMN, and SAIBA.

The implementation of SAKTI was carried out in stages as stipulated in the Minister of Finance Regulation (Peraturan Menteri Keuangan) number 223/PMK.05/2015 and the amendments which Minister of Finance Regulation number 159/ PMK.05/2018 and number 203/PMK.05/2019. At first, the SAKTI was built using a desktop basis. In 2019 the SAKTI application started using a web basis. The SAKTI produces Budget Realization Reports, Operational Reports, Changes in Equity Reports, and Balance Sheets, as well as Cash Flow Reports and Reports on Changes in Budget Balance for Public Service Agency (BLU) institution.

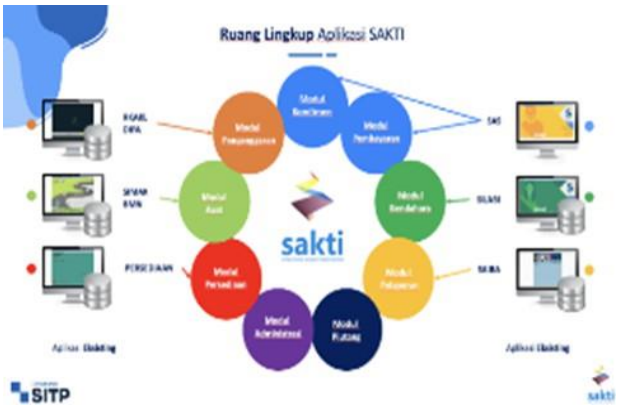

Figure 3. Scope of SAKTI (DJPB, 2020)

An overview of the scope of SAKTI's application is shown in Figure 3

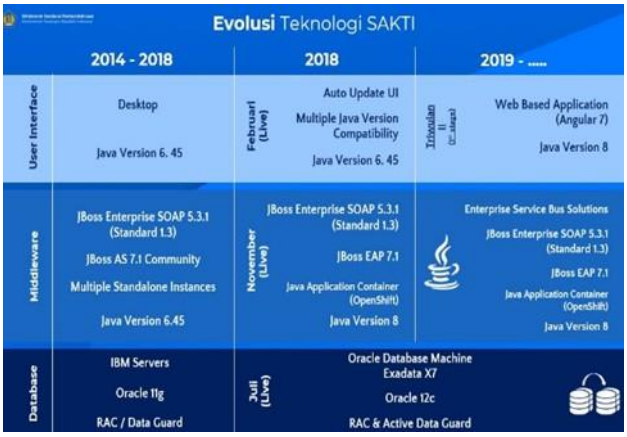

Figure 4. Evolution of SAKTI (DJPB Kemenkeu, 2021)

Figure 4 shows the Evolution of SAKTI's Technology.

Conceptual Model

The research framework or model uses five constructs or variables in the Update ISSM D&M while eliminating the "use" contruct. A model that eliminates the "use" contruct is also used by Sorum et al. (2012), Kim et al. (2012), and Amriani & Iskandar (2019).

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The elimination of the "use" contruct in this research model refers to the statement of Seddon & Kiew (1996) that the "use" variable in mandatory information systems is not relevant. This can be seen in the research results of Livari (2005), Koh et al. (2010), and Saba (2012). The proposed framework can be seen in Figure 5

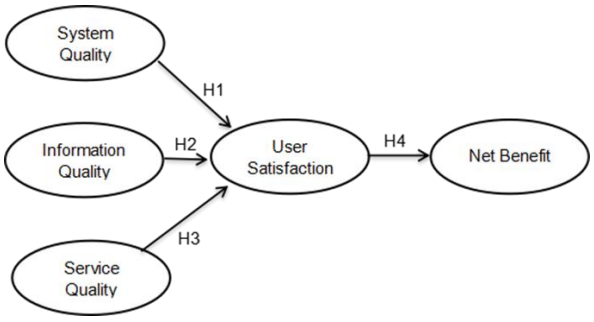

Figure 5. Scope of SAKTI (DJPB, 2020)

Variable Research

System Quality (SysQ) is the performance (process) quality of the application or it can be said that system quality refers to the characteristics of the SAKTI application based on user perceptions (Urbach & Muller, 2012). This variable uses five indicators described in statements related to ease of use, reliability, secure, response time and easy to learn.

Information Quality (InfQ) is a characteristic of the output produced by SAKTI (Urbach & Muller, 2012). The output of the SAKTI application can be in the form of agency financial reports and other report data. Information quality is measured using six indicators described through related statements such as the output is understandability, adequate and completeness, appropriateness or relevance, accuracy, the form is in accordance with the rules (format), and the resulting output is usefuli.

Service Quality (ServQ) is the characteristic of support and service assistance provided by the support system to users in implementing or using the SAKTI application based on user perceptions. ervice support and assistance can be in the form of financial education and training (training), workshops and the like, mentoring, helpdesk services such as hi-DJPB (hi Kemenkeu). The measurement of service quality variables uses five indicators which are described in statements such as adequate system support, helpful, good performance, responsive, usefull.

User Satisfaction (USat) is the user's perception of attitude or response to the application based on the suitability between the expected system attributes and real information system capabilities. Measuring user satisfaction becomes important when the information system used is mandatory (Urbach & Muller, 2012). This variable is measured by three indicators which are translated through statements related to system quality satisfaction and the resulting output or results, meeting expectations and overall satisfaction.

Net Benefit (NetB) in this study is the user's perception of SAKTI's ability to contribute or impact on user performance (DeLone & McLean, 2003), (Huang et al., 2015). The measurement of this variable uses four indicators which are described in the form of statements related to the speed of completing work (efficiency), employee productivity, simplicity or ease of work and usefulness in work (usefulness).

Relationship between System Quality and User Satisfaction

Based on Update D&M ISSM, user satisfaction is influenced by system quality. User satisfaction will be better in a ceteris paribus scenario if the system's perceived quality is higher ((Livari, 2005). If the user or users feel that the SAKTI application used has good quality as expected, the user will feel satisfied. System quality (SysQ), according to research by Livari (2005) that assesses the effectiveness of the financial and accounting system in Oulu, Finland, has a considerable impact on user satisfaction (USat). Research by Athmay et al. (2016), Oktal et al. (2016), Iskandar et al. (2017), Pambudi & Adam (2018), Amriani & Iskandar (2019), andLee & Jeon (2020) also obtained results that support Livari (2005). According to the preceding description, the first hypothesis:

H1: System Quality (SysQ) affects on User Satisfaction (Usat)

Relationship between Information Quality and User Satisfaction

The quality of the output produced by an information system (SAKTI) is referred to as information quality (InfQ). According to Update D&M ISSM, information quality (InfQ) influences user satisfaction (USat). In a ceteris paribus situation, the higher the quality of the report

or output perceived by the user, the higher the information system user satisfaction Livari (2005). According to Livari's research, examining the effectiveness of the financial and accounting system in Oulu, Finland. The same results were obtained by Wang and Liao (Y.-S. Wang & Liao, 2008), Huang et al. (2015),Noviyanti (2017), Pambudi & Adam (2018), and Hussein & Hilmi (2021) that the quality of information affects user satisfaction. Based on the description given above, the second hypothesis is formatted as follows:

H2: Information Quality (InfQ) affects on User Satisfaction (Usat)

Relationship between Service Quality and User Satisfaction

Service quality (ServQ) is the quality (effectiveness) of support that users receive in using information systems (W.-T. Wang & Wang, 2009), such as training and service assistance (Mohammadi, 2015). According to the Update D&M ISSM, service quality influences user satisfaction. Therefore, it can be said that if the application user gets good service from the information system provider, a feeling of satisfaction will arise. in using the application. The feeling of satisfaction is getting higher with the increase quality of service received. According to study by Mohammadi (Mohammadi, 2015), Awwad and Al-Mohammad, Oktal et al., (2016), Mohammadi (Mohammadi, 2015), and Ohliati & Abbas (Ohliati & Abbas, 2019) service quality has an impact on user satisfaction. The third hypothesis in this study is constructed using the information provided above as follows:

H3: Service Quality (ServQ) affects on User Satisfaction (Usat)

Relationship between User Satisfaction and Net Benefit.

User satisfaction (USat) is a user's perception of attitude or response to an application based on the suitability between the expected system attributes and real capabilities. Whereas Wang & Wang (W.-T. Wang & Wang, 2009) and Huang, et al (Huang et al., 2015) define user satisfaction as the feeling (degree of satisfaction) of the user after using the information system, Updating D&M ISSM defines it as the response felt by the recipient to the use of an information system's output. Net benefit (NetB) is the user's perception of information system's ability to contribute or impact on user performance (DeLone & McLean, 2003), Huang et al. (2015). According to Update D&M ISSM, user satisfaction has an impact on individual impact. The individual impact in this case is an increase in performance as indicated by work speed, work productivity, work effectiveness, and simplicity or ease of doing. If the user finds the information system provides satisfaction from the performance process and the resulting output as well as from the services provided in the process of implementing the information system, then he will work better to improve his performance. The results of research by Livari (Livari, 2005) show that user satisfaction significantly influences individual impact. The same results were also stated by Huang, et al (Huang et al., 2015), Pambudi and Adam (Pambudi & Adam, 2018), Aldholay et al. (Aldholay et al., 2018), and Hussein & Hilmi (Hussein & Hilmi, 2021). The following formulation for the fourth hypothesis is based on the description given above:

H4: User Satisfaction (USat) affects on Net Benefit (NetB)

RESEARCH METHODS

This study aims to analyze the implementation of the SAKTI application in 10 ministries/ government agencies and explain the variables that influence its implementation as a proxy in analyzing its implementation through hypothesis testing using a quantitative analysis approach.

This research model uses five latent variables: system quality, information quality, service quality, exogenous variables, user satisfaction, and net benefits, which are endogenous variables. Variable measurement uses a five-point Likert scale (strongly disagree - strongly agree). The measurement instruments used to analyze the implementation of the SAKTI application can seen in table 1.

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Table 1. Instrument Variable Research

Research Contruct (variable)	Indicator	Source
System Quality (SysQ)	SAKTI is an easy to use	(Gable et al., 2008)
	SAKTI has minimal errors or interruptions rarely occur	(Gable et al., 2008; Livari, 2005)
	SAKTI provides access control and provision of secure data back-ups	(Istianingsih & Wijanto, 2008)
	SAKTI responds quite quickly to commands for processing	(Livari, 2005; Oktal et al., 2016)
	SAKTI is an application that is easy to learn	(Gable et al., 2008)
Information Quality (InfQ)	Reports produced by SAKTI are presented in an easy-to-understand format	(Gable et al., 2008)
	SAKTI produces adequate and complete reports and information	(Livari, 2005)
	The reports produced by SAKTI are relevant	(Gable et al., 2008)
	Information or reports produced by the SAKTI application are accurate	(Gable et al., 2008)
	The report produced by SAKTI conforms to the format used	(Gable et al., 2008)
	The information produced by SAKTI is used in working unit operations	(Gable et al., 2008)
Service Quality (ServQ)	System Support (hi Kemenkeu, training and workshop) in the implementation of SAKTI is adequate	(Cheng, 2014)
	System Support (hi Kemenkeu, training and workshop) helped me in using SAKTI	(Sorum et al., 2012)
	System support personnel (hi Kemenkeu, training and workshop) have good skills in solving problems	(Cheng, 2014)
	System support personnel (hi Kemenkeu, training and workshop) are responsive	(Urbach & Muller, 2012)
	Training/workshops/FGDs that have been held are beneficial in the implementation of SAKTI	(Urbach & Muller, 2012)
User Satisfaction (USat)	I am satisfied with SAKTI's performance and the information that SAKTI has produced	(Wu & Wang, 2006)
	SAKTI met my expectations	(Y.-S. Wang & Liao, 2008)
	Overall, I am satisfied with SAKTI	(Y.-S. Wang & Liao, 2008)
Net Benefit (NetB)	SAKTI, makes my work faster	(Livari, 2005)
	SAKTI increases my work productivity	(Livari, 2005)
	By using SAKTI, my work easier	(Livari, 2005)
	SAKTI is usefull in my work	(Livari, 2005)

Data Collection Analysis Techniques

Primary data and secondary data are the two categories of data used in this study. To collect primary data, SAKTI users in government ministries/agencies are asked to fill out a survey or questionnaire. Secondary data is in the form of books, journals, articles or written works that researchers can obtain through library research.

Primary data comes from online surveys or questionnaires via googleform which are sent to respondents who serve as users of the SAKTI. Distribution or dissemination is carried out using WhatsApp to SAKTI users. The sampling technique used is incidental sampling (non-probability sampling).

The questionnaire has two parts, the first part contains demographics and the next part contains questions about user perceptions regarding the implementation of the SAKTI. Variables were measured using a five-point Likert scale with answer choices: "1= Strongly Disagree", "2= Disagree", "3= Doubtful", "4= Agree", and "5= Strongly Agree".

Data analysis was carried out in order to obtain relevant information contained in the data and use the results obtained to describe the research problem. Data analysis used descriptive statistical analysis and SEM-PLS or Structural Equation Model-Partial Least Square using R-Studio and WarpPLS 7.0 software.

RESULTS AND DISCUSSION

Descriptive Analysis

Respondents who filled out or responded to the questionnaire were 244 respondents. From 244 data collected, the data processed totaled 223 questionnaires originating from users from 10 ministries/government agencies already using web-based SAKTI, while the other 21 came from other ministries/government agencies users who had still using desktop-based SAKTI.

The 223 responders that were collected have complied with the criteria for data processing. (Sholihin & Ratmono, 2013)Solihin and Ratmono claim that even with a small sample size (35-50 samples), the model can still be calculated.

Table 2. Summary of Respondent Demographics

Description	Criteria	freq
Ministries/ Government Agencies	House of Representatives	6
	Ministry of Finance	153
	State Minister for The Empowerment of State Apparaturs and Bureaucratic Reform	4
	Indonesian Ministry of National Development Planning	26
	Ministry of State Secretariat	21
	Corruption Eradication Commission	2
	Judicial Commission	2
	National Procurement Board	3
	Constitutional Court	1
	Financial Transaction Reports and Analysis Center	5
Modules	Accounting and Reporting Modules (Modul Akuntansi dan Pelaporan)	49
	Fixed Assets Modules (Modul Aset Tetap)	9
	Treasurer Modules (Modul Bendahara)	52
	Commitment Modules (modul komitmen)	19
	Payment Modules (Modul Pembayaran)	51
	Budgeting Modules (Modul Penganggaran)	27
	Inventory Modules (Modul Persediaan)	15
	Receivables Modules (Modul Piutang)	1
Sex	Male	147
	Female	76
Educational Background	Accounting	125
	Informatics	10
	Others	88

Table 2 provides information on the demographics of the respondents, while Table 3 provides descriptive statistics for the research variables.

Tabel 3. Research Variable Descriptive Statistics

Construct	Indicators	Mea		Standard Deviation
		Theoretical	Actual	
System Quality (SysQ)	5	15	21.68	3.07
Information Quality (InfQ)	6	18	27.52	3.11
Service Quality (ServQ)	5	15	22.47	2.82
User Satisfaction (USat)	3	9	13.48	1.89
Net Benefit (NetB)	4	12	18.45	2.22

Testing and Data Analysis

In the PLS-SEM model, data analysis will go through two stages: (1) assessing the outer model, also known as the measurement model, and (2) evaluating the interior model, also known as the structural model (Ghozali & Latan, 2016).

Validity and reliability tests are used to evaluate the outer model. The convergent and discriminant components of the validity test. While the reliability test is used to evaluate the consistency of the questionnaire used to measure a latent variable, the validity test is used to determine whether the latent variable is valid. Data processing for testing in this study uses WarpPLS version 7.0. The results of the loading factor, p-value, average variance extracted (AVE), cronbach's alpha (CA) and composite reliability (CR) can be seen in table 4.

Table 4. Value of Loading Factor, AVE, CA and CR

Construct	Items (Indicators)	Loading	P- Value	AVE	CA	CR	validit
System Quality (SysQ)	SysQ1 (Indicator1)	0.844	<0.001	0.640	0.858	0.899	Yes
	SysQ2 (Indicator2)	0.761	<0.001				
	SysQ3 (Indicator3)	0.762	<0.001				
	SysQ4 (Indicator4)	0.863	<0.001				
	SysQ5 (Indicator5)	0.763	<0.001				
Information Quality (InfQ)	InfQ1 (Indicator1)	0.819	<0.001	0.735	0.928	0.943	Yes
	InfQ2 (Indicator2)	0.861	<0.001				
	InfQ3 (Indicator3)	0.882	<0.001				
	InfQ4 (Indicator4)	0.857	<0.001				
	InfQ5 (Indicator5)	0.873	<0.001				
	InfQ6 (Indicator6)	0.851	<0.001				
Service Quality (ServQ)	ServQ1 (Indicator1)	0.869	<0.001	0.739	0.911	0.934	Yes
	ServQ2 (Indicator2)	0.870	<0.001				
	ServQ3 (Indicator3)	0.920	<0.001				
	ServQ4 (Indicator4)	0.868	<0.001				
	ServQ5 (Indicator5)	0.763	<0.001				
User Satisfaction (USat)	Usat1 (Indicator1)	0.930	<0.001	0.869	0.924	0.952	Yes
	Usat2 (Indicator2)	0.926	<0.001				
	USat3 (Indicator3)	0.940	<0.001				
Net Benefit (NetB)	NetB1 (Indicator1)	0.907	<0.001	0.834	0.933	0.952	Yes
	NetB2 (Indicator2)	0.929	<0.001				
	NetB3 (Indicator3)	0.932	<0.001				
	NetB4 (Indicator4)	0.882	<0.001				

The loading factor and AVE score can be used to examine convergent validity testing. The level of the correlation between each measurement item (indicator) and its construct is described by the standardized loading factor (Haryono, 2017). Ideally a loading factor ≥ 0.7 means that the indicator is valid for measuring the construct. Besides that, p-value < 0.05 (Sholihin & Ratmono, 2020). AVE value can also be used as a guide in viewing the convergent validity of latent variables. AVE recommended value>0.5. The loading factor, p-value and AVE can be seen in table 3. Based on the processing results (table 4) the latent variables used have a loading factor value above 0.7, p-value < 0.05, and AVE > 0.5, so it can be said that the indicators used meet the convergent validity criteria

Discriminant validity testing was carried out by looking at (1) cross loading, (2) the square root of the average variance extracted (AVE) and (3) HTMT ratio (heterotrait-monotrait ratio).

Cross loading is one approach that can be used in assessing discriminant validity. Cross loading can mean that the loading of an indicator on the construct being measured should be greater than the loading on other constructs (Sholihin & Ratmono, 2020). Value of cross loading can be seen in table 4. We can see that the SysQ1 value on SysQ (0.844) should be greater than the SysQ1 value on InfQ (0.047), or on ServQ (-0.180), or USat (0.085) and NetB (0.227), so also the InfQ1 value in InfQ (0.819) should have a higher value than the other constructs. Based on the table 4, we can conclude that there is no problem with discriminant validity.

Table 5. Value of Cross Loading

		SysQ	InfQ	ServQ	USat	NetB
System Quality (SysQ)	SysQ1	**0.844**	-0.047	-0.180	0.085	0.227
	SysQ2	**0.761**	-0.094	0.212	0.247	-0.419
	SysQ3	**0.762**	0.391	-0.012	-0.088	-0.125
	SysQ4	**0.863**	-0.070	0.052	-0.075	0.017
	SysQ5	**0.763**	-0.166	-0.059	-0.168	0.273
Information Quality (InfQ)	InfQ1	-0.054	**0.819**	0.347	-0.184	0.204
	InfQ2	-0.047	**0.861**	-0.264	0.171	-0.034
	InfQ3	0.215	**0.882**	-0.185	0.001	-0.115
	InfQ4	-0.014	**0.857**	0.110	0.335	-0.190
	InfQ5	-0.024	**0.873**	0.076	-0.026	-0.213
	InfQ6	-0.085	**0.851**	-0.064	-0.306	0.366
Service Quality (ServQ)	ServQ1	0.210	-0.156	**0.869**	0.057	-0.096
	ServQ2	-0.240	-0.035	**0.870**	0.068	0.067
	ServQ3	0.025	-0.005	**0.920**	0.080	-0.129
	ServQ4	0.005	-0.189	**0.868**	0.213	0.015
	ServQ5	0.000	0.438	**0.763**	-0.482	0.172
User Satisfaction (USat)	USat1	-0.021	0.124	-0.113	**0.930**	0.087
	USat2	0.094	-0.099	0.094	**0.926**	-0.108
	USat3	-0.072	-0.025	0.019	**0.940**	0.020
Net Benefit (NetB)	NetB1	0.172	-0.010	-0.162	0.103	**0.907**
	NetB2	0.016	0.148	0.004	-0.073	**0.929**
	NetB3	-0.008	-0.135	-0.023	0.148	**0.932**
	NetB4	-0.185	-0.003	0.186	-0.186	**0.882**

Square root of AVE or Fornell-Larcker Criterion compares the correlation or value of each construct should be higher than the correlation of other constructs. The square root of AVE value can be seen in table 5. The SysQ value on SysQ (0.800) should be higher than the SysQ value on InfQ, ServQ, USat and NetB. Table 4 shows that there is good discriminant validity or there are no problems with discriminant validity.

Table 6. Square root of Average Variance Extracted

	SysQ	InfQ	ServQ	USat	NetB
SysQ	**0.800**	0.746	0.746	0.793	0.776
InfQ	0.746	**0.857**	0.765	0.767	0.748
ServQ	0.746	0.765	**0.860**	0.729	0.748
USat	0.793	0.767	0.729	**0.932**	0.810
NetB	0.776	0.748	0.748	0.810	**0.913**

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HTMT is the average of all indicator correlations of all constructs that measure different constructs or the ratio between between-trait and within-trait correlations (Sholihin & Ratmono, 2020). The ratio of the HTMT can be seen in table 7. HTMT ratio less than 0.9 indicates good discriminant validity, but a value of less than 0.85 is the best or ideal value. Based on table 6, it shows that all constructs have good discriminant validity and meet the requirements.

Table 7. Heterotrait-Monotrait Ratio

	SysQ	InfQ	ServQ	USat	NetB
SysQ					
InfQ	0.838				
ServQ	0.844	0.836			
USat	0.890	0.828	0.793		
NetB	0.866	0.804	0.812	0.871	

Examining the value of cronbach's alpha or composite reliability is one way to determine whether latent variables are reliable. More than 0.7 is the minimum value required for composite reliability and cronbach's alpha (Sholihin & Ratmono, 2013), (Ghozali & Latan, 2016), while a value ≥ 0.8 is very satisfactory (Haryono, 2017). Table 4 displays the result of the reliability test. Table 4 shows that all constructs have good reliability.

Structural Model Testing (Inner Model) is carried out to predict causal relationships between variables ((Jogiyanto & Abdillah, 2015). With PLS, we may evaluate the structural model or inner model by looking at the coefficient of determination (R^2) and the predictive relevance (Q^2). The R-Square value for each endogenous latent variable as the predictive capacity of the structural model can be used to determine the magnitude of the percentage of variance explained (Ghozali, 2013).

The predictive relevance (Q^2), also known as predictive sample reuse, can be used to evaluate the PLS model in addition to looking at the value of R^2 or adjusted R^2 (Ghozali & Latan, 2016). Predictive relevance is used to determine whether the model has predictive relevance or not. The R-Square, Adjusted R^2 and Q^2 values can be seen in table 7. Based on table 7, the R-Square value of the user satisfaction variable is 0.717, his shows that 71.7% of the user satisfaction variable variance is explained by the three exogenous variables which include system quality, information quality and service quality, while 29.3% is explained by other variables not included in the research model. The R-Square of the user satisfaction variable of 71.7% is included in the substantial category or strong model (Ghozali & Latan, 2016). The Q2 value of 0.714 (Q2> 0) indicates that the model used has predictive relevance (Ghozali & Latan, 2016; Sholihin & Ratmono, 2013).

The net benefit variable's R-squared value is 0.664, meaning that the four variables system quality, information quality, service quality, and user satisfaction account for 66.4% of the variance in the net benefit variable, while other variables not included in the four variables account for 34.6% of the variance. The Q^2 value of 0.664 (Q2> 0) indicates that the model used in the study has predictive relevance (Ghozali & Latan, 2016; Sholihin & Ratmono, 2013).

Table 8. R^2, Adjusted R^2 and Q^2

Construct	R-Squared	Adj. R-Squared	Q-Squared
Usat	0.717	0.713	0.714
NetB	0.664	0.662	0.664

Testing the fit model using WarpPLS 7.0 can be seen in the "model fit and quality indices" output, as presented in table 8. Based on table 8, it can be seen that the research model meets all the criteria for model fit.

Table 9. Model Fit and Quality Indices

Average path coefficient (APC)	0.433	P<0.001
Average R-squared (ARS)	0.690	P<0.001
Average block VIF (AVIF)	2.942	Acceptable if <=5, ideally <=3.3
Average full collinearity VIF (FVIF)	3.540	Acceptable if <=5, ideally <=3.3

Testing the hypothesis developed in this study is useful for assessing the significance of the relationship between exogenous latent variables and endogenous latent variables by calculating and looking at the magnitude of the p-value. This study uses a significance level of 5%. The results of hypothesis testing are seen from the path coefficients and p-values. The hypothesis is supported if the path coefficients are positive and significant or the - value <0.05. The path coefficients and p-values of hypotheses 1 to 4 can be seen in table 10 and figure 6

Table 9. The path coefficients and p-values of hypotheses

Hypothesis	Path	*Path Coefficients*	*P-Values*	Result
H1	SysQ → Usat	0.449	<0.001	accepted
H2	InfQ → Usat	0.308	<0.001	accepted
H3	ServQ →Usat	0.161	0.007	accepted
H4	Usat → NetB	0.815	<0.001	accepted

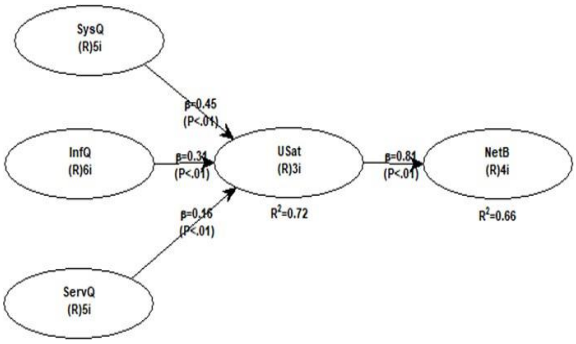

Figure 6. PLS Result

Discussion

The first hypothesis (H1) states that system quality has an effect on user satisfaction. From the results of data processing presented in table 9, it shows that the system quality path coefficients to user satisfaction have a positive value of 0.449 with a p-value of <0.001. This shows that the system quality of the SAKTI application has a positive and significant effect on user satisfaction, so it can be concluded that hypothesis one (H1) is accepted.

The positive value of the coefficient indicates that the relationship between system quality and user satisfaction is in line, this indicates that the higher the perceived system quality of SAKTI, the higher user satisfaction.

Acceptance or support for this hypothesis is also supported by data from the actual mean of the system quality variable which is reviewed in the descriptive statistics and presented in table 2. Where the actual mean value is greater than the theoretical mean (21.68>15). This shows that the SAKTI has a good system quality. In accordance with the direction of the research hypothesis, the higher the value of the system quality variable, the higher the user satisfaction. Based on table 2, the actual mean value of the user satisfaction variable is also higher when compared to the theoretical mean value (13.48 > 9).

The results of accepting the first hypothesis are also supported from the descriptive statistical data, it is known that the response with the highest average value is obtained on indicators related to ease of use (easy to use). Result of independent t-test with from easy to use indicator using the R-studio also show that there is no difference in response between those who have an informatics or non-informatics educational background, and there is no difference in results between those who have just used the SAKTI of less than six months and those who have used the SAKTI for more than six months, there is not even a difference between users who have used it for less than six months and users who have used it for more than two years. Based on the description, it can be said that in general, users feel that the system quality of the SAKTI used is good. The results of this study are in accordance with the Update D&M ISSM which states that system quality affects user satisfaction. These results also support the research of Pambudi and Adam (Pambudi & Adam, 2018), Oktal, et al (Oktal et al., 2016), Azwar, et al (Iskandar et al., 2017), Seta et al (Seta et al., 2018), Amriani & Iskandar (Amriani & Iskandar, 2019), and Lee & Jeon (Lee & Jeon, 2020) which state that system quality has a positive and significant effect on user satisfaction.

The second hypothesis (H2) suggests that information quality has an effect on user satisfaction. The results of data processing (table 9) show that the value of the path coefficients of information quality to user satisfaction is positive at 0.308 with a p-value of less than 0.001. This value shows that the information quality (output) of the SAKTI has a positive and significant effect on user satisfaction, therefore it can be said that hypothesis two (H2) is accepted.

The coefficient value which is positive indicates that the relationship between information quality is in line with user satisfaction. This means that the higher the respondent's perception of the information quality of the SAKTI, the higher the level of user satisfaction.

Support for this hypothesis can be seen from the actual mean information quality variable based on descriptive statistics which has a value greater than the theoretical mean (27.52> 18). This shows that the SAKTI application has good information quality. In accordance with the direction of the research hypothesis, the higher the quality of information, the higher the user satisfaction, therefore a high value on the variable information quality will be followed by a high value of the variable user satisfaction, where the variable user

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satisfaction is based the results of the descriptive statistics show that the mean value is also higher than the theoretical mean (13.48>9).

The results of accepting the second hypothesis are strengthened by descriptive data regarding the distribution of respondents' answers. The high average of respondents' answers to statements related to indicators of information quality reflects that respondents are satisfied with the information quality or the output generated from the SAKTI. This shows that respondents generally agree that the reports produced by the SAKTI are easy to understand, the reports are adequate, complete and relevant. Respondents also agreed that the format of the output produced by the SAKTI application complies with regulations and the output is used by working units. In addition, based on the results of the independent t-test (different test) that has been carried out, the results show that there is no difference regarding answers or responses from users between those who have an educational background in accounting and those who are not accounting. This indicates that the resulting report is easily understood by the user.

The results of this study are in accordance with the Update D&M ISSM (theoretical model) which states that information quality affects user satisfaction. These results support the research of Livari (Livari, 2005), Oktal, et al (Oktal et al., 2016), Pambudi and Adam (Pambudi & Adam, 2018) Hussein & Hilmi (Hussein & Hilmi, 2021) which states that information quality affects user satisfaction.

The third hypothesis (H3) states that service quality has an effect on user satisfaction. The results of data processing (table 9) show the path coefficients of the service quality variable to user satisfaction of 0.161 and a positive value and a p-value of 0.007 (<0.05). These results show that service quality related to the implementation of the SAKTI provided by the support system has a positive and significant effect on user satisfaction, therefore, the third hypothesis (H3) is accepted.

A positive coefficient value shows that the relationship between service quality is in the same direction as user satisfaction. This means that the higher the service quality felt by users of the SAKTI application, the higher the level of user satisfaction. Acceptance of the hypothesis can also be seen from the actual mean service quality variable based on descriptive statistics which has a value greater than the theoretical mean (22.47>15). This shows that the respondents were satisfied with the service or services provided by the support system in connection with the implementation of the SAKTI. In accordance with the direction of the research hypothesis, where the higher the service quality felt by users of the SAKTI, the higher the satisfaction of SAKTI users. The high value of the service quality variable will be followed by the high value of the user satisfaction variable, where the user satisfaction variable in this study based on the results of descriptive statistical analysis shows a mean value which is also higher, which is equal to 13.48 when compared to the theoretical mean.

The results of this study are in accordance with the ISSM D&M Update theoretical model which states that service quality has a positive influence on user satisfaction. These results support the research of Pambudi and Adam (Pambudi & Adam, 2018), Awwad and Al-Mohammad (Awwad & Al-Mohammad, 2010) and Ohliati & Abbas (Ohliati & Abbas, 2019)

The fourth hypothesis (H4) states, user satisfaction has an effect on net benefits. The results of the data processing presented (table 9) show that the path coefficients (path coefficients) of user satisfaction to the net benefit of 0.815 are positive with a p-value <0.001. The magnitude of this value indicates that user satisfaction of the SAKTI has a positive and significant effect on the net benefit, therefore, the fourth hypothesis (H4) is accepted.

Acceptance of the hypothesis can be seen from the actual mean value of the user satisfaction variable based on descriptive statistics which is greater than the theoretical mean (13.48>9). This shows that users are satisfied with the SAKTI. In accordance with the direction of the research hypothesis, the higher the satisfaction felt by users of the SAKTI, the higher the net benefit of SAKTI users, the high value of the user satisfaction variable will also be followed by the high value of the net benefit variable, where the net variable benefit based on the results of descriptive statistical analysis shows a higher mean value of 18.45 when compared to the theoretical mean of 12.

These results are consistent with Update D&M ISSM (theoretical model) which states that user satisfaction has an effect on net benefits or user performance. These results also support the research

of Livari (Livari, 2005), Huang, et al (Huang et al., 2015), Hussein & Hilmi ((Hussein & Hilmi, 2021), and Aldholay et al. (Ohliati & Abbas, 2019) which states that user satisfaction significantly influences net benefits in the form of individual impacts.

CONCLUSION

This research was conducted to assess or evaluate the implementation of the SAKTI application and its effect on user satisfaction and net benefit or performance of SAKTI application users. This study adopts the Update ISSM D&M. Four hypotheses are used to analyze the SAKTI application's implementation: the effect of system quality, information quality, and service quality on user satisfaction; the effect of user satisfaction on net benefits. The results obtained are system quality, information quality, service quality significantly affect user satisfaction. User satisfaction has a significant and positive effect on net benefits. Based on the results of the existing hypotheses, it was concluded that the use or implementation of the SAKTI application payment module, seen from the quality of the system and the quality of information, has gone well.

The sample in this study still uses non-prabability sampling, so that the percentage of responses from users between ministries/ government agencies (K/L) is different. Future studies are expected to be able to consider the percentage (probability) of the user's ministries/ government agencies so that each unit has a better representative sample.

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