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Original Research Article

Analysis of Success Dimensions: Financial Information System at the Directorate General of Livestock and Animal Health of the Ministry of Agriculture

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Abstract: According to the Letter from the Director General of the Treasury of the Ministry of Finance Number: 51 / PB / 2021 dated February 22, 2021, the Agency-Level Financial Accounting System (SAKTI) is an application that budget recipients from the State Budget (APBN), Directorate General of Livestock Health, the Ministry of Agriculture are required to use. The author examines the fixed asset module from a variety of modules in SAKTI, such as the Receivables Module, Inventory Module, Fixed Asset Module, Reporting Module, Budgeting Module, Commitment Module, Treasurer Module, Payment Module, and Administration Module. The author analyzes the fixed asset module as an end user, so hereby the author tries to make Information Quality, System Quality, Service Quality, User Satisfaction and Net Benefits as variables, therefore the success of the Delone and Mclean approach model information system on SAKTI makes assessment indicators on SAKTI.

Keywords: SAKTI, Information System, System Quality, User Satisfaction, Net Benefits, Directorate General for Livestock Health, the Ministry of Agriculture.

I. INTRODUCTION

Due to the intricate nature of the responsibilities held by the Directorate General of Livestock Health, this study focuses specifically on the activities of the Directorate General Secretariat, as outlined in *https://ditjenpkh.pertanian.go.id/pages/42-tupoksi* the Directorate General Secretariat is tasked with providing technical and administrative services to all units within the Directorate General of Livestock and Animal Health. In order to fulfill its primary duties, the Directorate General of Livestock Health, Ministry of Agriculture, encompasses the following functions: a. Coordinating the preparation of plans, programs, budgets, cooperation, and the implementation of public relations and public information in the field of animal husbandry and animal health; b. Managing financial affairs and equipment; c. Evaluating and enhancing organizational structure, governance, personnel management, and the drafting of laws and regulations; d. Conducting evaluations, reporting on activity implementation, and offering recommendation services; e. Handling administrative and internal affairs of the Directorate General of Animal Husbandry and Animal Health; f. Undertaking any other functions delegated by the Director General of Animal Husbandry and Animal Health.

According to *https://ditjenpkh.pertanian.go.id/profil/2-visi-misi* the vision of the Directorate General of Livestock Health is the realization of sovereignty and food security of livestock origin, while its mission is as follows: a. Realizing food security from livestock; b. Enhancing the value and competitiveness of livestock and livestock products; c. Developing sustainable animal husbandry businesses and animal health; d. Enhancing accountability and the quality of public services in the field of animal husbandry and animal health.

The measurement of information quality assesses the quality of the output produced by an information system (Jogiyanto, 2017). Similarly, the quality of the information itself can be subjectively evaluated by the user, known as perceptual information quality (Adi *et al*., 2022). Jogiyanto (2017) proposes three measurement scales for information quality: Completeness of Information, Accuracy, and Ease of Understanding.

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On the other hand, system quality is used to evaluate the overall quality of the information system, encompassing both the software and hardware components. It refers to the performance of the system, including how well the hardware, software, guidelines, and procedures of the information system meet the information needs of the users (DeLone and McLean, 1992).

Service quality, on the other hand, involves comparing customers' expectations with the actual service they receive. According to DeLone and McLean (2003), service quality consists of three influencing components: assurance, which refers to the quality assurance provided by the system; empathy, which denotes the system's concern for users; and responsiveness, which signifies the system's ability to respond to user actions.

Satisfaction is the focus of attention by all users of information systems, where the level of importance and expectations of users and the implementation or performance carried out by the company must be appropriate. Business people must be able to understand the concept of user satisfaction well if they want to win the competition. Basically a business aims to create and retain customers. The Company strives to be able to create and maintain in order to continue to use its services in conducting transactions (Khatimah, 2011). The higher the quality of the system, information, and services generated by an information system, the greater the likelihood of increasing user satisfaction. Adopt from (DeLone & McLean, 2003; Wahyudi *et al*., 2017) has 3 measurement scales, namely: Effective, Efficient, Satisfaction

Net benefits are the effects resulting from the use of information systems, including individual effects, benefits for customers, society and the organization (Saputro *et al*., 2016), (DeLone & McLean, 1992) grouped the two dimensions of individual impact and organizational impact into an information success model, combining them into one dimension and called it Net Benefits in 2003. Net Benefits are employed to assess the impact of Information Systems (IS) on performance, which can be either positive or negative. These benefits are measured in terms of organizational performance, work practices, and perceived usability (Petter & McLean, 2009). Drawing from Davis (1989), there are three measurement scales to evaluate Net Benefits, namely: Speed of accomplishing tasks, Job performance, and Effectiveness.

II. THEORETICAL STUDIES

This research is motivated by several issues related to the utilization of the SAKTI application, which, in the fiscal year of 2022, must be implemented by ministries/agencies for the first semester report of the current fiscal year (Letter of the Director General of Treasury of the Ministry of Finance Number: 51/PB/2021 dated February 22, 2021).

One of the problems that has emerged is the unrest among SAKTI users, particularly the SAKTI operators. Several features of the application have not been launched or unable to display complete reports, there is a lack of technical guidance, insufficient knowledge, and inadequate communication between administrators and operators from both central and local government agencies.

The SAKTI application consists of eight modules, including: 1) Budgeting Module, 2) Commitment Module, 3) Payment Module, 4) Treasurer Module, 5) Inventory Module, 6) Fixed Asset Module, 7) Reporting Module, and 8) Administrator Module (https://djpb.kemenkeu.go.id/kppn/pacitan/id/sakti/modul-sakri.html). The implementation of SAKTI aims to integrate various government financial management applications into a single system.

This research specifically focuses on the operators of the Fixed Asset Module and analyzes the administration of fixed assets as part of the reports submitted by ministries/agencies, which are their responsibility as budget recipients. The aim is to address the problems that arise in fixed asset administration when using the SAKTI application, with the goal of minimizing these issues and ensuring reliable management of State Property (BMN). The study also examines the impact on individuals and the entity.

The Directorate General of Livestock Health, Ministry of Agriculture, is an entity with 57 work units that are mandated to use the SAKTI application in fiscal year 2022. This has led to the researcher's interest in conducting research on SAKTI operators within the Directorate General of Livestock Health, Ministry of Agriculture, particularly focusing on fixed asset operators who have recently started using SAKTI for reporting purposes.

As per Davis (1989), management information systems are integrated human and machine systems designed to provide information supporting management functions and decision-making within an organization.

System quality refers to the performance of the system, encompassing the hardware, software, guidelines, and procedures of the information system, to fulfill the information needs of the users (DeLone and McLean, 1992).

Information quality is the subjective assessment of information by users, referred to as perceived information quality (Jogiyanto, 2017).

Service quality, as outlined by DeLone and McLean (2003), consists of three influencing components: assurance, which pertains to the quality assurance provided by the system; empathy, which signifies the system's concern for users; and responsiveness, which denotes the system's ability to respond to user actions.

User satisfaction is the focus of attention by all business people, where the level of importance and expectations of users and the implementation or performance carried out by the company must be appropriate. Business people must be able to understand the concept of user satisfaction well if they want to win the competition. Basically a business aims to create and retain customers. The Company strives to be able to create and maintain in order to continue to use its services in conducting transactions (Khatimah, 2011). The higher the quality of the system, information, and services generated by an information system, the greater the likelihood of increasing user satisfaction. Adopt from (DeLone & McLean, 2003) has 3 measurement scales, namely: Effective, Efficient, Satisfaction.

Net benefits are the effects resulting from the use of information systems, including individual impact, customer benefits, societal benefits, and organizational benefits (Saputro *et al*., 2016)., (DeLone & McLean, 1992) grouped the two dimensions of individual impact and organizational impact into an information success model, combining them into one dimension and called it Net Benefits in 2003. Net Benefits are used to indicate the impact of IS on performance can be positive or negative. Which is measured in terms of organizational performance, work practices, and perceived usability (Petter & McLean, 2009). Based on Davis (1989), there are three measurement scales to evaluate the impact of the system and information quality on user satisfaction. These scales include: Speed of accomplishing tasks, Job performance, Effectiveness.

III. QUANTITATIVE RESEARCH METHODS

In this study, there are five variables being examined: Information Quality, System Quality, Service Quality, Net Benefits, and User Satisfaction. The population for this study consists of 57 Fixed Asset Module Operators from Work Units within the Directorate General of Livestock Health, the Ministry of Agriculture. The collected data will undergo linear regression statistical analysis to determine the influence and impact of these variables (Respati *et al*., 2013).

IV. RESEARCH RESULTS

1. Research Characteristics

We sent the questionnaire to 57 employees. The collected data were tabulated. The profile of the respondents shows that the gender is 70.17% male and 29.82% female. Most respondents over 50 years old are 43%, less than 30 years old is 6%, 31 to 40 years old is 17%, and 41-50 years old is 33%. The educational level of most respondents is 38%, 33% high school diploma, 24% diploma, 5% postgraduate. Based on these findings, it can be concluded that the respondents possess a good level of knowledge and work experience.

2. Test Results and Statistical Description

Reliability is an indicator that demonstrates the dependability and trustworthiness of a measuring instrument. It indicates that the measurement results remain consistent when the same symptoms are measured repeatedly using the same instrument. A measuring instrument is considered reliable if it yields consistent results despite multiple measurements. The questionnaire is considered reliable if the answers received in the questionnaire are consistent or stable over time.

From the recapitulation data of respondents' answer scores as presented in the table above, it was analyzed with the *Cronbach alpha* approach which was calculated using the SPSS program version 22 for windows, with the findings obtained at least achieved 0.60. This means that the questionnaire used to collected data and information can be trusted, so the real questionnaire. Furthermore, the data collected from the questionnaire is worth analyzing, because the data is reliable. Overall, the reliability testing findings of each are shown in the Table.

Table 1: Reliability Test Results

Variable	Reliability Questionnaire	Result
System Quality (X1)	0,858	Reliable
Information Quality (X2)	0,933	Reliable
Quality of Service(X3)	0,909	Reliable
User Satisfaction (Z)	0,936	Reliable
Net Benefit (Y)	0,947	Reliable

Source: Data processed (2022)

Table 1 Based on the reliability test results in Table 1, it can be seen that all variables have a coefficient value greater than 0.60, so based on the reliability test results, the tested instruments are suitable for further processing.

The average statistical analysis result is presented in Table 2:

Table 2: Analysis of Results and Description of Statistics

Research Variables	Instruments	R validity	LIKE	Mean
KI - Information Quality	KI1-Complete	0,743	0,858	4,46
	KI2-Clear	0,762		4,46
	KI3-Exactly	0,813		3,74
	KI4-Exact	0,693		3,88
	KI5-Easy to understand	0,738		4,11
	KI6-Fast	0,803		4,30
KS-Quality System	KS1-Easily accessible	0,775	0,933	4,09
	KS2-Easy to search	0,869		4,12
	KS3-Easy to learn	0,893		4,12
	KS4-Easy to use	0,891		4,05
	KS5-Reliable	0,883		3,88
	KS6-Main System	0,903		3,88
KP-Quality of Service	KP1-Current	0,805	0,909	3,37
	KP2-Troubleshooting	0,899		3,61
	KP3-Data Security	0,798		3,96
	KP4-Security Reliable	0,863		3,91
	KP5-Understanding needs	0,817		3,81
	KP6-As Required	0,809		3,86
KP-User Satisfaction	KP1-Effective	0,900	0,936	3,89
	KP2-Easier	0,923		3,74
	KP3-More Efficient	0,907		3,88
	KP4-Simplified	0,913		3,72
	KP5-More help	0,846		3,93
	KP6-Easy Reconciliation	0,724		4,16
MB-Net Benefit	MB1-More Useful	0,862	0,947	4,04
	MB2-More Accurate	0,914		3,98
	MB3-Better	0,891		3,79
	MB4-Faster	0,885		3,86
	MB5-Easier	0,890		3,88
	MB6 – More Valid	0,902		3,79

3. Regression Analysis Results

The SPSS statistical application implements the regression method for collected data. Data are normally distributed and devoid of issues with heteroscedasticity, according to the analysis' results using the traditional assumptions. In the table below, the outcomes of multicollinearity and autocorrelation analysis are displayed.

Table 3: Regression Analysis Results

Model		Collinearity Statistics	
		Tolerance	BRIGHT
1	Information Quality (X_1)	.512	1.954
	System Quality (X_2)	.515	1.942
	Quality of Service (X_3)	.518	1.931

By showing that the multicollinearity test results on each variable in Model 1 and Model 2 have a tolerance value greater than 0.1 and a VIF value smaller than 10, it can be concluded that each variable is free from the symptoms of multicollinearity. The multiple linear regression equation model satisfies the principle of the optimal linear unbiased estimator, according to the findings of the analysis of the classical assumptions. The table below displays, the findings of a multiple linear regression analysis for four variables with one dependent variable and three independent variables.

Table 4: Multiple Linear Regression Analysis Results

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Itself.
		B	Std. Error	Beta		
1	(Constant)	2.907	1.020		2.850	.006
	Information Quality (X_1)	-.093	.060	-.312	-1.556	.126
	System Quality (X_2)	.060	.049	.255	1.233	.223
	Quality of Service (X_3)	-.042	.045	-.177	-.921	.361
	User Satisfaction (Z)	.003	.054	.015	.061	.952

From the table above it can be seen that all values of Sig. > 0.05 i.e., 0.126; 0.223; 0.361; 0.952, then this means that heteroscedasticity does not occur in the regression model.

V. Discussion and managerial implications

The hypotheses proposed in this research questionnaire have been fully accepted and found to be statistically significant, thereby supporting Dillon and McLean's information systems success model. The results of the research questionnaire indicate that system quality, service quality, and information quality, which are key components of measuring information system success, have a positive and significant impact on user satisfaction. This demonstrates that higher levels of system quality, service quality, and information quality in the SAKTI application lead to greater user satisfaction.

Furthermore, this study empirically establishes that user satisfaction has a positive and significant effect on the net benefits derived from the SAKTI application, particularly in terms of users' perceptions of the system's contribution to improving their performance. This finding suggests that as user satisfaction increases, the net benefits obtained from the SAKTI application also increase.

Based on the analysis of SAKTI application users' perceptions, all dimensions of information system success assessed in this study are categorized as good. The SAKTI application has proven to enhance users' productivity and work performance, streamline and expedite task completion, and improve the effectiveness of decision-making processes. Therefore, the researcher concludes that the implementation of the SAKTI application within Work Units under the Directorate General of Livestock Health, the Ministry of Agriculture, specifically the Fixed Asset module, can be deemed successful.

Indeed, the results of this study provide theoretical support for the DeLone and McLean Information Systems success model (2003). The model can effectively be applied to evaluate integrated government Information Systems whose use is mandatory.

From a practical perspective, the study highlights the significance of continuously improving the overall quality of information systems. If an organization aims to derive net benefits from the implemented information system, such as increased productivity, improved work performance, streamlined task completion, and enhanced decision-making effectiveness, it is crucial for the organization to prioritize user satisfaction with the information system.

These research findings can serve as valuable scientific considerations for organizations, particularly the Directorate General of the Treasury, when making decisions regarding system improvements and determining steps to enhance the success of the Integrated Financial Management Information System (IFMIS) implementation.

In terms of system quality, it is important to consider characteristics such as integration, reliability, ease of use, response time, security, and language during system development. Similarly, for information quality, key characteristics to be considered include accuracy, completeness, timeliness, understandability, and currency. Lastly, when focusing on service quality, factors like tangible, reliability, responsiveness, assurance, and empathy should be taken into account during development efforts.

VI. CONCLUSION

Researchers realize that this study still has some unavoidable limitations. This research uses measurement instruments that are personal perceptions of each user so that they can be influenced by subjective factors that may not reflect the real situation objectively. Furthermore, the scope of research which includes users of the SAKTI application in offices in a fairly wide and scattered area resulted in researchers not being able to reach respondents directly due to time and cost constraints, but distributing questioners during report preparation workshops. In addition, the questionnaires used in this study have not overcome the biased response of respondents. Suggestions for future research are that research should use data collection techniques directly (offline) so that the response rate and level of control over the distribution and filling of questionnaires are better.

Considering that the Directorate General of Livestock Health has implemented the SAKTI application since early 2022, it is crucial to prioritize the enhancement of specific characteristics that user

perceives to have shortcomings. Based on statistical calculations, the identified areas of improvement include system reliability, service reliability, and information understandability.

VII. RESEARCH ADVICE AND DEVELOPMENT

For the Directorate of the Ministry of Finance through the General of Treasury always make improvements to the SAKTI application so that application users can feel the net benefits of the purpose for which the SAKTI application was created.

For the Directorate General of Livestock Health, Ministry of Agriculture to initiate Technical Guidance for operators using the SAKTI application, it is hoped that improving the quality of Human Resources (HR) will also increase the net benefit of the purpose for which the SAKTI application was created.

For work units, to provide encouragement or motivation to Human Resources (HR) who become operators, so that these operators can improve their performance and work units get net benefits for the work units from the application's purpose.

The research findings can contribute to enriching the theory of Information System Management science, both at the Directorate General of Livestock Health, Ministry of Agriculture, and in the specific work units under its purview.

Future researchers can utilize the results of this study as a reference for conducting research related to the Success Factor Analysis of the Information System, employing the Delone and McLean Approach Model, in financial application systems (such as SAKTI) across various modules and work units in different settings.

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