

# IMPLEMENTATION OF THE DELONE & MCLEAN METHOD TO MEASURE THE SUCCESS OF THE PERFORMANCE ACCOUNTABILITY SYSTEM OF GOVERNMENT AGENCIES (SAKIP) APPLICATION IN SUPPORTING GOOD GOVERNMENT, CASE STUDY : SUBANG DISTRICT GOVERNMENT

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## Abstract

*This study aims to determine and analyze the effectiveness of an information system carried out in the local government of Subang district using the Delone & McLean method. The effectiveness of an information system can be interpreted as a measure of the success of an information system by using system quality, information quality, service quality, usage, user satisfaction, and net benefits as variables. This study uses structural equation modeling (SEM) analysis with data collection using a questionnaire given to civil servants or non-civil servants who act as system users. The sample used in this study involved 17 employees in the Subang District Government.*

*The Subang District Government is obliged to report and record the use of finance in one fiscal year which is useful as evaluation material for agencies. so that the Government Agency Performance Accountability System (SAKIP) plays an important role in facilitating the reporting of annual financial reports. The Performance Accountability System of Government Agencies requires a measure of success in its implementation so that the results of measuring success in this study can produce how effective the system and data accuracy are in supporting financial recording and reporting. The results of this study resulted in a conclusion stating that the application of SAKIP to the Subang District Government was effective. The success of SAKIP is influenced by the satisfaction of the users as well as the quality of the system. However, there are other success variables that need to be improved.*

**Keywords:** SAKIP, SEM, Effectiveness, Delone & McLean method.

## Introduction

Organizations or government agencies have activities that are tailored to programs and policies to achieve goals and targets that will be assessed systematically and continuously, this is a performance measure that becomes an evaluation material to improve the performance of the organization or agency [1]. In the Presidential Regulation of the Republic of Indonesia Number 29 of 2014 concerning the Performance Accountability System for Government Agencies, the Performance Accountability System for Government Agencies is a series of activities, tools and procedures systematically designed with the aim of becoming a system for measuring, classifying and reporting on the performance of the agency as material for accountability and performance improvement. government agencies. The Government Agency Performance Accountability System is one of the government's efforts to develop an information system using the internet that is easily accessible by everyone [2].

The measurement of the success of an information system that is most famous is by using the Delone & Mclean method [3, 4] with several success factors or different success benchmarks. The benchmark for the success of an information system can be seen from the quality of the system, namely in the form of the usability and effectiveness of the system, the quality of information, namely a system must have completeness, content that is relevant and easy to understand, the quality of service, namely the service received by the user must be responsive, usage is the use of the system by user [5]. In an information system, user satisfaction is important in measuring the success of information systems, this can be in the form of services, ease of accessing the system and receiving information. Then the net benefit is a measure of the system that provides benefits or not to the user.

The formulation of the problem from this research is how to apply the [3, 5, 6] method in the process of measuring the success of the SAKIP application of Subang and how the influence of the variables on the use of SAKIP.

This research has a purpose, namely to be an evaluation material, find out system deficiencies, improve system performance and reduce user complaints in using the Performance Accountability System for Subang District Government Agencies.

**Delone & Mclean**

Measurement of an information system using the [3] method is the most widely used method because using the [3]. Method is a model that is easy to implement and quite valid. Delone & Mclean produces benchmarks or variables for the success of information systems into six categories, namely system quality, information quality, usage, user satisfaction, individual impact and impact organization [3]. Then in the world's information system development and user environment, [5]. presents an improved success model of information systems, namely adding service quality as a success variable of an information system and by changing the impact of individuals and organizations into net benefits and adding improvement of measurements [5].

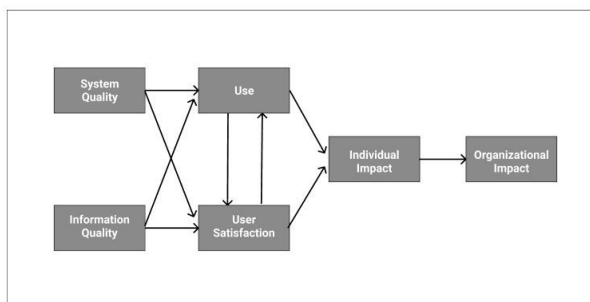


Figure 1. The Original [3] Model

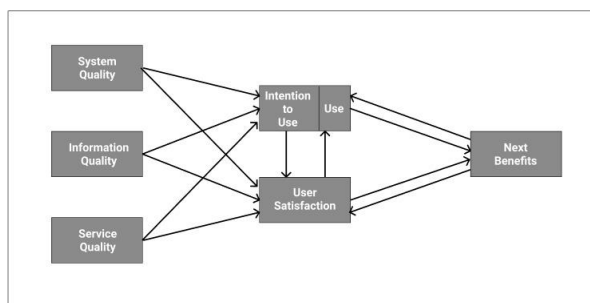


Figure 2. The Updated [5] model

**Information Quality**

Information quality is a result or output of a running system in the form of information, the better the quality of information produced by the system, the level of user satisfaction of the Government Agency Performance Accountability System (SAKIP) increases [7]. The completeness of information presented by the system and easy-to-understand information will make users feel significant benefits[8, 9]. and feel satisfied with the Government Agency Performance Accountability System (SAKIP).

**System Quality**

System quality is the level of good or bad information systems in terms of software capabilities, hardware, and system procedures contained in information system

applications [10]. System quality is closely related to the interaction between users and information systems or applications, user satisfaction when using the system is the benchmark for a system to get a very high or satisfactory system quality. Information systems related to the government system that manages the finances of a region require a strong system, so the quality of the support system must have good quality. In this case, SAKIP will have a great influence on agency decision-making and is highly reliable.

### **Service Quality**

Quality service is all user needs of the system that must be served properly, users give a good assessment of application services if all needs can be met. Users of information systems will expect service and can feel good service [11, 12]. As an example; Responsive accuracy, reliability, technical competence, empathy [5].

### **Use**

Use is all actions and user behavior towards information systems. Actions can be in the form of operating the system and understanding the system well [13]. In this study, those who use the Government Agency Performance Accountability System (SAKIP) application are civil servants and non-civil servants.

### **User Satisfaction**

User satisfaction is the feedback obtained from the information system by the user when finished using the application system information. The user's attitude towards the system becomes an assessment of the system used [14, 15] Quoting from the [5] article which uses two components, namely [5, 12].

#### **1. Information Satisfaction (Repeat Purchase)**

Information Satisfactio is an assessment and comparison value between the desired information and the incoming information. "In general, satisfaction of information as a result of comparison of expectations or needs of information systems with the performance of the system received".

#### **2. Overall Satisfaction (Repeat Visit)**

Overall satisfaction is a form of user satisfaction in general with all system facilities that are presented as well as the interaction relationship between the system, the level of satisfaction of information services and the benefits of the system in the process.

### **Net Benefit**

Net benefits are the benefits that are obtained when the user is successful or has used the information system application well, the user acts as an individual or group [15]. In this study, it will be sought whether the Government Agency Performance Accountability System (SAKIP) provides benefits to users.

### **Literature Review**

Nani Agustina, Entin Sutinah [16]. conducted research on the Cellular Application for New Student Admissions using the [5] model with variables of information quality, service

quality, system quality, actual use, user satisfaction, net benefits (individual impact) found the relationship between variables. The New Student Admission Mobile Application already has a good quality system and service, but the quality of service still needs to be improved.

In a previous study conducted by [17] namely the implementation of district and city government financial reports in North Sumatra, the variables in the study had a significant influence on the overall system quality, but the system service quality variable was not optimal. In research conducted on system users, the results are less satisfactory for system users.

In a study conducted by Iman Sanjaya & Awangga Febian [14] using the [5] model to measure the success of the Frequency Management Information System (SIMF), it resulted that the delone & mclean model had not been shown to have a significant effect on individual impacts. This does not give more effort to the quality of professionalism of each individual, this SIMF should be a reason for individuals to work better. However, the relationship between system quality and information quality has an effect on both use and user satisfaction. However, the influence given is not in the form of an influence that benefits both of them. The effect given is only beneficial to use on user satisfaction, in other words, use will precede user satisfaction while increasing user satisfaction has no impact on use or interest in using. It has been proven that there is a positive relationship path, from usage to user satisfaction, user satisfaction to individual impact, and individual impact to organizational impact.

Wihelmina, I Made & Budiasih [18] by testing SIPKD users at BPKAD, Sikka Regency resulted that the quality of collaboration, quality of information, and system quality had a significant effect on the use of SIPKD. The use of SIPKD has a significant effect on individual performance. [7] conducted a study using [5] testing SIPKD users in the Denpasar City Government with research variables namely information quality, system quality, user satisfaction, supervisory actions, net benefits. The results of the ten hypotheses tested, nine hypotheses were accepted, while the others were rejected. The rejected hypothesis is that user satisfaction cannot mediate the effect of system quality, information quality, and control measures on net benefits.

There are four [5] variables and one additional variable tested including system quality, information quality, supervisory measures and net benefits in the research conducted by [7]. Meanwhile, the research conducted by [18] tested five variables, namely collaboration quality, information quality, system quality, users and personal impact. In the research conducted in this journal is to test all parameters in the model [5, 6] namely information quality, system quality, service quality, users, user satisfaction and net benefits in the SAKIP application.

## Hypothesis

Based on the model of [5] in this study, the following hypotheses were obtained:

- Hypothesis 1 : The use of the system is affected by the quality of the information.
- Hypothesis 2 : System user satisfaction is affected by the quality of information.
- Hypothesis 3 : Service quality has a positive impact on the use of SAKIP.
- Hypothesis 4 : User satisfaction is affected by SAKIP's service quality.
- Hypothesis 5 : The use of the system is affected by the quality of the system.
- Hypothesis 6 : System quality has a significant impact on user satisfaction.
- Hypothesis 7 : The use of the system has an impact on net benefits.
- Hypothesis 8 : Net benefit is significantly affected by user satisfaction.

## Research Methods

The type of research used in this research is design research. Research design is a plan for data collection and processing so that it can be carried out to achieve research objectives [19]. The respondents of this study were users of the Subang District Government Agency Performance Accountability System (SAKIP). Data was collected by distributing questionnaires for the analysis process. Respondents who filled out the questionnaire were 17 people with characteristics based on gender, age and status as shown in table 1.

*Table 1*

### *Respondents*

Characteristics		Frequency	Percent
Gender	Male	6	35.3%
	Female	11	64.7%
Age	19-29	13	76%
	30-39	2	12%
	40-49	2	12%
Status	PNS	7	58.8%
	Non PNS	10	41.2%

In table 1, it is explained that 64.7% of women using the system are dominant, the dominant age between 19 and 29 years is 76.7% and the status that uses the system is dominated by Non-Civil Servants as much as 58.8% of the total sample.

## Validity Test & Reliability Test

The study was conducted by testing 17 samples, validation measurements were carried out using an r-table value of 0.4821 with a significance value of 5% level on the questionnaire that had been distributed to SAKIP users in Subang Regency. The measurement results of the questionnaire validation that exist in all variables are greater than 0.4821 for 17 respondents so it can be concluded that the indicator variables in this study are valid, reliable and can be used.

## Descriptive Statistical Test

Descriptive statistics are used to provide information that is collected and presented in a simple way, including the number of observations, minimum values, maximum values, average values, and standard deviations of each research variable. The results of descriptive statistics in this study are in table 2.

Table 2

**Descriptive Statistical Test**

Variable	N	Mean	Min	Max	Standar Deviation
Information Quality (X1)	17	3.941	1	5	0.730
System Quality (X2)	17	3.976	1	5	0.597
Service Quality (X3)	17	3.894	1	5	0.598
Use (X4)	17	3.953	1	5	0.770
User Satisfaction (Y1)	17	3.912	1	4	0.685
Net Benefit (Y2)	17	4.012	1	5	0.645

All variables in the sample data of this study have a minimum value of 1 and a maximum value of 5, except for the User Satisfaction variable which has a maximum value of 4. All variables have a high average value of > 3.912 and have sample proximity to a narrow average or standard deviation. So that it can be said that the Government Agency Performance Accountability System (SAKIP) of Subang Regency already has information quality, system quality and service quality is quite good. Seen in table 2 data shows that SAKIP users are satisfied in using the system and the system has a high intensity or frequency of use.

**Implementation and Result**

**Outer Model Test**

The outer model testing was carried out on 17 samples by testing the validation (discriminant), reliability (reliability composite) in the questionnaire given to users of the SAKIP system. If the standard indicator is less than 0.50 then the indicator must be removed from the model. The results in table 3 show that there are indicators that have a value less than 0.50 so that they must be removed from the model, namely the variables X<sub>2,3</sub> and X<sub>3,1</sub>. As in table 3 below.

Table 3

**Outer Loading**

Variable	Indicator	Outer Loading
Information Quality (X1)	X1.1	0.727
	X1.2	0.869
	X1.3	0.816
	X1.4	0.776
	X1.5	0.867
System Quality (X2)	X2.1	0.749
	X2.2	0.732
	X2.3	0.495
	X2.4	0.834
	X2.5	0.815
Service Quality (X3)	X3.1	0.383
	X3.2	0.766
	X3.3	0.831
	X3.4	0.869



	X3.5	0.605
Use (X4)	X4.1	0.696
	X4.2	0.729
	X4.3	0.798
	X4.4	0.855
	X4.5	0.642
User Satisfaction (Y1)	Y1.1	0.826
	Y1.2	0.913
	Y1.3	0.839
	Y1.4	0.589
Net Benefit (Y2)	Y2.1	0.639
	Y2.2	0.788
	Y2.3	0.692
	Y2.4	0.891
	Y2.5	0.865

Discriminant validity testing is carried out on the same sample using valid variables, discriminant validity is carried out to prove latent predicting the value in their block is higher than the value in other blocks in table 4 has proven that all variables meet the requirements and are declared valid. Data processing is generated to see the value of cross loading indicators and research constructs as shown in the table below:

*Table 4*

**Cross Loading**

	Information Quality (X1)	Net Benefit (Y2)	Service Quality (X3)	System Quality (X2)	Use (X4)	User Satisfaction (Y1)
X1.1	0.727	0.564	0.403	0.479	0.589	0.488
X1.2	0.869	0.615	0.491	0.609	0.522	0.554
X1.3	0.816	0.634	0.496	0.540	0.489	0.407
X1.4	0.776	0.673	0.783	0.765	0.626	0.711
X1.5	0.867	0.547	0.765	0.635	0.599	0.620
X2.1	0.340	0.609	0.273	0.777	0.481	0.652
X2.2	0.545	0.523	0.412	0.741	0.557	0.659
X2.4	0.859	0.741	0.815	0.822	0.721	0.773
X2.5	0.604	0.803	0.530	0.831	0.663	0.863
X3.2	0.523	0.272	0.830	0.542	0.416	0.534
X3.3	0.886	0.625	0.860	0.667	0.521	0.590
X3.4	0.502	0.343	0.867	0.439	0.209	0.521
X3.5	0.304	0.244	0.549	0.366	0.415	0.284
X4.1	0.480	0.587	0.294	0.567	0.695	0.439
X4.2	0.428	0.393	0.333	0.507	0.728	0.418
X4.3	0.610	0.617	0.489	0.673	0.798	0.652
X4.4	0.438	0.550	0.329	0.553	0.855	0.551
X4.5	0.635	0.512	0.429	0.553	0.644	0.480
Y1.1	0.526	0.803	0.281	0.767	0.466	0.816
Y1.2	0.482	0.738	0.401	0.842	0.623	0.907
Y1.3	0.650	0.532	0.656	0.763	0.668	0.847
Y1.4	0.662	0.395	0.840	0.616	0.468	0.603



Y2.1	0.828	0.640	0.467	0.523	0.538	0.415
Y2.2	0.528	0.788	0.376	0.728	0.657	0.601
Y2.3	0.687	0.693	0.672	0.546	0.311	0.621
Y2.4	0.525	0.891	0.135	0.713	0.593	0.661
Y2.5	0.489	0.865	0.391	0.784	0.685	0.757

Table 5

**Composite Reliability dan Cronbach Alpha**

Variable	Cronbach's Alpha	Composite Reliability
Information Quality (X1)	0.871	0.906
Net Benefit (Y2)	0.837	0.885
Service Quality (X3)	0.786	0.864
System Quality (X2)	0.806	0.872
Use (X4)	0.800	0.863
User Satisfaction (Y1)	0.809	0.876

Variable testing produces a value of the indicator > 0.70 so it can be said that all the variables are reliable.

**Hypothesis Testing**

Hypothesis testing is carried out to determine whether the hypothesis is accepted or not by looking at the T-statistical value compared to the T-table. If T statistic >= then the hypothesis is accepted, otherwise if T-statistic < T-table then the hypothesis is rejected.

Table 6

**Hypothesis Testing Results**

	Original Sample	T Statistics	P Values	Information
Information Quality (X1) -> Use (X4)	0.370	0.854	0.394	Not Significant
Information Quality (X1) -> User Satisfaction (Y1)	-0.044	0.200	0.842	Not Significant
Service Quality (X3) -> Use (X4)	-0.164	0.468	0.640	Not Significant
Service Quality (X3) -> User Satisfaction (Y1)	0.037	0.148	0.882	Not Significant
System Quality (X2) -> Use (X4)	0.601	1.430	0.153	Not Significant
System Quality (X2) -> User Satisfaction (Y1)	0.947	4.151	0.000	Significant
Use (X4) -> Net Benefit (Y2)	0.337	1.117	0.265	Not Significant
User Satisfaction (Y1) -> Net Benefit (Y2)	0.561	2.295	0.022	Significant

Data processing uses the SmartPLS application by obtaining the original sample value and the t-statistical value to show its significance. The following is a picture of the PLS estimation model from the research model:

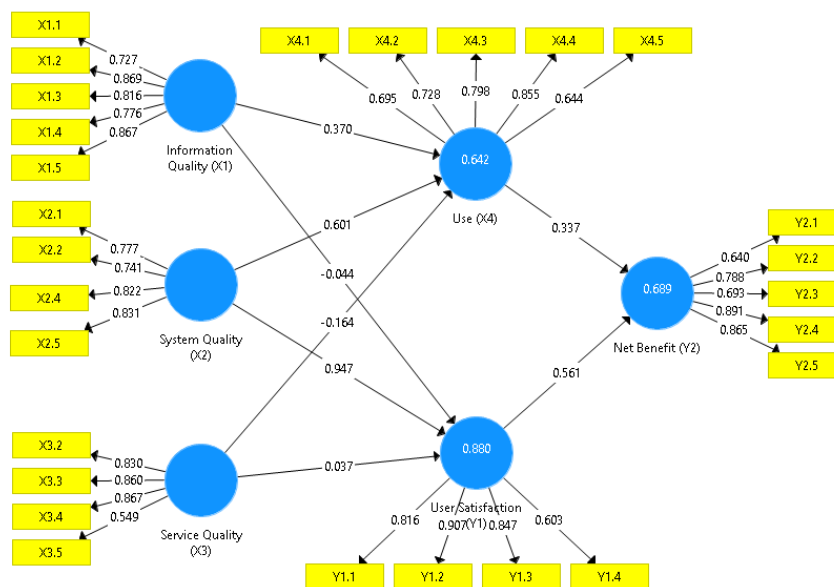


Figure 3. PLS Estimation Model

From the picture above, it can be explained that the research hypothesis testing is as follows:

- H<sub>1</sub> : The results of testing the quality of information on the use of the system have a direct effect with a coefficient of 0.370 with a t-statistic value of 0.854 < t-table 2.131450. Therefore, hypothesis 1 is rejected.
- H<sub>2</sub> : The results of testing the quality of information on user satisfaction have a direct influence with a coefficient of -0.044 with a t-statistic value of 0.200 < t-table 2.131450. Therefore, hypothesis 1 is rejected.
- H<sub>3</sub> : Testing the quality of SAKIP services on the use of SAKIP has a direct effect with a coefficient of -0.164 with a t-statistic value of 0.468 < t-table 2.131450. Therefore, hypothesis 1 is rejected.
- H<sub>4</sub> : The results of service quality testing on user satisfaction have a direct influence with a coefficient of 0.037 with a t-statistic value of 0.148 < t-table 2.131450. Therefore, hypothesis 1 is rejected.
- H<sub>5</sub> : Quality testing of the SAKIP system on the use of SAKIP has a direct effect with a coefficient of 0.601 with a t-statistic value of 1.430 < t-table 2.131450. Therefore, hypothesis 1 is rejected.
- H<sub>6</sub> : The results of system quality testing on system user satisfaction have a direct influence with a coefficient of 0.947 with a t-statistic value of 4.151 > t-table 2.131450. Therefore, hypothesis 1 is accepted.
- H<sub>7</sub> : The results of testing the use of the system on net benefits have a direct effect with a coefficient of 0.337 with a t-statistic value of 1.117 < t-table 2.131450. Therefore, hypothesis 1 is rejected.
- H<sub>8</sub> : The results of user satisfaction testing on net benefits have a direct effect with a coefficient of 0.561 with a t-statistic value of 2.295 > t-table 2.131450. Therefore, hypothesis 1 is accepted.

## Conclusions

The purpose of this study was to determine the success of implementing the SAKIP Subang District using the [5]method. Assessment or measurement of the success of this system by looking for the level of system effectiveness, then found in the SAKIP of Subang Regency, the level of system effectiveness is a fairly successful system. This is because a significant effect was found between the variables tested, namely the significant effect of system quality on user satisfaction and a significant effect of user satisfaction on net benefits in accordance with the hypothesis testing carried out. The system which is the object of this research shows several test results that can be used as material for evaluating the system for its management, so it can be concluded that the first analysis does not have a significant influence between the quality of information and the use of SAKIP. The second analysis found that this system information quality variable had no significant effect on SAKIP user satisfaction. The third analysis found that the use of the SAKIP system had no significant effect on its use. The results of the fourth analysis that the SAKIP system has a level of service quality that is not good for user satisfaction. The fifth analysis found that the influence of the quality of the SAKIP system was not significant on the use of the system. Later in this study it was found that the use of the SAKIP system had no significant effect on net benefits.

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