

## Integration is Success Model as an Evaluation Factor of Local Government Information Systems in Indonesia



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**ABSTRACT:** The increasing development of information and communication technology has impacted changes in all fields including the government sector, marked by the implementation of new policies, namely Minister of Home Affairs Regulation Number 70 of 2019 concerning Regional Government Information Systems (SIPD). This research evaluates the success of implementing the Regional Government Information System (SIPD) application in the Metro City Regional Government through the IS Success Model. The Grand Theory used in this research is the Information Success Model. The variables in this research use the constructs of the IS Success Model, including information quality, system quality, service quality, and user satisfaction. The sampling technique in this research used Nonprobability Sampling which used Purposive Sampling with several respondent criteria so that a sample of 93 respondents was obtained. Data analysis in this study used SPSS version 26 with multiple linear regression analysis testing. The research results show that system quality and service quality have a positive effect on SIPD user satisfaction, while information quality does not affect SIPD user satisfaction.

**KEYWORDS:** E-government, IS Success Model, User Satisfaction, Information System, SIPD.

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### INTRODUCTION

The rapid growth of technology has brought about changes in all fields including the public sector. This is also stated through Presidential Instruction No. 3 of 2003 concerning policies and plans to build e-government in Indonesia. The purpose of the regulation is to implement good governance, as well as maximize the efficiency, effectiveness, transparency, and accountability of government administration in improving public services. According to Klimach et al. (2018) state that good governance is a process where the community and government make important decisions or policies, carry out planning, and are accountable for the actions they take. Other research reveals that good management of state resources and affairs in an open, transparent, accountable, and equitable manner and responsive to community needs is referred to as good governance (Johnston, 2004).

Presidential Regulation No. 95/2018 is also an additional reference in utilizing information and communication systems in the government sector in Indonesia. This regulation explains the Electronic-Based Government System (SPBE). This SPBE regulation is designed to improve the quality and trust of public services through the implementation of clean, efficient, transparent, and accountable governance. In addition, SPBE aims to reduce the level of abuse of power in the form of nepotism, collusion, and corruption (Menpan RB, 2020). This is in line with research conducted by Mouna (2020) which states that information technology will increase government efficiency, encourage economic growth, and reduce corruption in the government.

One of the SPBE instruments in Indonesia is the Local Government Information System (SIPD). SIPD is an application compiled by the Ministry of Home Affairs in supporting one data Indonesia. SIPD itself is included in the government to government (G2G) SPBE type. The policies related to this SIPD application are contained in the Minister of Home Affairs Regulation (Permendagri) No. 70 of 2019 which contains an explanation of regional development planning, regional finances, and other regional explanations. According to Balqis et al. (2021) as part of the policy issued by the Ministry of Home Affairs of the Republic of Indonesia, the Local Government Information System (SIPD) is an application that can help central and local governments manage development and financial planning. This application is designed to encourage a more responsive, innovative, and accountable government.

Referring to Permendagri No. 70 of 2019, SIPD is considered an SPBE instrument in increasing participation and services to the community to create quality regional development plans (Ditjen Bina Pembangunan Daerah, 2021). Based on the Executive Summary of OMBUDSMAN RI in 2022, Metro City is the city with the lowest public service compliance rate in Lampung Province,

## Integration is Success Model as an Evaluation Factor of Local Government Information Systems in Indonesia

which Lampung Province itself is the third best province in Indonesia for the use of SPBE. Based on the results of a survey of several SIPD stakeholders in Metro City, SIPD has only been used since January 2023 and is implemented side by side with the SIMDA application, so there are still several obstacles such as server and human errors. To test whether the SIPD implemented in OPD in Metro City is running well, this research uses the IS Success Model as an integration of evaluation factors for the implementation of the system. The DeLone & McLean IS Success Model theory is a theory for evaluating the level of success of an implemented information system. According to Al-Okaily et al. (2023), the IS Success Model is divided into three factors, including the quality of information systems and services which are the main factors and must be considered. The second factor is people's general opinion about the usefulness of the system or can be referred to as user satisfaction, and the last factor is the benefit or superiority of the system in doing work. This research will measure the extent to which Metro City SIPD users are satisfied with the use of the system using the IS Success Model as a determining factor as described in the following conceptual framework.

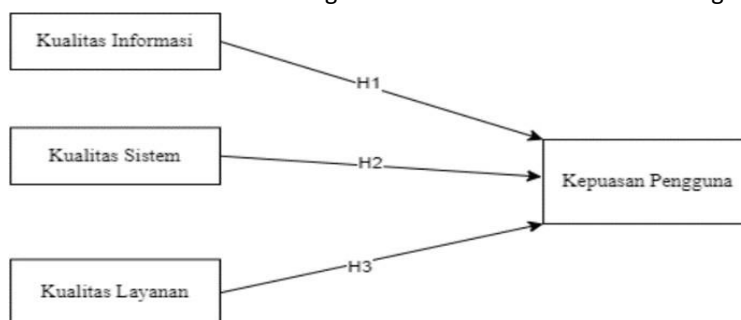


Figure 1. Conceptual Framework

### RESEARCH METHODOLOGY

#### A. Research Design

This research begins with formulating a problem followed by a literature study related to evaluating government information systems using the IS Success Model, followed by preparing research instruments in the form of a google forms questionnaire consisting of 24 questions distributed to 99 respondents. The respondent's answer data is collected and processed starting from making tabulated data, conducting research instrument tests, classical assumption tests, regression tests, to statistical hypothesis tests. The output of the data test using SPSS version 26, is described and analyzed and conclusions are drawn on the research that has been done. This research begins with formulating a problem followed by a literature study related to evaluating government information systems using the IS Success Model, followed by preparing research instruments in the form of a google forms questionnaire consisting of 24 questions distributed to 99 respondents. The respondent's answer data is collected and processed starting from making tabulated data, conducting research instrument tests, classical assumption tests, regression tests, to statistical hypothesis tests. The output of the data test using SPSS version 26, is described and analyzed and conclusions are drawn on the research that has been done.

#### B. Sampling Technique

Sugiyono (2017) states that in addition to population, samples are also a component of research. The Metro City Regional Government, which has the lowest level of public service compliance in Lampung Province, was used as the sample for this study. Purposive Sampling is a sampling technique carried out by researchers involving several special considerations (Sugiyono, 2017). The following are criteria or special considerations for research sampling.

1. Based on Law No. 23 of 2014 concerning Regional Government which explains the regional apparatus consists of:
  - a. Regional Secretariat,
  - b. DPRD Secretariat,
  - c. Inspectorate,
  - d. Dinas,
  - e. Agency, and
  - f. Sub-district.
2. According to the Minister of Home Affairs Regulation No. 77 of 2020 concerning Technical Guidelines for Regional Financial Management. Regional financial planning, budgeting, implementation, administration, reporting, accountability, and supervision activities are carried out by regional financial managers. The following parties are the parties involved in this research.
  - a. Head of SKPD as budget user (PA),
  - b. SKPD Secretary as the Technical Activity Management Officer (PPTK) who oversees the SKPD head, and

## Integration is Success Model as an Evaluation Factor of Local Government Information Systems in Indonesia

c. Functional Position of Planning and Finance as the person in charge of the planning and finance section of the SKPD.

### C. Operational Definition of Variables

#### 1. Information Quality

Information systems create information quality (DeLone and McLean, 1992). The level of user satisfaction is influenced by the quality of information (Seddon, 1997). If information is reliable to its users, then it is good. The author will investigate the quality of data created by Metro City's Local Government Information System (SIPD). Accuracy, precision, adequacy, trustworthiness, and conformity to user needs are indicators of information quality variables (Stefanovic et al., 2006).

#### 2. System Quality

The ability of the system to manage and present information according to what is needed by users is known as system quality (DeLone & McLean, 1992). The system is considered successful if it affects user satisfaction. The author will investigate how effective Metro City's Local Government Information System (SIPD) is for managing planning and development data, finances, and other local information. Ease of use, reliability, flexibility, access speed, and system stability are indicator measures of system quality variables (Lai & Yang, 2009; Wu & Wang, 2006).

#### 3. Service Quality

According to DeLone and McLean (1992) information system service quality is the quality of service offered to users by information system developers, so that it has an impact on the level of user satisfaction. A service is said to be good if it can meet customer needs, in this case good service. The author will examine whether the services provided by the Metro City Local Government Information System (SIPD) are of high quality, so that they affect the satisfaction felt by its users. Service speed, problem solving, availability when needed, meeting special needs, and interest in problem solving are measures of service quality variables (Wei et al., 2011).

#### 4. User Satisfaction

User satisfaction is determined by user responses and feedback after using the information system. The subjective criterion of how much users like the system used to meet their needs is known as user attitude towards information systems (DeLone & McLean 1992). The author will investigate the level of user satisfaction with the Metro City Local Government Information System (SIPD). According to Wu & Wang (2006), the variable indicators of user satisfaction in this study are finding knowledge, getting the necessary information, effective, and efficient.

### D. Data Analysis Method

Multiple linear regression analysis was used as a data analysis method in this study. Sugiyono (2017) states that researchers use multiple linear regression analysis to predict the state of the dependent variable (criterion) as well as two or more independent variables that function as predictor factors (up and down in value). The following is the formula for multiple linear regression analysis used in this study.

$$Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + e$$

Description:

Y : SIPD User Satisfaction, A : Constant,

$\beta_i$  : Regression coefficient,  $X_i$  : Independent Variables,  $X_1$  : Information Quality,  $X_2$  : System Quality,

$X_3$  : Service Quality, and  $e$  : Error

## RESULTS AND DISCUSSION

### A. Validity Test Results

The variables of information quality ( $X_1$ ), system quality ( $X_2$ ), and service quality ( $X_3$ ), and user satisfaction ( $Y$ ) each consist of 5 question items. All question items from each variable have a sig value  $<0.05$ . This can be stated that all question instruments are declared valid.

Table 1. Validity Test Results

Validitas	Sig (2-Tailed)	Keterangan
<b>Kualitas Informasi (X1)</b>		
Pertanyaan 1	0,00	Valid
Pertanyaan 2	0,00	Valid
Pertanyaan 3	0,00	Valid
Pertanyaan 4	0,00	Valid

## Integration is Success Model as an Evaluation Factor of Local Government Information Systems in Indonesia

Pertanyaan 5	0,00	Valid
<b>Kualitas Sistem (X<sub>2</sub>)</b>		
Pertanyaan 1	0,00	Valid
Pertanyaan 2	0,00	Valid
Pertanyaan 3	0,00	Valid
<b>Validitas</b>		
Pertanyaan 4	0,00	Valid
Pertanyaan 5	0,00	Valid
<b>Kualitas Layanan (X<sub>3</sub>)</b>		
Pertanyaan 1	0,00	Valid
Pertanyaan 2	0,00	Valid
Pertanyaan 3	0,00	Valid
Pertanyaan 4	0,00	Valid
Pertanyaan 5	0,00	Valid
<b>Kepuasan Pengguna (Y)</b>		
Pertanyaan 1	0,00	Valid
Pertanyaan 2	0,00	Valid
Pertanyaan 3	0,00	Valid
Pertanyaan 4	0,00	Valid
Pertanyaan 5	0,00	Valid

### B. Reliability Test Results

Based on the reliability test, the Cronbach's Alpha values for the information quality, system, service, and user satisfaction variables are 0.903, 0.900, 0.909, and 0.873, respectively. The Cronbach alpha value > from the reliable standard is worth 0.6. It is concluded that all questionnaires in the study are reliable.

**Table 2. Reliability Test**

Variabel	Reliability Statistics	
	Cronbach's Alpha	N of Items
Kualitas Informasi (X <sub>1</sub> )	0,903	5
Kualitas Sistem (X <sub>2</sub> )	0,900	5
Kualitas Layanan (X <sub>3</sub> )	0,909	5
Kepuasan Pengguna (Y)	0,873	5

### C. Normality Test Results

This study uses the One Sample Kolmogorov-Smirnov test to measure normally distributed data. The results show the value of Asymp. Sig. (2-tailed) value of 0.196c, which shows the sig value is more than 0.05. It is concluded that the data in this study is normally distributed.

**Table 3. Normality Test**

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		93
Normal Parameters	Mean	.0000000
	Std. Deviation	1.10083893
Most Extreme Differences	Absolute	.079
	Positive	.079
	Negative	-.056
Test Statistic		.079
Asymp. Sig. (2-tailed)		.196 <sup>c</sup>

D. Hypotesis Test Results

Tabel. 4 Hypotesis Test

		Coefficients <sup>a</sup>				
Model		Unstandardized		Standardized	t	Sig.
		Coefficients		Coefficients		
		B	Std. Error	Beta		
	(Constant)	5.793	1.009		5.742	.000
	Kualitas Informasi	.096	.071	.105	1.363	.176
1	Kualitas Sistem	.334	.074	.458	4.497	.000
	Kualitas Layanan	.300	.079	.372	3.800	.000

a. Dependent Variable: Y

**Information Quality on SIPD User Satisfaction**

Based on Table 4, the results of the hypothesis test show that the significance value for the information quality variable is 0.176. This states that the sig value is > 0.05, so it can be concluded that the 1st hypothesis is rejected, which indicates that information quality does not have a significant effect on SIPD user satisfaction.

An organization's information is always related to input data and output information that is realized through the system, to build user performance. Information quality affects user satisfaction (DeLone & McLean, 2003). In contrast to the findings of this study, information quality does not affect user satisfaction. This is due to the fact that the Minister of Home Affairs Regulation Number 70 of 2019 stipulates that data entry and reporting requirements in the Regional Government Information System (SIPD) must follow existing standards. The results of this study are in line with the research of Prayanthi et al. (2020), which found that information quality does not have a significant impact on user satisfaction.

**System Quality on SIPD User Satisfaction**

In Table 4, the results of the hypothesis test show that the sig value for the system quality variable is 0.000. This explains that the significance value is < 0.05, which indicates that the level of user satisfaction is strongly influenced by the quality of SIPD, while the coefficient value of the system quality variable is 0,334, which means that there is a positive relationship between system quality and user satisfaction, so it can be concluded that the second hypothesis is accepted, which indicates that SIPD user satisfaction can be significantly and positively influenced by system quality.

The quality of information systems is formed by the use of good software and hardware. How well software and hardware process data to produce output in the form of information for its users can be used as a measure of system quality (DeLone & McLean, 2003). This shows that user satisfaction with the ability to get the information they need can be influenced by good system quality. In line with the applied research from Al-Okaily et al. (2023) which reveals that SIPD user satisfaction is positively influenced by system quality.

**Service Quality on SIPD User Satisfaction**

In Table 4, the results of hypothesis testing obtained a significance value for the service quality variable as large as 0.000. This states that the sig value is < 0.05 which indicates that service quality has a significant effect on SIPD user satisfaction, but the research coefficient of the service quality variable is 0,300 which concludes a positive relationship between service quality and user satisfaction, so it can be concluded that the third hypothesis is accepted which indicates that SIPD user satisfaction is positively influenced by service quality.

According to McLean & DeLone (2003), the quality of service that users receive from information process developers will have an impact on how satisfied users are with the services they receive. In the study, it is known that service quality has a positive effect on SIPD user satisfaction, which means that SIPD is able to provide services that can provide satisfaction for users. This is in line with the research applied by Al-Okaily et al. (2023) which reveals that SIPD user satisfaction is positively affected by service quality.

**CONCLUSION**

The results of the study lead to the conclusion that the implementation of SIPD in Metro City by integrating the IS Success Model

## Integration is Success Model as an Evaluation Factor of Local Government Information Systems in Indonesia

as an evaluation factor has been successfully implemented. The results showed that system and service quality had a positive and significant impact on SIPD user satisfaction, however, information quality did not have a significant impact on user satisfaction. This shows that SIPD users are satisfied with the quality of the system and the quality of services for processing data and collecting the information needed using SIPD, but users are not satisfied with the quality of information generated by SIPD. From the results of this research, it is hoped that the Metro City Local Government will be able to improve the quality of information in accordance with the data through regulated regulations, in this case between input (data) and output (information) carried out using SIPD must be in line, so as to produce better quality in terms of regional development planning information, regional financial information, and other regional information.

The limitation in this study is the questionnaire questions that refer to previous researchers, so there is no renewal or modification of the questionnaire questions submitted to respondents. Suggestions for future researchers are expected to modify questionnaire questions or be able to test the results of evaluating the implementation of SIPD using other research models such as UTAUT or Technology Acceptance Model (TAM) Theory to determine the level of effectiveness of SIPD implementation in Indonesia.

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