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Analysis of the Success of Implementing the Srikandi Application on the Efficiency of Public Service Administration Through the Delone and Mclean Information System Model at the Regional Secretariat of Solok City, West Sumatra Province

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The implementation of the Integrated Dynamic Archiving Information System (SRIKANDI) application in government agencies aims to improve the efficiency of public service administration through integrated digital archive management. However, in its implementation, problems related to system quality, information quality, and service quality are still encountered, which have the potential to affect administrative efficiency and user satisfaction. This study aims to analyze the success of the SRIKANDI application implementation on the efficiency of public service administration through the DeLone and McLean Information System Success Model at the Regional Secretariat of Solok City, West Sumatra Province. This study uses a quantitative approach with a survey method. The population and sample of the study were all employees who use the SRIKANDI application, with a sampling technique using saturated sampling. Data were collected through questionnaires and analyzed using Structural Equation Modeling (SEM) with the help of SmartPLS. The results show that system quality, information quality, and service quality influence the efficiency of public service administration and user satisfaction. In addition, the efficiency of public service administration also influences user satisfaction. Therefore, it can be concluded that the success of the SRIKANDI application implementation is influenced by the quality of the information system that supports increased efficiency and user satisfaction.
Keywords: SRIKANDI Application, System Quality, Information Quality, Service Quality, Administrative Efficiency, User Satisfaction

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1. Introduction

Advances in information technology have encouraged government agencies to adopt information systems to improve administrative efficiency and the quality of public services. The use of information systems in the government sector is expected to support more effective work processes, reduce reliance on physical documents, and increase transparency and accountability in government administration. One such effort is the implementation of the Integrated Dynamic Archiving Information System (SRIKANDI) as a national electronic archives management system.

The SRIKANDI application is designed to support the integrated management of dynamic archives, from creation and use to digital storage. The Regional Secretariat of Solok City, West Sumatra Province, is one of the government agencies that has implemented the SRIKANDI application to support administrative and archival activities. However, its implementation still faces several obstacles that could potentially impact

system performance, such as suboptimal system quality, information that does not fully meet user needs, and the quality of support services that still need to be improved.

The success of an information system implementation is not only determined by the existence of technology, but also by the quality of the system, the quality of information, and the quality of service perceived by users. The DeLone and McLean Information System Success Model is one of the evaluation models widely used to assess the success of an information system through the relationship between system quality, information quality, service quality, user satisfaction, and the net benefits obtained [1]. In the context of public organizations, these net benefits can be realized in the form of efficiency in public service administration.

Based on the description, this study was conducted to analyze the success of the SRIKANDI Application implementation on the efficiency of public service administration using the DeLone and McLean Information System Success Model at the Regional Secretariat of Solok City, West Sumatra Province. The results of this study are expected to provide an empirical overview of the factors that influence the successful implementation of an archival information system in the government environment.

2. Method

Structural Equation Modeling (SEM) Analysis

This study used the Structural Equation Modeling (SEM) analysis tool using the SmartPLS program. SmartPLS is a component-based approach for testing structural equation models, commonly called SEM. SmartPLS is based on the idea of having two iterative procedures that use least squares estimation for single and multi-component models. By applying these procedures, this algorithm aims to minimize the variance of all dependent variables, therefore the cause and direction between all variables need to be clearly defined. SmartPLS is divided into measurement models and structural models. SmartPLS is a powerful method because it is not based on many assumptions. Data does not have to be multivariate normal distribution (indicators with categorical, ordinal, interval, and ratio scales can be used in the same model). SmartPLS is also more efficient with algorithmic calculations that are capable of estimating larger and more complex models with hundreds of latent variables and thousands of indicators.[21].

Measurement Model Test (Outer Model)

In data analysis techniques using SmartPLS, there are three criteria for assessing the outer model: Convergent Validity, Discriminant Validity, and Composite Reliability. Convergent validity of a measurement model with reflective indicators is assessed based on the correlation between item scores or component scores estimated using SmartPLS software. An indicator is considered to have good reliability if it has a value above 0.7. We can see this figure by referring to the Outer Loading table in SmartPLS.[22].In this composite reliability test, there are two tables that must be observed: the values contained in the Composite Reliability table and Cronbach's Alpha, which must be greater than 0.7. For the Discriminant Validity test, it can be seen from the cross-loading value. The correlation value of the indicator to its construct must be greater than the correlation value between the indicator and other constructs. There is another way to test Discriminant Validity by comparing the root value of the Average Variance Extracted (AVE) for each construct with the correlation between the construct and other constructs.

1. Measurement Modelor Validity
   The outer model assessment aims to assess the correlation between item or indicator scores and their construct scores, indicating the level of validity of a statement item. Outer model testing is conducted based on the results of a questionnaire trial conducted for all research variables. There are three

criteria in the use of data analysis techniques to assess the outer model: Convergent Validity, Discriminant Validity, and Composite Reliability. In the development stage, a correlation of 0.50 to 0.6 is considered acceptable. In research, the limit for convergent validity is above 0.7.

2. Reliability
   Once the data validity level is known, the next step is to determine the level of data reliability or the level of reliability of each construct or variable. This assessment is done by looking atComposite reliability value and Crombach alpha value. A construct is said to be reliable if it provides a Crombach alpha value > 0.70.
3. R-square
   Next, as explained previously, the inner model assessment will be evaluated through the R-Squared value, to assess the influence of certain exogenous latent constructs on endogenous latent constructs to see whether they have a substantive influence.

Path Coefficient and Hypothesis Testing

Testing the inner model or structural model is conducted to examine the relationship between variables, the significance value, and the R-square of the research model. Model assessment using PLS begins by examining the R-square for each dependent latent variable. Changes in the R-square value can be used to assess the influence of a particular independent latent variable on the dependent latent variable and whether it has a substantive effect.

3. Results and Disccusion

Research Description

Table 1. Calculation of Questionnaire Distribution Results

No.	Questionnaire	Amount	Percentage%
1	Distributed questionnaires	87	100
2	Unreturned questionnaires	0	0
3	Incorrectly filled out (defective or damaged) questionnaire	0	0
4	Questionnaires suitable for data processing	87	100

Source: Survey Results, 2026

Research Data Analysis

There are three criteria for using data analysis techniques to assess the outer model: Convergent Validity, Discriminant Validity, and Composite Reliability. In the development stage, a correlation of 0.50 to 0.6 is considered adequate or acceptable. In research, the limit for convergent validity is above 0.7.

Outer Model (Structural Model) Testing Before Elimination

Based on the resultsTesting the outer model using SmartPLS, obtained the correlation values between the statement items of the research variables as follows:

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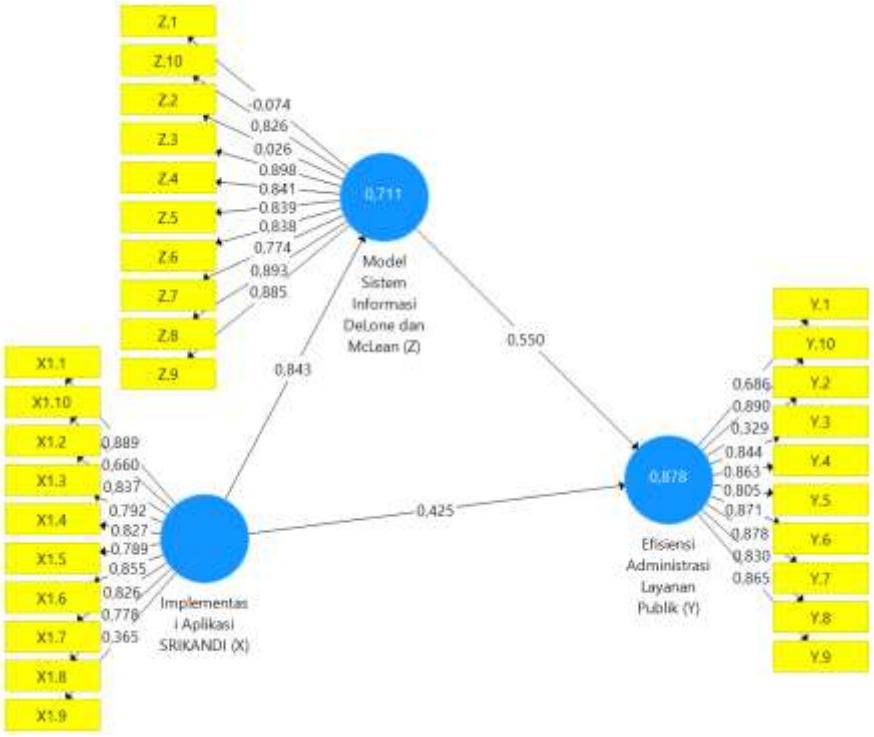
Figure 1. Outer Loadings Before Elimination



In data analysis techniques using SmartPLS, there are three criteria for assessing the outer model: convergent validity, discriminant validity, and composite reliability. Convergent validity of a measurement model with reflective indicators is assessed based on the correlation between item scores or component scores estimated with PLS software. Indicators are considered to have good reliability if they have a value above 0.7. There are three criteria in the use of data analysis techniques to assess the outer model: convergent validity, discriminant validity, and composite reliability. In the development stage, a correlation of 0.50 to 0.6 is considered adequate or acceptable. In research, the limit value of convergent validity is above 0.7.

Outer Model (Structural Model) Testing After Elimination

Based on the resultsTesting the outer model using SmartPLS, obtained the correlation values between the statement items of the research variables as follows:

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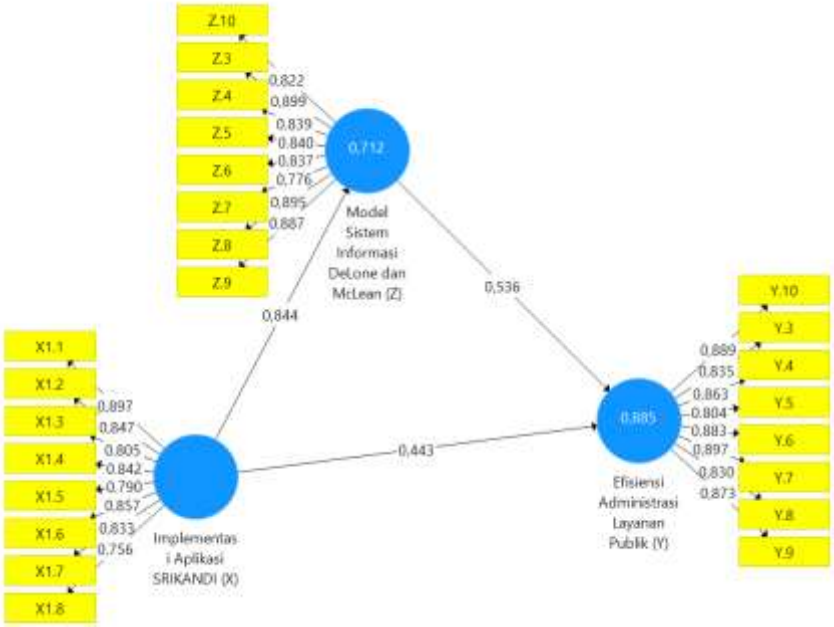
Figure 2. Outer Loadings After Elimination



Average Variance Extracted (AVE) Assessment

The validity criteria for a construct or variable can also be assessed through the Average Variance Extracted (AVE) value for each construct or variable. A construct is considered to have high validity if its value is above 0.50. The AVE values for all variables are presented below.

Table 2. Average Variance Extracted (AVE) Value

	Average Variance Extracted (AVE)
Public Service Administration Efficiency (Y)	0.739
Implementation of SRIKANDI (X) Application	0.688
DeLone and McLean Information Systems Model (Z)	0.723

Based on Table 2, it can be concluded that all constructs or variables above meet good validity criteria. This is indicated by the Average Variance Extracted (AVE) value above the recommended 0.50 criterion.

Outer Model Testing (Structural Model)

The next testing process is testing the inner model, or structural model, which aims to determine the relationships between hypothesized constructs. The structural model is evaluated by observing the R-Square value for the endogenous construct and the influence it receives from the exogenous construct.

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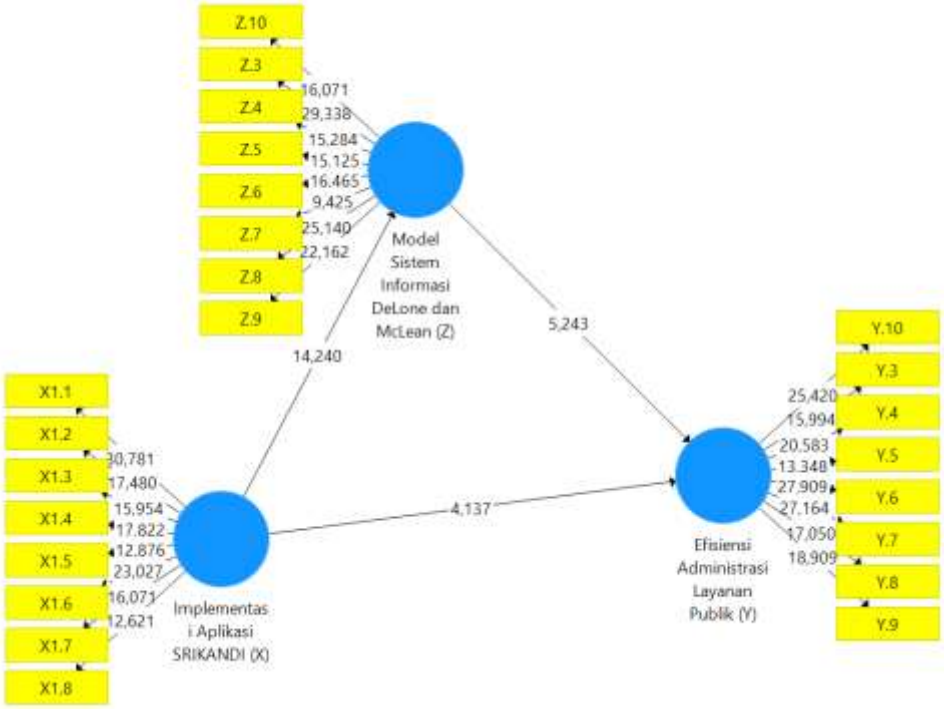
Figure 3. Structural Outer Model



Next, as explained previously, the inner model assessment will be evaluated through the R-Squared value, to assess the influence of certain exogenous latent constructs on endogenous latent constructs to see whether they have a substantive influence. The following is the R-Square estimate:

Table 3. Evaluation of R Square Value

	R Square	R Square Adjusted
Public Service Administration Efficiency (Y)	0.885	0.882
DeLone and McLean Information Systems Model (Z)	0.712	0.709

Source: SmartPLS Outer Model Test Results, 2026

In the table above, the r-square value of the performance variable is 0.885 or 88.5%, so the contribution of the performance variable is 0.885 or 88.5%.Implementation of SRIKANDI Application danDeLone and McLean Information Systems Modelon performance by 88.5%, the remaining 11.5% is influenced by other variables outside this research, such as effectiveness and efficiency.

R-Square value of variableDeLone and McLean Information Systems Modelis 0.712 or 71.2%, then the contribution of the variableImplementation of the SRIKANDI ApplicationtoDeLone and McLean Information Systems Model71.2%, the remaining 28.8% is influenced by other variables outside this research, such as effectiveness and efficiency..

PenHypothesis test

TestingThe hypothesis aims to answer the problems in this study, namely the influence of certain exogenous latent constructs on certain endogenous latent constructs, either directly or indirectly through mediating variables. Hypothesis testing in this study can be assessed from the magnitude of the t-statistic or t-count compared to the t-table of 1.96 at 5% alpha. If the t-statistic/t-count < t-table 1.96 at 5% alpha, then Ho is rejected and if the t-statistic/t-count > t-table 1.96 at 5% alpha, then Ha is accepted. The following SmartPLS output results illustrate the estimated output for testing the structural model.

Table 4. Results for Inner Weights Direct Affect

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Implementation of SRIKANDI Application (X) -> Efficiency of Public Service Administration (Y)	0.443	0.437	0.107	4,137	0,000
Implementation of SRIKANDI Application (X) -> DeLone and McLean Information System Model (Z)	0.844	0.839	0.059	14,240	0,000
DeLone and McLean Information Systems Model (Z) -> Public Service Administration Efficiency (Y)	0.536	0.541	0.102	5,243	0,000
Implementation of SRIKANDI Application (X) -> DeLone and McLean Information System Model (Z) -> Public Service Administration Efficiency (Y)	0.452	0.456	0.102	4,435	0,000

4. Conclusion

There is a significant influenceImplementation of the SRIKANDI Application on the DeLone and McLean Information System Model. There is a significant influenceImplementation of the SRIKANDI Application on the Efficiency of Public Service Administration. There is a significant influenceDeLone and McLean's Information Systems Model on Public Service Administration Efficiency. There is a significant influenceImplementation of the SRIKANDI Application on the Efficiency of Public Service Administration through the DeLone and McLean Information System Model.

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