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Analyzing The Successful Implementation of General Procurement Information System (Sirup) Using The Delone and Mclean Model in Muna Regency, Southeast Sulawesi

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Abstract

The Muna District Government has also applied SIRUP to ease the announcement of procurement of goods and services. But the general success of this information system in the work units of Muna Regency has not been much studied. So that in this study, it will be tested the success of the information system on the General Procurement Plan in Muna Regency based on Delone and McLean Model of the information system. The purpose of this study is to evaluate how well the information system worked in the work units of the regency's government. The evaluation applies the Delone and McLean model with six dimensions: system quality, service quality, information quality, user satisfaction, user usage, and net benefit. This research uses quantitative approach with descriptive and statistical analysis methods. There is only one finding that system quality significantly influences usage. Meanwhile, system quality, information, and service significantly affect user satisfaction. Therefore, the conclusion is that the government needs to increase innovation and improve the management of service and system quality to enhance user engagement and raise awareness of the SIRUP Application, thereby increasing user satisfaction with it.

Keywords: *Delone and McLean, SIRUP Application, Success Analysis, Procurement Announcement, Information System.*

Abstrak

Pemerintah Kabupaten Muna telah menerapkan aplikasi SIRUP untuk merampingkan proses pengumuman pengadaan barang dan jasa. Meskipun telah diadopsi, analisis komprehensif mengenai keberhasilan sistem tersebut di berbagai unit kerja di Kabupaten Muna masih terbatas. Oleh karena itu, penelitian ini mengevaluasi keberhasilan Sistem Informasi Rencana Umum Pengadaan menggunakan Model DeLone and McLean. Tujuannya adalah untuk menilai efektivitas dan kinerja sistem informasi yang digunakan oleh unit kerja Pemerintah Kabupaten. Evaluasi menggunakan enam variabel dari model Delone and McLean: kualitas sistem, kualitas layanan, kualitas informasi, kepuasan pengguna, penggunaan pengguna, dan manfaat bersih. Pendekatan kuantitatif digunakan dengan menggabungkan analisis deskriptif dan statistik. Hasil penelitian menunjukkan bahwa hanya kualitas sistem yang memiliki dampak signifikan terhadap penggunaan. Sementara itu, kualitas sistem, informasi, dan layanan secara signifikan memengaruhi kepuasan pengguna. Oleh karena itu, disimpulkan bahwa pemerintah perlu meningkatkan inovasi dan memperbaiki manajemen kualitas layanan serta sistem untuk meningkatkan keterlibatan pengguna dan meningkatkan kesadaran terhadap aplikasi SIRUP, sehingga dapat meningkatkan kepuasan pengguna terhadap aplikasi tersebut.

Kata Kunci: DeLone dan McLean, Aplikasi SIRUP, Analisis kesuksesan sistem informasi, sistem pengadaan.

1. Introduction

Indonesia is a country governed by the rule of law. Development efforts are actively pursued across various sectors, including procurement of goods and services, to enhance the quality of human resources. The goal of development is to improve society's welfare and well-being, which entails meeting the growing demands of technology and knowledge across different areas of life (Jeilani et al, 2025; Savveli et al., 2025). To achieve this, the government must provide adequate goods, services, and infrastructure to advance the general welfare and social justice (Seddon & Kiew, 1996; Weerakkody et al., 2016).

From a sociological perspective, based on virtual discussions summarized in Kontan Jakarta news, Roni Dwi Susanto, the Head of the Procurement Policy Institute for Goods and Services, stated that in 2021, procurement in Indonesia accounted for 52.1% of the total State Budget Revenue and Expenditure, equivalent to Rp 1.214 trillion. In response, the Government Procurement Policy Institute (LKPP) implemented a bureaucratic reform by introducing the SIRUP application, the General Procurement Plan Information System. SIRUP provides easy access to

information and public services related to the procurement of goods and services, as well as the determination of budgeting frameworks (Wang, 2022).

In this sense, good value for money and good governance in public supply and services is needed. Consequently the government has also implemented big changes to its bureaucracy with the introduction of the SIRUP (Sistem Informasi Rencana Umum Pengadaan) system. SIRUP is a General Procurement Plan information system, with the goal of making information and public services related to the procurement of goods and services and the determination of budget ceilings easily accessible (LKPP, 2023). Nevertheless, it is also important to incorporate cybersecurity components in the success of e-government (Al-Zahrani, 2020).

Muna Regency is one of the regions that has been implementing the SIRUP application since 2017. In 2022, SIRUP.lkpp.go.id has a total of 2,238 registered provider packages and 2,458 provider self-managed activities in the course of procurement. The SIRUP application version SIRUP 2.3 u20210202 has been adopted by the Procurement Service Unit in Muna Regency, it is a local government body that it is fully committed to the latest SIRUP version upgraded and enhanced with new features. Although the SIRUP system has been introduced, certain procurement activities are still not well documented.

The new enhancements are filters in the OLAP menu and the validation of the activity ceilings against the ceiling of the program to avoid the activity ceilings to be higher than the program ceilings. Therefore, a General Procurement Plan (RUP) for goods and services should be issued by means of the SIRUP application. In the year 2021, for instance, the Research and Development Agency of Muna Regency executed 53 provider packages with a big total of 645 and 68 self-managed packages with a grand total of 5, 000, culminating into 6,169 boxes for that fiscal year. But there are still inconsistencies between what is in the field and in the data in the SIRUP application, which means there are some procurements that are not recorded in the application, since the establishment of the SIRUP application (Santika & Mauritsius, 2025). Also, the level of citizens' smart ICT access

significantly determines the quality of e-government services (Abdulkareem & Ramli, 2021).

The obstacles SIRUP has to face are the server slowdown and downtime. Such errors, as knocks on the door, can be caused when the SIRUP centralized application server at Unit Layanan Pengadaan is accessed by several departemnt or govt agency at the same time. Entry of procurement plan (SIRUP) in the system is normally done in advance prior to the beginning of the fiscal year, resulted in a race to upload by 57 work units and the system could not keep up. The problem is exacerbated by all work units across Indonesia uploading data simultaneously still hindering the procurement. SIRUP application also provide feature that help to save your time, energy and cost during procurement goods and services. With the number of users increasing to include local government and service providers, the performance of the SIRUP information system should be evaluated. System success in the Information System is influenced by various factors such as system quality, information quality, service quality, user intention, user satisfaction, and final benefits (Wang, 2022) which refer to DeLone & McLean (2003) and that of these success factors could be measured or determined with the information system success model.

Smooth execution of procurement process depends on the success of this application. However, the centralized architecture of the SIRUP application inside Electronic Procurement Service Unit (LPSE) as well as the mass upload from several government institution which would cause server overheat has generated server downtime and slow sensation among users. Therefore, the procument process will be obstructed and consequently, the later stages of next procurement might be disturbed.

Nevertheless, an analysis or evaluation of the implementation of the SIRUP information system in Muna Regency has not been conducted. Most of DeLone & McLean's study is centred on the corporate or national e-government sector, therefore this study contributes in the small pool of local government studies. Such a review is important because it offers important ideas for future improvement in

procurement procedures. This study aims to assess the effectiveness of SIRUP as an information system in Muna Regency using the Delone and McLean model to describe the above variables. The study is motivated by prior work in diverse countries on assessing the success of information systems (Umaroh & Barmawi, 2021).

There has been considerable application of the validated DeLone and McLean model in the international community of e-government researchers. Several studies have highlighted the importance of system and information qualities as major determinants of user satisfaction and net benefits (Wang, 2022; Zhou et al., 2023). However, application of the model in the context of mandatory government procurement systems at the local government level in developing countries is not extensive. This paper contributes for literature by investigating the SIRUP in Muna Regency.

The purpose of this study is to describe the success that can be obtained from the use of the application SIRUP in the public procurement announcement process at munna district, Southeast Sulawesi. The study will examine the effect of system quality, information quality, and service quality on use and user satisfaction, and the consequential effect on net benefits. Through analyzing and maturing these relations, this research hopes to have contributions on suggestions for the SIRUP application improvement.

To this end, building on the Delone and McLean model, the study will propose hypotheses to explain the effects among variables relating to SIRUP success. The following hypotheses are proposed: (Ha1) System quality has an effect on usage:

(Ha2) System quality has an effect on user satisfaction.

(Ha3) Information quality has an effect on usage.

(Ha4) Information quality has an effect on user satisfaction.

(Ha5) Service quality has an effect on usage.

(Ha6) Service quality has an effect on user satisfaction.

(Ha7) Usage has an effect on the final benefit.

(Ha8) User satisfaction has an effect on the final benefit.

(Ha9) System quality effect the final benefit through usage.
(Ha10) Information quality effect the final benefit through usage.
(Ha11) Service quality effects the final benefit through usage.
(Ha12) System quality effect the final benefit through user satisfaction.
(Ha13) Information quality effects the final benefit through user satisfaction.
(Ha14) Service quality effects the final benefit through user satisfaction.

These hypotheses are developed to examine the impact of system quality, information quality, service quality, use, and user [1] satisfaction on the net benefit of the SIRUP application in Muna regency. In this paper are presented the determinants of the use and net benefit of the application, and proposals to enhance both the effectiveness of the application and user satisfaction. It is expected that the results of this study will improve the public procurement process as well as provide motivators for policy makers and administrators for strengthening the implementation of SIRUP in Muna regency.

2. Methods

This study adopts a quantitative, deductive approach. The quantitative method is employed to test theory by quantifying research variables with numbers and analyzing the data numerically [20]. It begins with what is already known (theory) and tests this against what is observed (data). This study applies a multiple linear regression to predict the impact of the independent variables (i.e. system quality, information quality, and service quality) and the mediator (usage and user satisfaction) on the dependent variable (end-benefit).

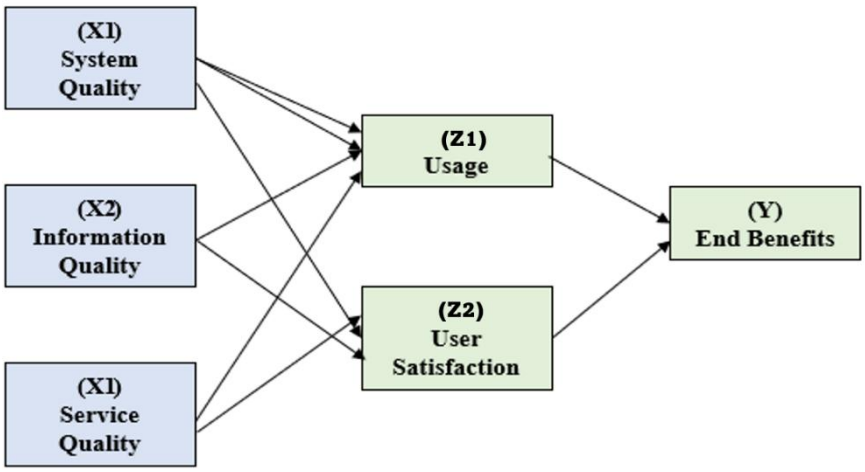

Figure 1: Research Model based on Delone and McLean Framework (2003)

The variables of the study are defined operationally based on the D&M model System Quality (X1) refers to the functioning and the ease of use of the SIRUP system such as its dependability and its proffered functionality. Information Quality (X2) relates to the system's output, such as the accuracy, timeliness, and completeness of the procurement information. Service Quality (X3) evaluates the quality of services provided by the Procurement Service Unit such as its responsiveness capabilities and empathy levels. Usage (Z1) assesses the frequency of utilization of the SIRUP system. The extent to which users are satisfied with the system is Z2. Net benefits (Y) reflect gains stemming from system use such as improved process efficiency and productivity.

The acquired data are quantitative and analyzed in order to verify the research hypotheses. The sample size for this study is calculated by using the Yamane (2003) formula, which is appropriate for large population. Determined by the above formula the sample size is:

$$n=\mathrm{N}/(1+N(e)^2)$$

Where:

n = minimum sample size

N = total population size

e = margin of error (desired level of precision)

This research is a population study with subject are employees at 57 DUs registered in the Sirup system in the Muna Regency. To calculate the sample size, a stratified random sampling technique was used. The population (N) is 57 work units, and the desired sample size (n) is 37 work units. but the study chooses a sample of 37 units by stratified random sampling, separating the population into three clusters (low, medium, and high) according to the procurement packages of each unit. From each stratum, individuals are selected randomly to form a stratified random sample consisting of 37 units.

The sample was drawn through stratified random sampling technique from 57 units which were registered in the Sirup system in Muna Regency. The research tool is a Likert-scale questionnaire to obtain primary information data. This study employed a close ended questionnaire on a 5-point Likert scale with 1=Strongly Disagree to 5=Strongly Agree. The questions was adopted from previously validated instrument of earlier D Muller model studies. To evaluate content validity and reliability, a pilot test was performed by selecting 10 respondents from non-sampled units. The pilot demonstrated good homogeneity, and Cronbach's Alpha values for all constructs exceeded the minimum required threshold of 0.70.

This includes an instrument validity and reliability testing, conversion of the ordinal data into interval data application of the MSI method, and classical assumption tests (normally, heteroskedastisity and multicollinearity). By applying multiple linear regression the present study is also able to examine the combined effect of the studied variables on the End Benefits.

3. Result and Discussion

The Result

The research hypotheses were examined by multiple linear regression analysis. The analysis was performed with SPSS, interpreting the results depends on the value of the coefficients. The outputs of the following tables are the results of the multiple linear regressions analysis for multiple relationships:

Table 1 Multiple Linear Regression Tests (X1, X2, X3 to Z1)

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Stdr. Error	Beta		
1	(Constant)	1347.291	604.528		2.229	.029
	X1	.152	.042	.502	3.598	.001
	X2	-.032	.048	-.095	-.673	.503
	X3	.044	.057	.109	.782	.437
a. Dependent Variable: Z1						

Source: Research Results, 2024

Table 1 presents the results of the multiple linear regression for the dependent variable z1 (usage) in relation to the independent variables (x1, x2, x3). The results reveal that system quality (x1) has a significant positive effect on usage, but information quality (x2) and service quality (x3) do not. The effect of one-unit change on system quality on usage equals 0.502 with all other variables held constant. This is a fairly substantial effect size. The results (see table 1) show that system quality explains a significant amount of variance in usage (x1 to z1, $\beta = 0.502$, $p < 0.01$; 0.05). Therefore, it can be inferred that the functionality of the system affects the sirup usage directly.

Table 2 Multiple Linear Regression Tests (X1, X2, X3 to Z2)

Coefficients [a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Stdr. Error	Beta		
1	(Constant)	6451.117	1389.301		4.643	.000
	X1	.407	.097	.573	4.202	.000
	X2	-.261	.111	-.327	-2.360	.021
	X3	.191	.131	.200	1.464	.014
a. Dependent Variable: Z2						

Source: Research Results, 2024

Table 2 presents the results of the multiple linear regression analysis for the relationship between the independent variables (X1, X2, X3) and the dependent variable Z2 (user satisfaction). The findings indicate that system quality (X1) and service quality (X3) have a significant positive impact on user satisfaction, whereas information quality (X2) does not.

Table 3 Multiple Linear Regression Test (Z1 and Z2 to Y)

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Stdr. Error	Beta		
1	(Constant)	4075.256	980.108		4.158	.000
	Z1	.804	.287	.373	2.804	.007
	Z2	.188	.122	.205	1.543	.127
a. Dependent Variable: Y						

Source: Research Results, 2024

Table 3 displays the results of the multiple linear regression analysis for the relationship between the independent variables Z1 (usage) and Z2 (user satisfaction) and the dependent variable Y (final benefits). The findings indicate that usage (Z1) has a significant positive impact on final benefits (Y), whereas user satisfaction (Z2) does not.

Tables 4 and 5 present the results of the multiple linear regression analysis of the relationship between the independent variables (X1, X2, X3) and the dependent variable Y (final benefits) via the mediating variables Z1 (usage) and Z2 (user satisfaction).

Table 4 Multiple Linear Regression Tests (X1, X2, X3 against Y Through Z1)

Coefficients [Z1]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Stdr. Error	Beta		
1	(Constant)	107.333	1082.311		.099	.921
	X1	.240	.079	.368	3.020	.004
	X2	.146	.084	.199	1.746	.085
	X3	.101	.099	.115	1.023	.310
a. Dependent Variable: Y						

Source: Research Results, 2024

The Results indicate that both system quality (X1) and information quality (X2) positively and significantly affect final benefits (Y) via usage (Z1). On the other hand, the service quality (X3) is not found to have a significant effect on final benefits via usage.

Table 5. Multiple Linear Regression Test (X1, X2, X3 to Y Through Z2)

Coefficients (Z2)						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Stdr. Error	Beta		
1	(Constant)	-418.449	1207.505		-.347	.730
	X1	.239	.082	.366	2.897	.005
	X2	.178	.087	.243	2.035	.046
	X3	.088	.101	.100	.870	.038
a. Dependent Variable: Y						

Source: Research Results, 2024

Furthermore, system (X1) and information quality (X2) have a positive effect on netbenefits (Y) via user satisfaction (Z2) but service quality (X3) does not have such effect. The relationships between the independent and the dependent variables were tested by multiple regressions analysis. This research was conducted to determine the effect of system quality, information quality and service quality on use, user satisfaction and net benefit in SIRUP application in Muna Regency. Various hypothesis testing methods were used including t-tests and F-tests. This is consistent with research on e-government technology usage amongst public servants (Zhou et al., 2023).

T-Test:

The t-test was employed to analyze the separate influence of the independent variables on the dependent variable. Table 6 results show that the system quality (X1) has a positive impact on usage (Z1) and user satisfaction (Z2) at 0.001 significance level and 0.0002 level, respectively. Better system quality results in greater use and user satisfaction. But the quality of information (X2) and service

quality (X3) had no significant effect on usage (Z1) and user satisfaction (Z2) since their p-value was above 0.1.

Table 6. T Test

Variable Independent		Variable Dependent	Sig
System Quality (X1) Information Quality (X2) Service Quality (X3)		Usage (Z1)	.001 .503 .437
System Quality (X1) Information Quality (X2) Service Quality (X3)		User Satisfaction (Z2)	.000 .021 .014
Usage (Z1) User Satisfaction (Z2)		End Benefits (Y)	.007 .127
System Quality (X1) Information Quality (X2) Service Quality (X3)	Usage (Z1)		.004 .085 .310
System Quality (X1) Information Quality (X2) Service Quality (X3)	User Satisfaction (Z2)		.005 .046 .038

Source: Research Results, 2024

The t-tests in Table 6 show that all three independent variables (X1, X2, X3) significantly impact user satisfaction (Z2).

F-Test:

The F-test was conducted to examine the combined effects of the independent variables on the dependent variables. Regarding the F-tests, Table 7 shows that the independent variables (X1, X2, X3) significantly impact usage (Z1). Similarly, Table 8 shows that both Z1 and Z2 have a significant impact on the final benefits (Y). Tables 9 and 10 show the total effects of the independent variables (X1, X2, X3) and the mediators (Z1, Z2) on the final benefits (Y).

Table 7. Anova test (X1, X2, X3 to Z1)

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	15909558.221	3	5303186.074	8.483	.000[b]
	Residual	43760904.157	70	625155.774		
	Total	59670462.378	73			

a. Dependent Variable: Z1

b. Predictors: (Konstan), X3, X1, X2

Source: Research Results, 2024

In Table 7, the F-test showed that the combined impact of system quality, information quality, and service quality on usage (Z1) was significant (p-value < 0.1). Similarly, in Table 7, the F-test indicated that these three independent variables had a significant combined effect on user satisfaction (Z2) with a p-value < 0.1. Moreover, the F-test in Table 7 demonstrated that both usage (Z1) and user satisfaction (Z2) had a significant combined effect on the final benefit (Y) with a p-value < 0.1.

Table 8. Anova test (X1, X2, X3 to Z2)

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	98930980.043	3	32976993.348	9.988	.000[b]
	Residual	231124102.619	70	3301772.895		
	Total	330055082.662	73			

a. Dependent Variable: Z2

b. Predictors: (Konstan), X3, X1, X2

Source: Research Results, 2024

In addition, Tables 8 and 9 indicated that the joint effect of system quality, information quality, and service quality on the final net benefit (Y) as assessed by usage (Z1) and user satisfaction (Z2) was significant at the level of p-values < 0.1.

Table 9 Anova Test (Z1 and Z2 to Y)

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	78021437.173	2	39010718.586	13.882	.000[b]
	Residual	199516872.665	71	2810096.798		
	Total	277538309.838	73			
a. Dependent Variable: Y						
b. Predictors: (Konstan), Z2, Z1						

Source: Research Results, 2024

The decomposed ANOVA for X1, X2, X3 on Y via Z1 based the on equations 4.85 through 4.88: ⇒ The Table 4.10 results are strongly significant. The results are highly statistically significant with a significance (p) value of 0.000 which is less than the usual significance level of 0.1. Also, F = 19.833 is greater than the tabulated value of F(3, 71) at = .05 of 2.734, telling us that the overall system quality, service quality, and information quality via usage on final benefit is significant. These data lend strong support to the idea that improvement of these quality factors individually and in practical application can lead to an enhancement overall benefit.

Table 10. Anova test (X1, X2, and X3 to Y through Z1)

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	148435269.390	4	37108817.347	19.833	.000[b]
	Residual	129103040.448	69	1871058.557		
	Total	277538309.838	73			
a. Dependent Variable: Y						
b. Predictors: (Konstan), X3, Z1, X2, X1						

Source: Research Results, 2024

Table 11 presents the ANOVA results for the variables X1 (system quality), X2 (information quality), and X3 (service quality) on Y via Z2 (user satisfaction) in the 2nd layer. The value of significance is 0.000 which is less than 0.1, and the value of F-statistic (Fhit) is greater than the critial value from F-table (2.734), so these three factors, system quality, service quality and information quality, have the effect on the final benefit via user satisfaction collectively and simultaneously.

Table 11 Anova Test (X1, X2, and X3 to Y through Z2)

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	145965135.942	4	36491283.986	19.137	.000[b]
	Residual	131573173.896	69	1906857.593		
	Total	277538309.838	73			
a. Dependent Variable: Y						
b. Predictors: (Konstan), Z2, X2, X3, X1						

Source: Research Results, 2024

This implies that having a high level of system quality, service quality, and information quality can bring about a high level of customer satisfaction, which in turn benefits the final performance. These results highlight the need to tune-in to different quality dimensions in order to enhance user satisfaction (and so system benefits) to the maximum level.

In summary, the multiple regression analysis revealed that usage and user satisfaction were significantly influenced by system quality. Conversely, the quality of information and service did not have a significant influence on those variables. The system-, information-, and service-quality factors (and to a lesser extent the positive and negative perception ones) played a significant role ($p < 0.0001$) in explaining behavior in terms of use, user satisfaction and final benefit. This implies that a high quality system and quality improvement in information and service is needed to support the user's experiences and satisfaction with the application of the SIRUP in Muna regency.

Finally, the R-squared values in ∧ and in from various tables indicate how much of the variance in the dependent variable can be explained by the independent variables. For example, in Table 12, the independent variable X1 (system quality) accounts for 37% of the variation in usage (Z1). From Table 12, we can also see that the independent variable X2 (information quality) accounts for 9.5% of the variation in usage (Z1). The same holds for other R-square values in the subsequent tables. In this scenario, system quality (X1) explains 37.0% of the variation of usage (Z1), which is shown in Table 12. As a final simple regression

analysis (not shown in any table) it was found that information quality (X2) accounted for 9.5% of the variation in usage.

Table 12 R-Square Results (X1 to Z1)

Model Summary				
Model	R	R Square	Adjusted R-Square	Std. Error of the Estimate
1	.620[a]	.370	.360	.21761
a. Predictors: (Constant), X1				

Source: Research Results, 2024

The result shows that system quality (X1) and information quality (X2) have a positive effect on usage (Z1) and user satisfaction (Z2), which in the end also affects net benefits (Y). Service quality (X3) also has a significant positive effect on user satisfaction (Z2), but it does not have a significant direct effect on net benefits (Y). These results suggest that attention should be paid to the system and information quality to improve usage and user satisfaction in order to lead to the improvement of net benefits in the investigated application.

Discussion

The purpose of this study is to investigate the effect of system quality, information quality, service quality, usage, and user satisfaction on the net benefits based on DeLone and McLean's information systems success model. The findings indicate that both system and information quality have a positive and significant impact on usage and user satisfaction. Yet, quality of information has no influence on usage. User satisfaction has a significant impact on net benefits. In addition, system quality and information quality are only partially indirect affected the net benefits through usage and user satisfaction. This study adds to earlier research conducted in Indonesia that used the DeLone and McLean model to e-government systems (Rahmatullah et al., 2025).

Quality of the System Affects Usage:

Hypothesis (Ha1) posits that quality of system affects usage. The multiple regression with t-test analysis showed a significant difference in the quality of the system ($p = 0.001 < 0.1$). Therefore the hypothesis is accepted. This finding is in line with that of Peter, DeLone, and McLean (2008), who indicated that high system quality could result to greater user needs and higher intensity of software usage.SIRUP's easy-to-learn features enhance user convenience and operational efficiency, which in turn significatively promotes system usage.

Quality of the System Affects User Satisfaction:

The claim (Ha2) posits that quality of system affects user satisfaction. Quality of system was significantly different ($p = 0.000 < 0.1$) according to the statistical analysis, which supported the hypothesis. Firdaus and Akbar (2015) indeed confirm this result by stating that the higher the information system quality, the higher the user satisfaction. By combining several features and providing more user convenience in SIRUP, user satisfaction and ease of application in purchasing procedures were maximized.

Quality of Information Does Not Affect Usage:

The alternative hypothesis (Ha3) is that information quality affects usage. The quality of information is not significant based on the statistical result ($p = 0.573 > 0.1$) so that the hypothesis is rejected. Even with a strong system in place, the lack of user awareness and understanding of the capabilities of that system can prevent it from being fully utilized Syahfitri (2022). Because of minimal socialization between Muna regency and all units on SIRUP, which result in low frequency usage.The Unit Layanan Pengadaan in the whole process should give comprehensive and current information while updating data and solving dubious procurement information.

Quality of Information Affects User Satisfaction:

The Hypothesis (Ha4) stated that the user satisfaction would be influenced by the information quality. The Statistical results reveal that there is a significant

difference in IQ (p = 0.021 < 0.1) which supports this hypothesis. This finding is consistent with Ritonga and Yanto (2013) that states good quality of information will make the users be satisfied. Relevant, precise information on procurement is one of the strongest incentives for users to come back to use the system: SIRUP.

Quality of Service Does Not Affect Usage:

Hypothesis (Ha5) is that service quality has no effect on usage. The result of statistics shows that p-value for service quality is insignificant (p = 0.473 > 0.1), so the null hypothesis is accepted. Though service quality and usage are in medium level, the small frequency and percentage for service quality (14.9%) and usage (13.5%) suggested that the influence is minimum. The decrease mainly related with that the Unit Layanan Pengadaan did not socialize to other units. It is a hope that quality of services and users access to the system will have effect of increase if we provide the intensive training and workshop to all operators and official concern SIRUP.

Quality of Service Affects User Satisfaction:

The Ha6 hypothesis is that service quality has an impact on satisfaction. Statistical test results show that there is significant difference of service quality (p = 0.014 < 0.1), and Ha is accepted. The presence of manual assistance during server aborts and emergencies shows the sympathy of Unit Layanan Pengadaan (ULP). It makes users feel safe and they will be more satisfied. SIRUP service support motivates users to keep using the system.

Usage Affects Ultimate Benefits:

The alternative hypothesis (Ha7) states that use has an effect on ultimate benefits. The results of the statistical test indicate that there is a significant difference in usage (p = 0.07 < 0.1), which supports the hypothesis [see Table 2]. Usage affects also ultimate benefits to a moderate degree (35.7%). Users find SIRUP useful and effective in running procurement processes without paper documents and with access to real-time notifications. As a result, the customers get more productivity and convenience in the overall benefits.

User Satisfaction Has No Impact on Ultimate Benefits:

Hypothesis (Ha8) posits that user satisfaction is not related to ultimate benefits. User satisfaction Results The statistical result shows a nonsignificant finding for user satisfaction ($p = 0.127 > 0.1$) and thereby the hypothesis is not supported. Although the contribution of user satisfaction towards ultimate benefits is not significant (18.6%) but the overall effect on ultimate benefits is small. This manifestation might be attributed to potential stronger determinants of ultimate benefits.

Quality of the System Affects Ultimate Benefits through Usage:

Ha9 hypothesis is the system quality has a positive impact on ultimate benefits through usage. The t-test reveals that there is a significant difference in the quality of system ($p=0.004<0.1$), which supports the hypothesis. The quality of the system potentially explains 57.3% of the change of ultimate benefits through usage. Because SIRUP is easy to access, user satisfaction and productivity are increased for government services. The quality of the system allows a seamless procurement notification.

The quality of information influences the ultimate benefits from using the information.

The quality of information has a positive effect on ultimate benefits through usage (Ha10). The t-test shows a statistically significant difference in information quality ($p = 0.085 < 0.1$), which supports the hypothesis. The quality of information has a medium effect size (57.3%) on ultimate benefits through usage. Higher information quality in SIRUP had become a strong reason for users to keep using the system.

Quality of Service Affects Ultimate Benefits through Usage:

The hypothesis (Ha11) is that service quality influences ultimate benefits via usage. The result of analysis is that the value of quality of service is not significant ($p = 0.310 > 0.1$), thus the hypothesis is rejected. This means that service quality has no significant effect on ultimate benefits from use.

The quality of the system has an effect on ultimately benefit through user satisfaction.

The quality of the system (Ha12) has an impact on ultimate benefits via user satisfaction. The quality of the system ($p = 0.005 < 0.1$), which is statistically significant, supports the hypothesis. User satisfaction accounts for 37.5% of the effect of system quality on ultimate benefits. This It is a well-established fact that a well-operating system such as SIRUP enhance user comfort and satisfaction, which in turn evoke user benefits and better processes of procurement announcements.

Quality information leads to ultimate benefits via user satisfaction:

An additional hypothesis (Ha13) is that information quality affects ultimate benefits through user satisfaction. The quality of information ($p = 0.046 < 0.1$) is significant, which supports the hypothesis. Information quality makes up 57.3% of the effect of user satisfaction on ultimate benefits. Information satisfaction (IS) with the information provided in SIRUP leads to more effective system utilization and its benefits.

Quality of Service Affects Ultimate Benefits through User Satisfaction:

The alternate hypothesis (Ha14) was that the SERVQUAL dimensions would predict ultimate benefits by way of user satisfaction. The ≤0.1 level of service quality was significant from the statistical analysis ($p = 0.038 < 0.1$), so it was concluded that the hypothesis was accepted. By driving user satisfaction, service quality has a significant effect on ultimate benefit. User satisfaction is increased and information representation and organizational performance are enhanced by SIRUP on account of its productive service delivery.

This study is a modification of Information System Success theory which was developed by DeLone and McLean, based on several other theories in order to examine the SIRUP application in Muna regency. The results of the inferential statistical analysis indicate that system quality has significant positive effect on usage (Ha1 is supported) and user satisfaction (Ha2 is supported). These results

are consistent with the theory that usage and user satisfaction are affected by system quality. In procurement, SIRUP application with its easy to learn features and system flexibility encourage users to use more and satisfy them (Ardianyah, 2017; Peter et al., 2008).

Yet, it was found that information quality has no significant effect on usage (Ha3 is not supported). This problem may be caused by lack of socialization and user's comprehension of the SIRUP application. Earlier studies have also emphasized the role of information quality in promoting increasing systems usage (Hussein et al., 2007; Ritzkal & Subchan, 2017; Ariyanto et al., 2022). Thus, there need to be measures to improve information quality and full-fledged socialization to make the best use of SIRUP.

Meanwhile, In the: onsolidated model of acceptance and use of technology model (CMoCAUT), information quality has a strong effect on user satisfaction (Hypothesis 4 is supported). SIRUP offers up to date, high quality information, SIRUP also increases user satisfaction, and the number of users of SIRUP continues to grow. Consistent with previous studies (Hidayah et al., 2020; Jusniati et al., 2022), this suggests that the quality of information has a positive impact on benefits.

Meanwhile, the result shows service quality is insignificantly related to use (Ha5 is not supported). The lack of socialization and training the Procurement Service Unit is a factor. Prior study recognized the importance of service quality to increase the use of system (Seddon & Kiew, 1996; Wang, 2022). So in order to increase the usage of the application,we have to enhance the quality of the service and the generalization should also be more comprehensive.

Service quality has a positive effect on user satisfaction (Ha6 is accepted). Thanksgiving Day: Service rendered for manual service in the SIRUP during server down time is satisfactory. This is in line with the researches that good service produce user satisfaction and the ultimate benefit (Umaroh & Barmawi, 2021; Syahfitri, 2022).

This study describes the determinants of utilization and the ultimate benefit of the SIRUP in Muna regency. System quality and information quality have a

positive effect on usage and user satisfaction, while service quality has a positive effect on user satisfaction. Yet, it needs to be underlined that the quality of information should be improved to have a positive impact on usage. In addition, increased socialization and service quality are required to improve the use and user satisfaction. The enhancement for those matters will make it possible for SIRUP application to give more advantages to the users and the related agencies in Muna regency through those identified and remedied matters. This study is to emphasize the importance to have the total socialization of SIRUP so that would increase a frequency of use, service quality, user satisfaction, and then is capable to realize the ultimate benefit. Low awareness of the SIRUP and its poor promotion across all sectors in Muna Regency contributes to a low rate of application (Hidayat Ur Rehman et al., 2023).

The result about service quality which is not significantly affecting the final benefits in this study is consistent with previous study indicating that service quality does not influence final benefits through use (rejecting Ha11). The whole government work units are mandated by the National Public Procurement Agency (LKPP) to adopt SIRUP. That must mean that SIRUP is not just for show but a requirement when buying goods and services. In a mandatory system, extrinsic motivation factors such as regulatory compliance may be more influential for use than intrinsic motivation factors related to service quality (Anityasari, Pamungkas, & Sonhaji, 2024).

SKPD's User in Muna District, whether satisfied with services or not must input their Rencana Umum Pengadaan (RUP) into sirup. Service quality improvement in ULP (Procurement Service Unit) has been proven in this study, albeit service quality improvement does not always have a positive correlation with intention to use taking final benefit, because the users' intention is to be "locked in" by the forced closure. Ultimately, users believe that the increase in productivity and convenience are the ultimate benefits, which is consistent the result of e-filing study in Indonesia (Putra et al., 2022). Similar results were reported in the studies of e-invoice adoption (Wibisono et al., 2023; Wagiman et al., 2023).

This could be due to other factors that have a more substantial impact on achieving ultimate benefits, such as trust in e-government systems (Hooda et al., 2023). This finding is consistent with conceptual models of e-taxation satisfaction (Wibowo & Utomo, 2021) and aligns with studies on e-kinerja applications in North Sulawesi (Walangitan & Sumual, 2021).

In the context of a mandatory system, extrinsic factors, such as regulatory obligations, often become the primary drivers of use (Anityasari et al., 2024).

Furthermore, the Task-Technology Fit framework can provide additional explanation. This theory states that the benefits of an information system will be realized if there is a match between technological capabilities, the tasks to be completed, and user skills (Goodhue & Thompson, 1995). In the context of SIRUP, even though service quality (such as the responsiveness of the helpdesk) is good, if the core features of the system are deemed not fully compatible with the specific tasks of users (for example, the complexity of inputting non-standard procurement packages or server instability during peak RUP uploads), then this "compatibility" is not achieved. As a result, even though it is used (because it is mandatory), the system does not provide optimal end benefits. In other words, system quality, which in this study proved to be significant, is a more direct representation of "technology-task fit" than supporting service quality. This finding is consistent with previous research on mandatory e-government, which indicates that system and information quality are more decisive for success than service quality (Herdiana et al., 2022).

4. Conclusion

This study finds that SIRUP's success in Muna Regency primarily emanates from the quality of the system and the information it provides. These factors give a strong boost to user satisfaction and are vital in generating net benefits. The results indicate that better system and information quality can cut down on procurement and increase user contentment. On the other hand, service quality does affect satisfaction, but it doesn't lead to more usage or bigger net benefits in this mandatory-use setting because external regulatory factors largely steer user

behavior. For the improvement of the SIRUP system, the following actions are suggested to the Muna Regency Procurement Service Unit and the LKPP:

(1) Technical improvement aimed at the stability of the server, mainly focusing on the peak periods of the RUP upload, system response, and
(2) A quarterly audit process of the system, along with user feedback sessions, to continuously detect and fix performance-draining points, and
(3) The creation of training modules that focus on the importance of achieving task-technology fit, where users can use the procurement tasks in the SIRUP applivation effectively, rather than being satisfied with mere familiarity with the system, and finally,
(4) A socialization and help desk process to ensure the timely and correct dissemination of information to all units.

The practical implications of this study are for the Muna Regency Government and LKPP to not only conduct outreach but, more importantly, to innovate and continuously improve the technical quality of the SIRUP system, particularly by addressing server downtime issues and improving feature integration. Additionally, training should focus on improving users' understanding of how to execute their tasks using the system (task-technology fit), rather than merely introducing features. Thus, even when used in a mandatory context, SIRUP can deliver tangible benefits and increase user satisfaction.

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