@is The Best :
Accounting Information Systems and Information Technology Business Enterprise
Volume 9, Issue 2 (2024) Pages 151-165
ISSN: 2252-9853 (Print) | ISSN: 2656-808X (Online)
https://ojs.unikom.ac.id/index.php/aisthebest/index

Accredited Ranking 4th, SK Number: 105/E/KPT/2022
DOI: https://doi.org/10.34010/aisthebest.v9i2.15078

Analysis of Pegadaian Digital Services Based on User Satisfaction Using D&M IS Success Model

Gunawan Witjaksono[1*], Vilosa Auliya Dewinta Sentanu[2]
[1, 2] Information System, Cyber University, TB Simatupang St. No.6, South Jakarta City, Special Capital Region of Jakarta, 12530, Indonesia
*Email: gunawan.witjaksono@cyber-univ.ac.id

ABSTRACT
This study aims to determine the significance of variables and the success of the Pegadaian Digital Services (PDS) application utilizing the DeLone & McLean Information System (D&M IS) Success Model in the Jabodetabek area. This research method uses a quantitative approach, collecting data through questionnaires to active users of the PDS application in Jabodetabek. The collected data was processed using the SEM-PLS model with the SMARTPLS3 tool. The findings indicate that user satisfaction is significantly impacted by system quality, information quality, as well as service quality. However, net benefits are not strongly influenced by user satisfaction. Nevertheless, net gain is not much impacted by user satisfaction. Furthermore, both system quality and information quality also have a significant and positive effect on net benefit. The overall success rate of the PDS application is 84% which means that the PDS application is very successful, which is analyzed from the user's perspective and the D&M IS Success Model is effective in measuring application success. This finding is expected to be an evaluation material in improving the quality of PDS applications and for further research can expand the coverage area, explore additional factors, and conduct research with direct interviews with users.

Keywords: Application Success, D&M IS Success Model, PDS Application, SEM-PLS, User Satisfaction

Introduction

Technological advances continue to develop over time, impacting various aspects of life and encouraging individuals to utilize these developments [1]. Realizing the increasingly intense competition, many companies quickly adapt by changing their business strategies from conventional models to digital models. This technological growth is particularly embraced by the financial sector, which continues to innovate to provide improved facilities for customers, ensuring their satisfaction and loyalty to the company [2]. PT Pegadaian (Persero) as one of the financial institutions that has been operating in Indonesia for a long time, carried out a digital transformation by developing fintech services, namely launching the Pegadaian Digital Service (PDS) Application. According to the World Bank as cited in Chikmah et al, financial technology (fintech) refers to an industry where technology-driven companies provide financial services to make systems and services more efficient [3].

Since the end of 2017, the PDS application has been developed and published to the public in 2018. The number of PDS application users reached 6.5 million by the end of 2023, up 14% from the previous year, while the transaction volume reached Rp14.54 T, up 72% from the previous year [4]. These achievements highlight how fintech solutions like PDS are transforming the financial sector by providing seamless, reliable, and efficient services [3].

Since the launch of the PDS application in 2018, PT Pegadaian (Persero) has received many awards for its digital transformation. Some of the awards achieved are listed in the following table:

ISSN: 2252-9853 (Print) | ISSN: 2656-808X (Online)

Table 1. Digital Transformation Awards

Awards	By
Digital 2019 on Digital Service for Millenial	IT Works (2019) [5]
Digital 2019 on Digital Service for Millenial	Economics (2020) [6]
Top Innovation Choice Award 2021 category Pegadaian Digital Service "Aplikasi Tabungan Emas dan Gadai Online"	Info Brand (2021) [7]
The Best IT Development & Innovation	Itech (2022) [8]
The Best Transformation & Digital Innovation 2023	Digitech Award (2023) [9]

Although it has managed to get many awards, based on reviews on the AppStore [10] and PlayStore [11] problems and phenomena experienced by PDS application users that have a relationship with the DeLone & McLean model variables, as in the table:

Table 2. User Complaints According to the DeLone & McLean Model

Related Variables	Problems
System Quality	1. The PDS application often performs maintenance during productive hours, which hinders some customer transactions. 2. Network-based problems arise that do not occur on other devices. 3. PDS application still often has errors or bugs. 4. Customer CIF number not found. 5. Difficulty upgrading your account to premium.
Information Quality	1. Customers still do not receive points despite following the instructions to go to the points web. 2. Gold price data updates are not fast and stable.
Service Quality	Handling complaints or applications takes a long time.

This indicates that further evaluation of system quality, information quality, and service quality is needed because these factors have previously been shown to significantly impact user satisfaction. Since the launch of the PDS application, there has been no specific research that discusses the success of this application based on user satisfaction. The PDS application, which is relatively recently implemented, needs to be evaluated to determine whether this application is functioning as desired and accepted by its users or not.

Assessing the success of an application implementation is by knowing the level of user acceptance because the user is considered the party who knows best whether the system is acceptable or not [12]. Therefore, feedback from users is very important in this study.

Therefore, it is necessary to evaluate the PDS application with a special emphasis on the success of the application from the user's perspective to be the focus of improvement and development of the PDS application later. Although there are other models available to assess technology success, in this study the authors chose to use the D&M IS Success Model developed by DeLone & McLean [13].

The previous research conducted by Abidin et al showed that the user satisfaction variable is very important and the only variable that has a significant and positive effect on net benefit [2]. Furthermore, a study conducted by Rachman used 5 variables from the D&M IS Success Model. The results of his research state that the success rate of implementing the LAPOR E-Goverment system reaches a percentage of 73.4%, so the system implementation can be said to be successful

[14]. The D&M IS Success Model is considered capable and successful for measuring the success of a system.

Based on the explanation above, the author has the desire to explore the topic in a research with the title "**Analysis of Pegadaian Digital Services Based on User Satisfaction Using D&M IS Success Model**". This analysis will focus on active PDS application users in the Jabodetabek region. The primary objectives are to assess the significance of correlations between variables and to evaluate the success of the PDS application implementation.

The following figure illustrates the conceptual framework for this research:

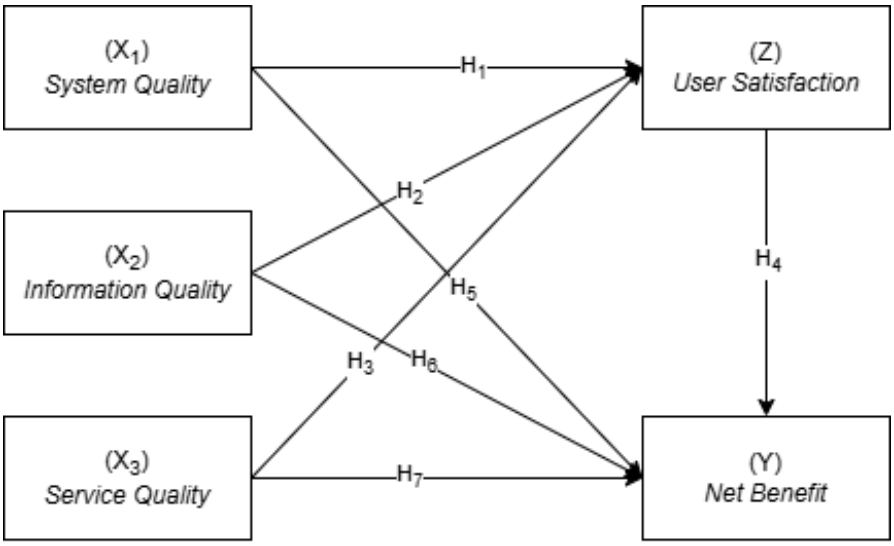

Figure 1. Research Framework for This Work

In Figure 1, 7 research hypotheses are generated as follows:

1. Whether System Quality has a positive and significant effect on User Satisfaction.
2. Whether Information Quality has a positive and significant effect on User Satisfaction.
3. Whether Service Quality has a positive and significant effect on User Satisfaction.
4. Whether User Satisfaction has a positive and significant effect on Net Benefit.
5. Whether System Quality has a positive and significant effect on Net Benefit.
6. Whether Information Quality has a positive and significant effect on Net Benefit.
7. Whether Service Quality has a positive and significant effect on Net Benefit.

Method

A quantitative research design was adopted for this research, with data gathered through a survey administered via Google Forms. By collecting this data, we will be able to conduct an analysis of the relationships and correlations between variables and subsequently evaluate user satisfaction with the PDS application. The data will then be statistically analyzed using SEM-PLS analysis techniques with SMARTPLS3 software for empirical validation of hypotheses.

The population is obtained from PDS application users with a sample of PDS application users in the Jabodetabek region. Since the precise number of populations is unclear, the Cochran method was used to decide the number of samples in this investigation [15]. Thus, utilizing the Cochran formula, one can calculate the sample size as follows:

$$n = \frac{z^2 pq}{e^2} \quad (1)$$

$$n = \frac{(1{,}96)^2(0{,}5)(0{,}5)}{(0{,}1)^2} = 96{,}04 \quad (2)$$

ISSN: 2252-9853 (Print) | ISSN: 2656-808X (Online)

Description:
n = Required number of samples
z = The value on the normal curve for a 5% deviation, with a value of 1.96
p = 50% chance of being correct i.e. 0.5
q = 50% chance of being wrong i.e. 0.5
e = Sample error rate, in this study it is 10%

Based on these calculations with rounding, this research requires approximately 100 respondents. Statistical analysis using the SEM-PLS approach employs an outer modeling component for measurement and an inner modeling component for structural relationships. Listed in the table below:

Table 3. Model Evaluation in Research

Model Evaluation	Testing Criteria	Information
Reflective Measurement Model (Outer Model)	Convergent Validity	• Loading factor > 0.70 • AVE < 0.50
	Discriminant Validity	• Cross-loading (comparing construct with other vars) • Fornell-Larcker the square root value of AVE of each construct must be greater
	Composite Reliability	The value must be > 0.70
	Cronbach's Alpha	The value must be > 0.70
Structural Model (Inner Model)	Collinearity	VIF value must be < 5
	Path Coefficient (hypothesis test)	Bootstrapping process (one-tailed), p-value < 0.50, and t-statistic > t-table (5% = 1.65) for significant results.
	R-Square	(0.67) strong, (0.33) moderate, (0.19) weak
	F-Square	(0.35) large, (0.15) medium, (0.2) small
	Q-Square	(0.50) high, (0.25) moderate, (0) small
	GoF	< 0.38 indicates that a model is considered good

Source: Data was originated from [16]

Results and Discussion

3.1 Pilot Study

A pilot study is an initial study on a small scale conducted to test the feasibility of a model, technique, or research instrument before conducting the main research. Researchers successfully collected respondent data for the pilot study for 9 days, starting from April 17, 2024, to April 26, 2024, which obtained 34 respondents in Jabodetabek. The pilot study data processing used Ms. Excel and SPSS 26 tools.

Instrument testing is necessary before conducting primary research to ensure that the research results have high validity and reliability. The two main aspects of instrument testing are validity and reliability tests [15].

a. Validity Test

For 34 respondents, this validity test uses a significant level value of 5%, thus the calculated r-table is 0.339. Given that the observed r-count surpasses the critical r-table value, the indicator is

deemed statistically significant. An explanation of the questionnaire validity test findings is given in the table below presents:

Table 4. Questionnaire Validity Test Results

Indicator	R-Count	R-Table	Description
SQ1	0.795	0.339	Valid
SQ2	0.717	0.339	Valid
SQ3	0.768	0.339	Valid
SQ4	0.691	0.339	Valid
SQ5	0.785	0.339	Valid
IQ1	0.668	0.339	Valid
IQ2	0.761	0.339	Valid
IQ3	0.810	0.339	Valid
SEQ1	0.692	0.339	Valid
SEQ2	0.718	0.339	Valid
SEQ3	0.750	0.339	Valid
US1	0.788	0.339	Valid
US2	0.809	0.339	Valid
US3	0.759	0.339	Valid
US4	0.790	0.339	Valid
US5	0.739	0.339	Valid
NB1	0.768	0.339	Valid
NB2	0.836	0.339	Valid
NB3	0.779	0.339	Valid
NB4	0.745	0.339	Valid

Source: Primary Data (2024)

Referring to Table 4, it is evident that the calculated r-count is less than (>) r-table, indicating that all indicators have been confirmed as valid. It also states if all statements on the questionnaire are easy to understand and can reflect variables.

b. Reliability Test

The Cronbach's Alpha value is used to measure the instrument's consistency to conduct the reliability test. If a variable's Cronbach's Alpha value is > 0.70, it is deemed dependable [16]. The following table describes the questionnaire validity test results:

Table 5. Questionnaire Reliability Test Results

No	Variables	Cronbach's Alpha	Description
1	SQ	0.864	Reliable
2	IQ	0.759	Reliable
3	SEQ	0.744	Reliable
4	US	0.871	Reliable
5	NB	0.848	Reliable

Source: Primary Data (2024)

As per Table 5, the reliability analysis revealed Cronbach's alpha values consistently above 0.70 for all measured constructs, suggesting robust measurement instruments. This proves that the variables used are accurate and consistent.

3.2 Data Analysis Results

The findings of the primary research are presented in this section. This research managed to collect 112 respondent samples, starting from April 26, 2024, to June 18, 2024. The following are the results of respondent characteristics:

a. Gender, female respondents totaled 60 people with a percentage of 53.6% and men totaled 52 people with a percentage of 46.6%.
b. Age, 71 respondents (63.4%) were in the 21-30 age group, 15 respondents (13.4%) were in the 41-50 age group, 12 respondents (10.7%) were in the > 50 age group, 11 respondents (9.8%) were in the 31-40 age group, and 3 respondents (2.7%) were in the < 20 age group.
c. Domicile, Jakarta with 55 respondents (49.1%), followed by Bogor with 23 respondents (20.5%), Bekasi with 14 respondents (12.5%), and Depok and Tangerang with 10 respondents each (8.9%).
d. Occupation, the student/student group amounted to 47 people (42%), then the employee group amounted to 42 people (37.5%), then respondents with self-employed jobs and others (housewives and TNI) each amounted to 9 people (8%), then respondents with Civil Servant jobs amounted to 5 people (4.5%).
e. Income, 45 respondents (40.2%) got incomes from IDR 2,000,000 to IDR 5,000,000; 34 respondents (30.4%) got incomes from IDR 2,000,000 to IDR 5,000,000; 24 respondents (21.4%) got incomes from IDR 5,000,000 to IDR 10,000,000; 9 respondents (8%) got incomes over IDR 10,000,000.
f. Of the types of PDS application services that are often used, the gold savings feature amounted to 37 people (33%), then those who used the payment & top feature amounted to 36 people (32.1%), then those who used the pawn feature amounted to 23 people (20.5%), then those who used the financing feature amounted to 9 people (8%), those who used the gold installment feature amounted to 6 people (5%), and those who used other features (see metal/gold info) only amounted to 1 person (0.9%).

3.3 Measurement Model Evaluation (Outer Model)

This research applies the reflective indicator model, in which a variable leads to an indicator. Convergent validity (assessed through loading factor and AVE value), discriminant validity (evaluated using cross-loading and Fornell-Larcker criteria), composite reliability, and Cronbach's alpha are key elements utilized in the assessment of reflective measurement models as outlined by Hair et al [16].

Table 6. Outer Loading, CA, CR, AVE

Variables	Outer Loading	CA	CR	AVE
System Quality (X_{1})	0.765	0.786	0.853	0.538
	0.714			
	0.736			
	0.732			
	0.720			
Information Quality (X_{2})	0.779	0.701	0.834	0.626
	0.777			
	0.816			

ISSN: 2252-9853 (Print) | ISSN: 2656-808X (Online)

Variables	Outer Loading	CA	CR	AVE
Service Quality ($X_{3)}$	0.762	0.718	0.841	0.639
	0.786			
	0.848			
User Satisfaction (Z)	0.824	0.802	0.864	0.559
	0.716			
	0.736			
	0.729			
	0.729			
Net Benefit (Y)	0.738	0.731	0.832	0.553
	0.752			
	0.761			
	0.723			

Source: Primary Data (2024)

Referring to Table 6, it is evident that all values align with the guidelines outlined by Hair et al. The outer loading, Cronbach's alpha, and composite reliability values are > 0.70. The AVE value of all variables is also > 0.50 [16].

The subsequent table provides a comprehensive analysis of the discriminant validity findings:

Table 7. Cross Loading Values

	SQ	IQ	SEQ	US	NB
SQ1	**0.765**	0.532	0.508	0.539	0.461
SQ2	**0.714**	0.547	0.374	0.420	0.571
SQ3	**0.736**	0.415	0.519	0.544	0.526
SQ4	**0.732**	0.602	0.455	0.501	0.449
SQ5	**0.720**	0.517	0.571	0.626	0.599
IQ1	0.552	**0.779**	0.615	0.663	0.556
IQ2	0.535	**0.777**	0.455	0.577	0.546
IQ3	0.594	**0.816**	0.498	0.633	0.635
SEQ1	0.439	0.455	**0.762**	0.515	0.436
SEQ2	0.591	0.576	**0.786**	0.631	0.537
SEQ3	0.558	0.547	**0.848**	0.604	0.562
US1	0.513	0.628	0.598	**0.824**	0.495
US2	0.605	0.621	0.528	**0.716**	0.599
US3	0.572	0.595	0.602	**0.736**	0.563
US4	0.552	0.548	0.497	**0.729**	0.576
US5	0.450	0.553	0.509	**0.729**	0.490
NB1	0.632	0.482	0.454	0.530	**0.738**
NB2	0.514	0.522	0.394	0.525	**0.752**
NB3	0.505	0.566	0.582	0.599	**0.761**
NB4	0.480	0.611	0.481	0.520	**0.723**

Source: Primary Data (2024)

Table 7 shows that each indicator has a stronger association with a different factor compared to the other factor. This finding supports the notion that the indicators used in this research demonstrate adequate discriminant validity. Evaluation of discriminant validity is also seen from the Fornell-Larcker value in the following table:

Table 8. Fornell-Larcker Values

	SQ	IQ	SEQ	US	NB
SQ	**0.734**				
IQ	0.709	**0.791**			
SEQ	0.669	0.663	**0.799**		
US	0.717	0.734	0.645	**0.744**	
NB	0.725	0.790	0.734	0.732	**0.748**

Source: Primary Data (2024)

Table 8 shows that the system quality (SQ), information quality (IQ), service quality (SEQ), user satisfaction (US), and net benefit (NB) variables have an AVE root that has a greater correlation than other variables. This concludes that the Fornell-Larcker value in this study has been met and the discriminant validity of each variable has also been met.

3.4 Structural Model Evaluation (Inner Model)

The structural model is used to explain the causal relationship between latent variables [17]. The structural model evaluation will be explained as follows:

a. Collinearity

Table 9. Inner VIF Values

	NB	US
NB		
US	3.599	
SQ	2.503	2.344
IQ	3.017	2.311
SEQ	2.400	2.077

Source: Primary Data (2024)

From Table 9, it can be observed from each variable, the inner VIF value is < 5. This states that there is no multicollinearity.

b. Path Coefficient

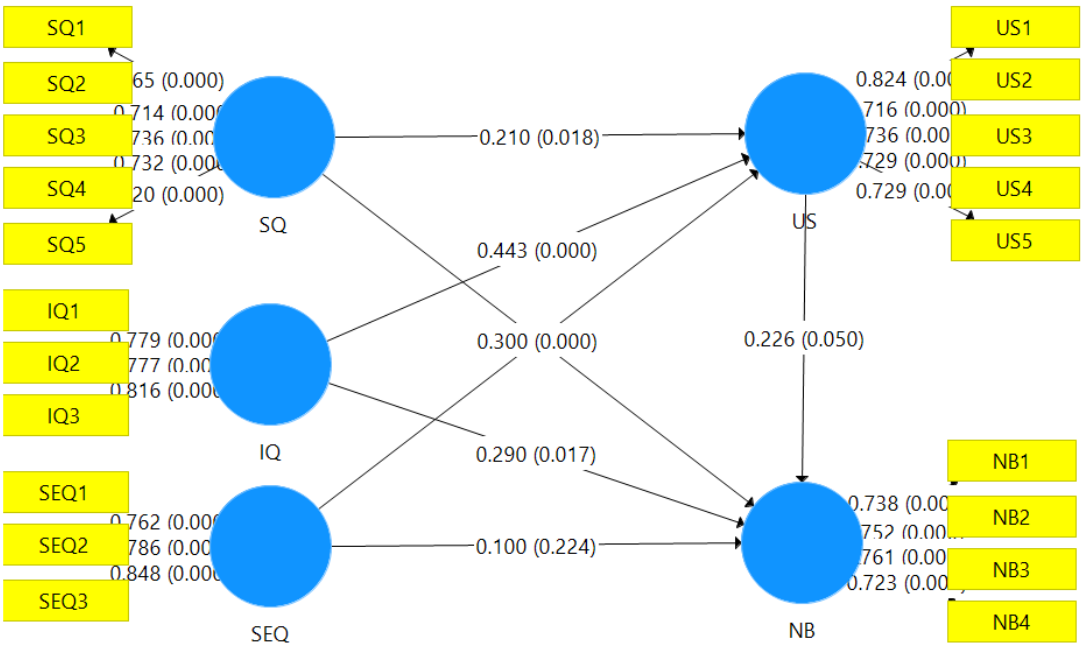

Figure 2. Bootstrapping Results
Source: Primary Data (2024)

Fig. 2 is the result of the calculation of the bootstrapping process, which shows the path coefficient value in each path. An explanation of the figure will be described in the following table:

Table 10. Bootstrapping Results

Hypothesis	Path Coefficient	P-Values	T-Statistics	T-Table	Description
SQ → US	0.210	0.018	2.094	1.65	Significant
IQ → US	0.443	0.000	5.431		Significant
SEQ → US	0.300	0.000	3.645		Significant
US → NB	0.226	0.050	1.645		Not Significant
SQ → NB	0.280	0.021	2.030		Significant
IQ → NB	0.290	0.017	2.113		Significant
SEQ → NB	0.100	0.224	0.759		Not Significant

Source: Primary Data (2024)

H_1: Whether System Quality has a positive and significant effect on User Satisfaction. System quality significantly and favorably affects user satisfaction, the first hypothesis (H_1) **is accepted**. This result agrees with the research by Amriani & Iskandar, who also claimed that system quality has a positive and significant impact on user satisfaction [18]. Additionally, this result supports the view of DeLone & McLean that enhancing the quality of information systems will positively correlate with greater user satisfaction [19]. The user will be satisfied if the system quality satisfies favorable standards in their opinion. Therefore, to guarantee user satisfaction, businesses, and development teams need to focus on issues of system quality.

H_2: Whether Information Quality has a positive and significant effect on User Satisfaction. Information quality significantly and favorably affects user satisfaction, the second hypothesis (H_2) **is accepted**. This idea is supported by a study by Panjaitan et al, which also indicates that user

satisfaction is significantly and favorably influenced by the information quality [20]. This result is also consistent with the view of DeLone & McLean that user satisfaction would rise if the information quality generated by a system improves [19]. Users are highly likely to be satisfied and have more faith in the system when they believe the information they get from it is of a high caliber.

H_3: Whether Service Quality has a positive and significant effect on User Satisfaction.
Service quality significantly and favorably affects user satisfaction, and the third hypothesis (H_3) **is accepted**. This theory is supported by research by Marpaung, which also indicates that user satisfaction is significantly and favorably influenced by service quality [21]. This finding is also in line with the opinion of DeLone & McLean who suggest that if the system produces better service quality, user satisfaction will increase [13]. Indirectly, improving service quality can be an effective strategy for increasing user satisfaction, which will certainly increase loyalty and continued use of PDS applications.

H_4: Whether User Satisfaction has a positive and significant effect on Net Benefit.
The fourth hypothesis (H_4**) is rejected** even though it shows a positive effect of user satisfaction on net benefits, but this effect is not significant. This hypothesis is by research conducted by Jayanti et al, which also indicates that user satisfaction has no significant effect on net benefit [22]. Overall, the results of this study indicate that although there is a positive effect of user satisfaction on net benefits, the effect is not strong enough and statistically significant. This may indicate that other factors are more dominant in influencing net benefit.

H_5: Whether System Quality has a positive and significant effect on Net Benefit.
System quality significantly and favorably affects net benefit, hence the fifth hypothesis (H_5) **is accepted**. This theory is supported by a study by Syahfitri et al, which also claims that net benefits are significantly and favorably impacted by system quality [23]. According to DeLone & McLean a system that has good quality will produce positive net benefit [13]. In addition, net benefits are also the most important measure but cannot be understood and analyzed without system quality. When users feel that the system they use has good system quality, they will tend to be more productive and able to utilize the system more effectively which will certainly increase net benefit.
Whether Information Quality has a positive and significant effect on Net Benefit.
Information quality significantly and favorably affects net benefit, hence the fifth hypothesis (H_6) **is accepted**. This theory supports the findings of the study of Krisdiantoro et al, which further implies that net benefits are significantly and favorably impacted by the quality of the information [24]. According to DeLone & McLean, net benefit is also the most important measure but cannot be understood and analyzed without information quality [13]. When users feel that the information they receive is of good quality, they will tend to make better and faster decisions. This will certainly increase the value of the net benefit.

H_7: Whether Service Quality has a positive and significant effect on Net Benefit.
The seventh hypothesis (H_7**) was rejected** even though it showed a positive effect of service quality on net benefit, but the effect was not significant. This hypothesis is by research conducted by Jazil et al, which also suggests that service quality has no significant effect on net benefit [25]. Perhaps there are other aspects in terms of service quality that need to be improved to achieve greater net benefit.

c. R-Square

Table 11. R-Square Value

	R-Square
US	0.714
NB	0.630

Source: Primary Data (2024)

As evidenced by the data in Table 11, it is apparent that the effect of SQ, IQ, and SEQ on the US is 0.714 (high influence) or 71.4%. SQ, IQ, and SEQ can explain the US by 71.4%. Meanwhile, the effect of SQ, IQ, SEQ, and US on NB is 0.630 (moderate to high influence) or 63%. SQ, IQ, SEQ, and US can explain NB by 63%.

d. F-Square

Table 12. F-Square Values

	NB	US
NB		
US	0.040	
SQ	0.088	0.068
IQ	0.078	0.306
SEQ	0.012	0.156

Source: Primary Data (2024)

The SQ variable in the US has a small influence of (0.068). The IQ variable in the US has a medium to large influence, namely (0.306). The SEQ variable in the US has a medium influence, namely (0.156). The US variable on NB has a small influence, namely (0.040). The SQ variable on NB has a small effect of (0.088). The IQ variable on NB has a small effect of (0.078). The SEQ variable on NB has a small effect of (0.012).

e. Q-Square

Table 13. Q-Square Values

	Q-Square
US	0.382
NB	0.331

Source: Primary Data (2024)

This means that the US and NB variables have relevant predictive value. SQ, IS, and SEQ variables can predict US variables with moderate/medium prediction accuracy. Similarly, the SQ, IQ, SEQ, and US variables can predict the NB variable with a moderate/medium level of predictive accuracy.

f. Goodness of Fit (GoF)

$$GoF = \sqrt{AVE \times R^2} \quad (3)$$

$$GoF = \sqrt{0.583 \times 0.672} = \sqrt{0.390} \quad (4)$$

$$GoF = 0.625 \quad (5)$$

ISSN: 2252-9853 (Print) | ISSN: 2656-808X (Online)

The GoF value is the overall value of the model. The resultant GoF of 0.625, significantly above the benchmark of 0.38, provides compelling evidence for the robust alignment of the research model with the observed data, which means that the model is good.

3.5 Additional Testing Results

This research also involves additional testing to evaluate the percentage of success of the PDS application formula used to test success is as follows:

a. Total average of measurement items

$$Average\ of\ measurement\ items = \frac{(scale\ \times weight\ of\ measurement\ item\ scale)}{number\ of\ respondents} = 83.40$$

b. Average weight of measurement items

$$Average\ weight\ of\ measurement\ items = \frac{average\ of\ measurement\ items}{number\ of\ indicators} = 4.22$$

c. Percentage of Success

$$Percentage\ of\ success = \frac{average\ weight\ of\ measurement\ items}{maximum\ value\ of\ likert} \times 100\% = 84\%$$

The success criteria based on the percentage *range* are shown in the figure below:

Level	% Success	Description
1	0 – 20%	Very Unsuccessul
2	21 – 40%	Not Successful
3	41 – 60%	Quite Successful
4	61 – 80%	Success
5	81 – 100%	Very Successful

Figure 3. System Success Levels
Source: Rismayanti et al [26]

Referring to the result above, one can see that the percentage of success of this PDS application is 84%. If you look at the percentage level of success, then the PDS application can be said to be **very successful**.

When looking at the results of the percentage of success, the PDS application has been said to be very successful, and indirectly it also confirms that the majority of PDS application users are satisfied in terms of system quality as well as information quality and service quality.

However, there are some recommendations for improvement in the research that has been conducted.

a. System Quality

To overcome problems regarding system quality, there are several research recommendations, namely, (1) conduct thorough software testing to analyze or identify bug/error problems so that improvements can be made; (2) reduce the frequency or duration of application maintenance and consider maintenance without downtime; (3) improving application performance should be the main focus by improving server infrastructure or caching technology; (4) conduct direct interviews with users to get more in-depth feedback on their experience using PDS applications.

b. Information Quality

To overcome problems regarding information quality, there are several research recommendations, namely, (1) identifying sources of information delay and instability, starting from the data collection process, the frequency of information updates, and data validation mechanisms; (2) improving the accuracy of information to keep it up to date.

c. Service Quality

To overcome problems regarding service quality, there are several research recommendations, namely, (1) identifying bottlenecks or obstacles in the problem handling/submission process; and (2) evaluating the efficiency and responsiveness of the existing system.

d. User Satisfaction

To improve user satisfaction, the recommendations include system quality, as well as information quality and service quality, because these things would increase user satisfaction.

e. Net Benefit

To address the issue of net benefit, there are several research recommendations, namely, (1) conduct an in-depth analysis of user needs to identify what services or features still require physical visits to branch offices; (2) develop additional features in the PDS application that allow more services to be performed virtually/online.

Conclusion

This study aims to assess the success level of the PDS application and the factors influencing its success using the DeLone & McLean model. Out of the 7 hypotheses tested, 5 showed statistically significant relationships, indicating that system quality, information quality, and service quality play important roles in enhancing user satisfaction. The study also found that the overall performance of the PDS application is good, with a success rate of 84%. However, 2 key aspects did not show a significant impact. User satisfaction did not significantly affect the net benefit, and service quality did not influence the perceived net benefit. This suggests that while user satisfaction is important, it does not always directly correlate with net benefit. Future research is recommended to expand the geographic scope and incorporate qualitative methods, such as interviews or focus groups, to gain deeper insights into user experiences. Additionally, factors such as ease of use and security should be further explored, as they could enhance both user experience and the overall success of the application.

References

[1] M. Danuri, "Perkembangan Dan Transformasi Teknologi Digital," pp. 116–123, Sep. 2019.

[2] Abidin, N. S. Zahra, and A. Yusuf, "Analisis Aplikasi Kredivo Berdasarkan Information System Success Model (ISSM)," *Jurnal Maksipreneur: Manajemen, Koperasi, dan Entrepreneurship*, vol. 12, no. 2, pp. 602–616, Jun. 2023, doi: 10.30588/jmp.v12i2.1193.

[3] I. F. Chikmah and L. D. P. Karsono, "The Influence of Financial Technology (Fintech), Financial Literacy, and Income on Financial Inclusion of Society," *@is The Best : Accounting Information Systems and Information Technology Business Enterprise*, vol. 9, no. 1, pp. 1–15, Jun. 2024, doi: 10.34010/aisthebest.v9i1.11990.

[4] Nurhadi. M, "Transaksi Pegadaian Digital Capai Rp14,54 triliun Tahun 2023, Ini Faktor Penentunya," suara.com. Accessed: Mar. 12, 2024. [Online]. Available: https://www.suara.com/bisnis/2024/02/09/103927/transaksi-pegadaian-digital-capai-rp1454-triliun-tahun-2023-ini-faktor-penentunya#:~:text=Damar%20menyatakan%20bahwa%20jumlah%20pengguna%20aplikasi%20Pegadaian%20digital,Rp14%2C54%20triliun%20%28meningkat%207

[5] "Laporan Tahunan 2019 PT Pegadaian (Persero)," 2019. Accessed: Jun. 01, 2024. [Online]. Available: www.pegadaian.co.id

[6] "Laporan Tahunan 2020 PT Pegadaian (Persero)," 2020. Accessed: Jun. 01, 2024. [Online]. Available: www.pegadaian.co.id

[7] "Laporan Tahunan 2021 PT Pegadaian (Persero)," 2021. Accessed: Jun. 01, 2024. [Online]. Available: www.pegadaian.co.id

[8] "Laporan Tahunan 2022 PT Pegadaian (Persero)," 2022. Accessed: Jun. 01, 2024. [Online]. Available: www.pegadaian.co.id

[9] "Laporan Tahunan 2023 PT Pegadaian (Persero)," 2023. Accessed: Jun. 01, 2024. [Online]. Available: www.pegadaian.co.id
[10] AppStore, "Penilaian dan Ulasan," AppStore. Accessed: Mar. 01, 2024. [Online]. Available: https://apps.apple.com/id/app/pegadaian-digital/id1350501409?l=id&see-all=reviews
[11] PlayStore, "Penilaian dan Ulasan," Google Play. Accessed: Mar. 01, 2024. [Online]. Available: https://play.google.com/store/apps/details?id=com.pegadaiandigital
[12] R. J. Angelina, A. Hermawan, and A. I. Suroso, "Analyzing E-Commerce Success using DeLone and McLean Model," *Journal of Information Systems Engineering and Business Intelligence*, vol. 5, no. 2, p. 156, Oct. 2019, doi: 10.20473/jisebi.5.2.156-162.
[13] W. H. DeLone and E. R. McLean, "The DeLone and McLean model of information systems success: A ten-year update," in *Journal of Management Information Systems*, M.E. Sharpe Inc., 2003, pp. 9–30. doi: 10.1080/07421222.2003.11045748.
[14] R. Rachman, "Analisa Kesuksesan E-Government LAPOR dengan Model Delone-Mclean pada Pengembangan Smart City," *SISTEMASI: Jurnal Sistem Informasi*, vol. Volume 10, pp. 357–368, May 2021, [Online]. Available: http://sistemasi.ftik.unisi.ac.id
[15] Prof. D. Sugiyono, *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Bandung: ALFABETA, 2019.
[16] J. F. Hair, G. T. M. Hult, C. M. Ringle, and M. Sarstedt, *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM) Third Edition*, Third Edition. United States of America: SAGE, 2022.
[17] J. F. Hair, G. T. M. Hult, C. M. Ringle, M. Sarstedt, N. P. Danks, and S. Ray, *Partial Least Squares Structural Equation Modeling (PLS-SEM) Using R*. in Classroom Companion: Business. Cham: Springer International Publishing, 2021. doi: 10.1007/978-3-030-80519-7.
[18] T. N. Amriani and A. Iskandar, "Analisis Kesuksesan Implementasi Sistem Aplikasi Keuangan Tingkat Instansi (SAKTI) pada Satuan Kerja di Lingkungan Badan Pendidikan dan Pelatihan Keuangan (BPPK)," *Kajian Ekonomi dan Keuangan*, vol. 3, no. 1, pp. 54–74, Apr. 2019, doi: 10.31685/kek.v3i1.409.
[19] W. H. DeLone and E. R. McLean, "Information systems success: The quest for the dependent variable," *Information Systems Research*, vol. 3, no. 1, pp. 60–95, 1992, doi: 10.1287/isre.3.1.60.
[20] E. S. Panjaitan, S. F. Hasibuan, N. Maulani Ula, and S. Sembiring, "Analisis Faktor-Faktor yang Mempengaruhi Manfaat Bersih yang di Mediasi oleh Kepuasan Pengguna Sistem Informasi Administrasi Kependudukan," *Seminar Nasional Sains & Teknologi Informasi (SENSASI)*, pp. 394–399, 2019, [Online]. Available: http://prosiding.seminarid.com/index.php/sensasi/issue/archivePage|394
[21] G. Marpaung, "Analisis Kesuksesan Sistem Informasi Data COVID-19 Kota Bontang dengan Pendekatan Model Delone dan McLean," 2022. [Online]. Available: http://bontangkota.go.id/.
[22] A. Jayanti, D. H. Zulfikar, and F. Nopriani, "Analisis Keberhasilan Sistem Informasi Akademik Universitas Baturaja Menggunakan Human Organization Technology Fit Model," *Journal of Software Engineering Ampera*, vol. 4, no. 1, pp. 2775–2488, 2023, [Online]. Available: https://journal-computing.org/index.php/journal-sea/index
[23] K. R. Syahfitri, R. Trisnawati, and F. Ahyani, "Dampak Kualitas Sistem, Kualitas Informasi, Dan Kualitas Layanan Terhadap Net Benefit Pemakaian Website Lazismu Solo Dengan Variabel Intervening Kepuasan Pengguna," *Fatchan Ahyani*, vol. 8, no. 2, p. 33, Jul. 2022, [Online]. Available: https://www.lazismusolo.org/.
[24] Y. Krisdiantoro, I. Subekti, and Y. W. Prihatiningtias, "Pengaruh Kualitas Sistem dan Kualitas Informasi terhadap Manfaat Bersih dengan Intensitas Penggunaan sebagai Variabel Mediasi," *Jurnal Akuntansi Aktual*, vol. 6, pp. 261–279, Feb. 2019.

[25] A. Jazil, S. Hidayatullah, and D. A. Prasetya, "The Effect of System Quality, Information Quality and Service Quality on Benefits Throught User Satisfaction (Case study: iSantri Application)," *International Journal of Research in Engineering, Science, and Management*, vol. 5, no. 12, pp. 23–29, Dec. 2022.

[26] A. Rismayanti, E. Maria, and H. P. Chernovita, "Evaluasi Kesuksesan Website PT Yogyakartas Mega Grafika Saat COVID-19 Menggunakan Model DeLone-McLean," *Jurnal Sistem Informasi*, vol. 10, pp. 688–700, 2021, [Online]. Available: http://sistemasi.ftik.unisi.ac.id