

Evaluation Of Net Benefit In Akumaju HRIS Using The Delone & Mclean Model AT PT. Valdo International

Muhammad Azhari Marpaung¹, Jarot S.Suroso²

^{1,2} Master of Information Systems Management, Binus University, Jakarta, Indonesia

Email : ariipaung@gmail.com¹, jsembodo@binus.edu²

Abstrak

Teknologi informasi atau IT untuk era modern menjadi kebutuhan bagi individu atau organisasi/perusahaan. Dalam penerapannya, TI sangat mempengaruhi proses suatu perusahaan sehingga dapat dengan cepat mengembangkan dan mengolah data, salah satunya TI berbasis manajemen sumber daya manusia (SDM) yang merupakan elemen yang sangat penting dalam sebuah perusahaan. Salah satu TI berbasis SDM adalah human resource integrated system (HRIS), dalam penggunaannya untuk mempermudah dan mempercepat sumber daya manusia (SDM) dalam pengolahan data dan operasional perusahaan yang diimplementasikan di PT Valdo International. Namun pada kenyataannya implementasi TI memerlukan pengembangan dan evaluasi lebih lanjut karena era semakin maju dan pembaruan sistem dilakukan untuk memudahkan setiap pengguna yang terlibat. Maka penelitian ini dibuat untuk mengevaluasi manfaat bersih HRIS AkuMaju menggunakan model Delone & Mclean di PT Valdo International yang bertujuan untuk menggambarkan pengaruh kualitas informasi, kualitas sistem, kepuasan pengguna dan kualitas layanan terhadap penggunaan, pengaruh kualitas informasi, kualitas sistem dan kualitas layanan. pada kepuasan pengguna, dan pengaruh penggunaan dan kepuasan pengguna pada manfaat bersih. Untuk mengetahui pengaruh tersebut digunakan model Delone & Mclean menggunakan aplikasi SPSS dan Smart-PLS dengan hasil sebagai bahan pertimbangan dalam proses pengembangan sistem HRIS di PT Valdo International untuk kemajuan perusahaan.

Kata Kunci: *Dalam Teknologi Informasi, Model Delone & McLean, smart-PLS*

Abstract

Information technology or IT for the modern era become a necessity for individuals or organizations/companies. In its application, IT greatly affects the process of a company so that it can quickly develop and process data, one of which is IT based on human resource management (HR) which is a very important element in a company. One of the HR based IT is the human resource integrated system (HRIS), in its use to simplify and speed up human resources (HR) in data processing and company operations which is implemented at PT Valdo International. However, in reality, the implementation of IT requires further development and evaluation because the era is increasingly advanced and system updates are carried out to make it easier for every user involved. So this study was made to evaluate the net benefits of AkuMaju HRIS using the Delone & Mclean model at PT Valdo International which aims to describe the effect of information quality, system quality, user satisfaction and service quality on use, the effect of information quality, system quality and service quality. on user satisfaction, and the effect of use and user satisfaction on net benefits. To find this effect, the Delone & Mclean model was used using the SPSS and Smart-PLS applications with the results as a consideration in the process of developing the HRIS system at PT Valdo International for the progress of the company.

Keywords: *In Information technology, Delone & McLean model, smart-PLS*

INTRODUCTION

Every Information technology is a set of tools that facilitate the work of humans in completing tasks related to information processing. current information technology very big influence on the facilitate and fluency of processing information in various fields, one of them in the field of human resource management. Human Resource management (HR) itself, is one of the most important elements that will turn the wheels the company continues to run.

PT Valdo International is a company engaged in the field of labor since 20 years ago. Up to the beginning of the year 2021, the total that are registered reach 13,000 partners (outsourse), 400 permanent employees, and 250 contract employees. But the whole company standing all the process of archiving and logging of the employees are still going through the process manually. Until finally in mid-2020 applied humans resource integrated system (HRIS) as innovation and new solutions to these problems [4]. In the implementation of the initial phase of the clear many obstacles are found from the side of the technical and non-technical. The following data on the number of complaints per month incoming related HRIS used by the employee remains on the Table 1.

Table 1 : The Number Of Complaints Related To The Use Of HRIS [4]

Month	Number of Complaints
January	471
February	387
March	354
April	256
May	396
June	215
July	105

Based on Table 1, the Number of Complaints Related to the Use of HRIS for the period of January-July 2021 indicates that data is fluktuatif. Then in May where there is the update the system such as the display and update. The complaints received reduced in the last two months showed dissatisfaction on the user. With the updates on the system HRIS then evaluation is required to review the success in the development of the system, to process evaluation can be done by using the approach of the model of Delone & McLean [5]. The model includes a description of the influence information quality, system quality, user satisfaction and service quality to use, an overview of the influence of information quality, system quality and service quality to user satisfaction, and an overview of the influence use and user satisfaction to net benefit [6]. In the implementation process of the analysis carried out with the approach Structur Equation Modelling - Partial Least Square (SEM-PLS). So that these results can be used for the application or system updates HRIS for the next.

Information System (IS)

System is a collection of elements that interact to achieve a goal. Meanwhile, according to Ariawan, (2016) a system as a collection/group of parts/components of any physical or non-physical are interconnected to each other and work together in harmony to achieve a certain goal. Information is data that has been processed into a meaningful form for the recipient, and is beneficial to the decision at this time or next. Based on these definitions, information system components-components that are interconnected and work together to collect, process, keep, and distribute information to support decision making processes, coordination, and control.

The benefits information system according to Turban et al (2007) which provides speed, accuracy and communication tools in the organization, the data storage does not take up space, Giving quick and easy access in search of information, automation of business processes and the work , Facilitate the interpretation of various data, Providing work efficiency compared to manually.

Human Resource Information System (HRIS)

Human Resource Information System (HRIS) is defined as a computer-based applications and database system that was developed to help HR in making decisions and reporting. Human Resource Information system (HRIS) is an indispensable instrument for achieving competitiveness advantage in the organization. One of the advantages of this system is to save your time and resources to realize Human Resources (HR) with the execution of the task more quickly and more accurately.

HRIS consists of user friendly interface, powerful analytic tools, and reporting tools to share information. As a tool of analysis, Decisions. Support system (DSS) is used for the HUMAN resources strategy plan, predict resource requirements, and assess HUMAN resource policies and practices.

According to DeLone & McLean (2003) there are three components of HRIS that: Flexibility, Ease of use, and Reliability. HRIS basically facilitates the HR department and marked its presence by providing a number of benefits to all levels of management. The relationship between system quality and information quality with the satisfaction of users on the HRIS and with the success of HRIS. HR has a level of complexity of the job are high and require that the management system organized, understandable, and efficient through the use of technology.

Success Methods Of Information System

The success of the information system is considered critical in the field of information systems. The measurement of success is important to be able to determine the value of the steps that are performed in the management of information systems and investment information system. Investment in information systems is generally carried out in large numbers so that the organization wants to know whether these investments have good results for the organization. The effectiveness of a system depends on many factors such as organizations, environments and people using it In its development, the information systems success Delone and Mclean model has experienced improvement with added service quality and net benefits as a substitute for individual impact and organizational impact. The addition of service quality is due to the emergence of end user computing make the organization of the information system is no longer only as a provider of information, but also as a service provider. While variable net benefit created as a replacement for individual impact and organizational impact is to be able to further simplify the measurement of success along with the increasing activities of information systems in life While variable net benefit created as a replacement for individual impact and organizational impact is to be able to further simplify the measurement of success along with the increasing activities of information systems in life.

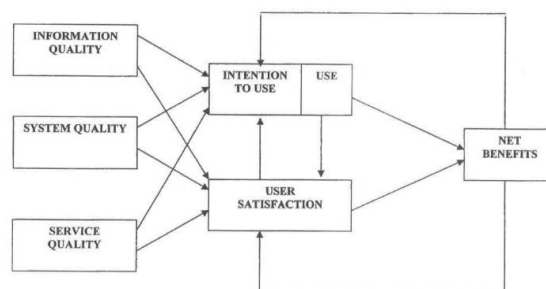


Figure 1 : success Delone & McLean Model [6]

Success Delone & McLean Model is composed of :

1. Information Quality

Information quality refer to the output of the system information, it is concerning the value, benefits, relevance, and urgency of the information produced [17].

2. System Quality

System quality refer to the specifications desired from the system information such as system reliability, flexibility, ease of learning, ease of use, system features, sophistication and response time [5].

3. Service System

Service system as a comparison of customer expectations with perceptions of the real service they receive [6].

4. Use

Use system this information showed the decision to use the information system by a user in completing the task the user [18].

5. User Satisfaction

User satisfaction is the overall evaluation of the user experience in using information systems and the potential impact of information systems [19].

6. Net Benefits

On the information systems success Delone & McLean model the end result is a net gain which includes the advantages of the individual and the organization obtained from the use of the system such as financial gain or operational.

Structur Equation Modelling – Partial Least (SEM-PLS)

Partial Least Square (PLS) is the orientation of the structural equation models are used to test theories or to develop theory (predictive purposes) [20]. This is often applied because of three reasons, that is the distribution of data, sample size, and usage of the indicators formative. This method is a method that very powerful because it is not based on a lot of assumptions, data should not be distributed with the normal multivariate and to sample material should not be large with a minimum of sample 30-50 be applied and it deserves to be used as research sample. There are three relationships in the PLS model analysis that is: Inner model, Outer Model, and weight relation.

METHOD

In this research, through the steps of the framework as shown in the image below:

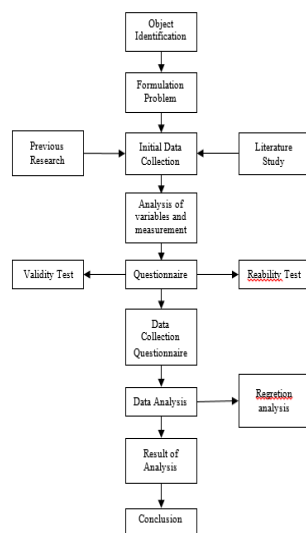


Figure 2: Framework

Such steps are as below:

1. Research of object identification and formulation Problem
Identification is done in PT Valdo International. Observation of the research object, namely the system AkuMaju used internal parties to support the activities and daily activities that relate to the work of each employee of the company.
2. Initial data collection
Data collection was conducted by using literature study and previous studies related to this research so that it becomes a reference background and formulation of the problem as well as the methods used in data processing and data analysis.
3. Analysis of variables and Measurement Indicators
Analysis of variables and the measurement indicators is implemented through the literature from previous studies to get the proper measuring devices and has been tested.
4. The preparation of the questionnaire
The preparation of the questionnaire is based on the indicators that have been set previously. Once that is done test the validity and reliability tests on each of the question items in the questionnaire.
5. Questionnaire data collection and data analysis
The results of the questionnaire data goes further analyzed by processing the quantitative data using the calculation statistics. The analysis used is regression analysis.
6. The results of the analysis
Based on the results of the data analysis, it can be determined the success of the information system based on the Delone and McLean model which consists of information quality, system quality, service quality, use, user satisfaction, and net benefit.
7. Conclusion and suggestions
The conclusion to the answers of the problems that exist so it is used for the repair and improvement of the system AkuMaju PT Valdo International, and also can be a reference for the development of other information systems in the future.

RESULTS AND DISCUSSION

Testing

1. Validity Test

In this process, the determination of whether or not valid is done by comparing the value of r count the results in the form of processing of the application of SPSS with the value of ther table:

Table 2: Result of validty test (50 responden)

Variable	Indicators	r Counting	r Table	Conclusion
<i>Information quality</i>	IQ1	0.726	0.2787	Valid
	IQ2	0.805	0.2787	Valid
	IQ3	0.746	0.2787	Valid
	IQ4	0.874	0.2787	Valid
<i>System quality</i>	SQ1	0.663	0.2787	Valid
	SQ2	0.822	0.2787	Valid
	SQ3	0.536	0.2787	Valid
	SQ4	0.762	0.2787	Valid
	SQ5	0.674	0.2787	Valid
<i>Service quality</i>	SEQ1	0.877	0.2787	Valid

	SEQ2	0.942	0.2787	Valid
	SEQ3	0.938	0.2787	Valid
<i>Use</i>	U1	0.868	0.2787	Valid
	U2	0.918	0.2787	Valid
	U3	0.779	0.2787	Valid
<i>User Satisfaction</i>	US1	0.816	0.2787	Valid
	US2	0.835	0.2787	Valid
<i>Net Benefits</i>	NB1	0.680	0.2787	Valid
	NB2	0.695	0.2787	Valid
	NB3	0.798	0.2787	Valid
	NB4	0.793	0.2787	Valid
	NB5	0.852	0.2787	Valid

The results obtained that all the statements declared invalid by the indicator that all the r count is greater or equal to r table the results of the calculation is 0.2787.

2. Reliability test

Reliability test using the value of Cronbach's alpha.

Table 3: Result Of Reliability Test

Variable	Indicator	Cronbach's Alpha value	Conclusion
<i>Information quality</i>	IQ1	0.910	Very Reliable
	IQ2	0.909	Very Reliable
	IQ3	0.907	Very Reliable
	IQ4	0.905	Very Reliable
<i>System quality</i>	SQ1	0.903	Very Reliable
	SQ2	0.909	Very Reliable
	SQ3	0.910	Very Reliable
	SQ4	0.916	Very Reliable
	SQ5	0.913	Very Reliable
<i>Service quality</i>	SEQ1	0.907	Very Reliable
	SEQ2	0.906	Very Reliable
	SEQ3	0.906	Very Reliable
<i>Use</i>	U1	0.908	Very Reliable
	U2	0.907	Very Reliable
	U3	0.910	Very Reliable
<i>User Satisfaction</i>	US1	0.914	Very Reliable
	US2	0.909	Very Reliable
<i>Net Benefits</i>	NB1	0.909	Very Reliable
	NB2	0.907	Very Reliable
	NB3	0.913	Very Reliable
	NB4	0.912	Very Reliable
	NB5	0.913	Very Reliable

Because the value of cronbach's Alpha is more than 0.8 then all the variables are expressed very reliable.

3. Evaluation of Research Model

After the determination of the model, the adjustment of the sampling technique, the obtained indicators reflective is shown in the table below :

Table 4: Indicator Reflector

Latent Variable	Number of Indicators	Notation Reflective Indicators
Information Quality	4	IQ1, IQ2, IQ3, IQ4
System Quality	5	SQ1, SQ2, SQ3, SQ4, SQ5
Service Quality	3	SEQ1, SEQ2, SEQ3
Use	3	U1, U2, U3
User Satisfaction	2	US1, US2
Net Benefit	5	NB1, NB2, NB3, NB4, NB5

After having obtained the reflective indicator, then made a model of a study using SEM-PLS as shown in the image below:

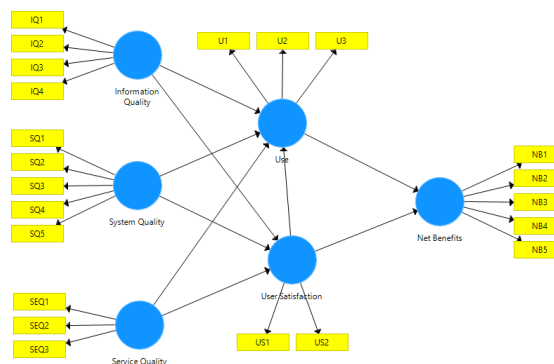


Figure 3 : Research Model Using SEM-PLS Model

Figure 3 shows full use the structural model of the software Smart PLS 3. In structural equation modeling PLS, two types of models is formed: the measurement model (Outer Model) and the structural model (Inner model). On the outer model to explain the relationship between latent variables with indicators to measure it. For example, the latent variable information quality (IQ) was measured with a variable reflection Q1, Q2, Q3, and Q4. Then on the inner model, explain the relationship between the latent variable exogen and variable endogen. Latent variables exogen or independent is a latent variable that is not affected by the latent variables other but affects the latent variable of the other. Latent variables endogen or dependent latent but are influenced by the latent variables exogen.

Based on the complete diagram of the structural model, there are three variables are exogen and three endogen variables. The third exogen variables consist of service quality (SEQ), system quality (SQ), and information quality (IQ). Then variable endogen consists of the use (U), user satisfaction (US), and net benefit (NB). Latent variable U is influenced by the latent variable SEQ, SQ, IQ, and the US, while the latent variable of US is influenced by the variable IQ, SQ, and SEQ. the last is the NB which is influenced by the variable U and the US.

The research Model is evaluated as a measurement model (outer model) and the structural model (inner model). From the results of sampling 50 first responders, employees of the internal PT Valdo International evaluate the model with the overall survey of up to 400 respondents, and then to determine the validity and reliability in measuring latent variables, evaluation of the structural model was conducted to determine whether exogen variables have a significant influence on the endogen variables.

4. Evaluated a measurement model (Outer Model)

To get the relations of each is still a latent variable measurement of the t statistic are presented in the table below:

Table 5: Test Result Between Variable

Relations Each latent variable	Original Sample (O)	Standard Error (STERR)	T Statistics (O/STER)	Descriptions
IQ -> U	0,177	0,041	4,365	significant
IQ -> US	0,258	0,044	5,888	significant
SEQ -> U	0,423	0,038	11,063	Significant
SEQ -> US	0,195	0,045	4,336	Significant
SQ -> U	-0,041	0,049	0,847	not significant
SQ -> US	0,175	0,054	3,218	Significant
U -> NB	-0,091	0,054	1,671	not significant
US -> NB	0,265	0,053	5,011	Significant
US -> U	0,293	0,038	7,663	Significant

From the test results, it is found that the relationship between the latent variables tends to be significant with marked t-statistics (count) value is greater than t-table is 1.96. But the relationship between the variables of SQ with U, and U with NB is not significant because the value of t-statistics(count) is low or less than 1.96.

Then, measurement of tested, namely a test of determination shown by the value of R-square (R2) in the following table:

Table 6 : Value of R-Square

Endogen Variable	R-Square
U	0.380
US	0.177
NB	0.057

In this research, the endogen variables consist of U, US and NB. Table 6 shows the value of R2 to U of 0.380 that shows the influence of IQ,SQ, SEQ, and US in the determinant has a percentage of 38% against the U. The value of the US by 0.177 that shows the influence of IQ, SQ, and SEQ be determinant has a percentage of 17.7% against the US. The value of NB of 0.057, which shows the influence of U, and US in the determinant has the percentage of 5.7% against NB.

Evaluation of the Q-Square predictive relevance for the structural model, mengukur how good the value of the observations generated by the model and estimation of its parameters. The value of Q-square > 0 indicates the model has predictive relevance; on the contrary, if the value of the Q-Square ≤ 0 indicates the model have less predictive relevance.

Table 7 : Value of Q-Square

Endogen Variable	Q-Square
U	0.216
US	0.101
NB	0.037

DISCUSSION

Overview of the Influence of Information Quality, System Quality, Service Quality And Service Quality To Use

The results of the study obtained information quality to use affect significantly on the mark value of t-statistics calculation is greater than t-statistics table for 4.365 with t-statistics table 1.96. it had been in accordance with the theory of the success Delone and Mclean model (2003) on the influence of information quality, while the system quality of the obtained results is not significant with the value of t-statistics of 0.847 is smaller than 1.96, it is because the PT Valdo International in the use of HRIS still does the development that best suits your needs. On the influence on the service quality significantly with the base if the company PT Valdo International services in the process of a system running well.

In the case of this study, it is seen that the quality of information is good, but the quality of the system hasn't really include all the employees, but on the quality of service is satisfying on the mark with significant results.

Overview of the influence of Information Quality, System Quality, Service Quality and Service Quality to User Satisfaction

An overview of the influence of information quality, system quality and service quality on user satisfaction has significant influence to the mark with the value of t-statistics on the results of the calculation is greater than t-statistics table with the values obtained IQ against the US by 5.888, SQ to US by 3.218, and SEQ against US by 4.336 with t-statistics table 1.96. In this section the individual feel satisfied with the system HRIS based on IQ, SQ and SEQ refers to the results of the assessment of the Use which tends to be better. In addition, the results obtained are significant because over the months every individual getting familiar with the system used and the development of a better system anyway, this is in accordance with the theory of Delone and Mclean.

Overview of the influence Use and User Satisfaction to Net Benefits

An overview of the influence of the relationship with the user satisfaction has significant influence to the mark with the value of t-statistics on the results of the calculation is greater than t-statistics table with the value obtained US against the NB of 7.663 with t-statistics table 1.96. So the result is in accordance with the theory of Delone and Mclean where individuu is more interested to do back access when the user is satisfied.

On the relations of use with the net benefit is not affected significantly with the value of t-statistics count for 1671 smaller than t-statistics table for 1.996. This happens because the information system that used still in the process of development and has yet to find the most suitable system as a whole because the company also continues to experience growth, where in the theory of Delone and Mclean level of relations is not so strong that relate to efficiency and effectiveness in operations.

CONCLUSION

Based on the research and the results of the data analysis that has been done by using the approach DeLone and Mclean model on the company PT Valdo International, conclusions can be drawn: **Pertama**, Information quality, user satisfaction and Service quality significantly influence use and have a positive relationship between both of them, whereas System quality did not significantly influence use and has a negative association between both of them. **Kedua**, Information quality, System quality, and Service quality significantly influence user satisfaction and have a positive relationship between both of them. **Ketiga**, User satisfaction significantly influence the Net Benefits and have a positive relationship between the pair, while the use did not significantly influence the net benefit and has a negative association between both of them.

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