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Evaluation of Care General Insurance System Solution Using the Delone and Mclean Methods at XYZ Insurance

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Abstrak: Seiring dengan visi dan misi yang ditetapkan dalam organisasi atau perusahaan serta didukung oleh perkembangan teknologi yang pesat, Asuransi XYZ harus mampu menyeimbangkan strategi bisnis dengan teknologi informasi untuk menjalankan proses bisnis yang berkembang saat ini. Sistem informasi dituntut untuk menjadi suatu sistem terintegrasi yang dapat mencapai titik efektivitas dan efisiensi tertinggi, dan membantu kegiatan bisnis yang kompleks. Tujuan penelitian ini adalah untuk menguji seberapa sukses implementasi sistem CGISS di Asuransi XYZ dengan menggunakan variabel DeLone dan McLean diantaranya : Information Quality, System Quality, Service Quality, Use, User Satisfaction, Net Benefit, serta dua variabel tambahan dari UTAUT yaitu Performance Expectancy dan Effort Expectancy. Populasi yang diambil adalah seluruh karyawan internal Asuransi XYZ kantor pusat dan kantor cabang yang memiliki alamat email yang berdomain asuransi xyz dan beberapa sampel yang dibutuhkan untuk studi kasus ini sebanyak 100 sampel untuk mengkaji pandangan responden berdasarkan variabel: Kualitas Sistem, Kualitas Informasi, Kualitas Layanan, Niat Penggunaan/Penggunaan, Kepuasan Pengguna Ekspektasi Kinerja, Ekspektasi Upaya, dan Manfaat Bersih. Beberapa variabel yang dilibatkan dalam penelitian ini diantaranya mempunyai beberapa pengaruh bagi aplikasi CGISS. Identifikasi mengenai berbagai kendala/permasalahan yang dihadapi selama ini dapat digunakan sebagai acuan untuk perbaikan serta peningkatan kinerja aplikasi CGISS dikemudian hari. Hasil pengolahan data menunjukkan bahwa adapun 7 hasil hipotesis yang ditolak tidak berpengaruh signifikan terhadap pengunaan aplikasi CGISS dan 4 dari 11 hipotesis dianggap terbukti bahwa kepuasan pengguna sangat dipengarui oleh dua faktor utama sebagai berikut: kualitas informasi, dan kualitas pelayanan. Implikasi manajerial yang dapat dilakukan oleh pihak internal Asuransi XYZ tentang Aplikasi CGISS sebagai sistem informasi aktifitas internal di Asuransi XYZ Penelitian ini dapat digunakan sebagai bahan pertimbangan dan evaluasi mengenai motivasi, peluang, proses, permasalahan, serta kinerja pengelola aplikasi selama ini.

Abstract: Along with the vision and mission set in the organization or company and supported by rapid technological developments, XYZ Insurance must be able to balance its business strategy with information technology to carry out currently developing business processes. Information systems are required to become an integrated system that can achieve the highest point of effectiveness and efficiency, and assist complex business activities. The purpose of this study is to test how successful the implementation of the CGISS system is at XYZ Insurance by using DeLone and McLean variables including: Information Quality, System Quality, Service Quality, Use, User Satisfaction, Net Benefit, as well as two additional variables from UTAUT namely Performance Expectancy and Effort Expectancy. The population taken is all internal employees of XYZ Insurance head office and branch offices who have email addresses with xyz insurance domains and some samples needed for this case study of 100 samples to examine

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respondents' views based on variables: System Quality, Information Quality, Service Quality, Intention to Use/Use, User Satisfaction Performance Expectations, Effort Expectations, and Net Benefit. Some of the variables involved in this research include having several influences on the CGISS application. Identification of various obstacles/problems encountered so far can be used as a reference for improving and enhancing the performance of CGISS applications in the future. The results of data processing show that the 7 rejected hypotheses have no significant effect on the use of the CGISS application and 4 of the 11 hypotheses are considered proven that user satisfaction is strongly influenced by two main factors as follows: information quality and service quality. Managerial implications that can be carried out by XYZ Insurance internal parties regarding the CGISS Application as an internal activity information system at XYZ Insurance. This research can be used as material for consideration and evaluation regarding motivation, opportunities, processes, problems, and the performance of application managers so far.

INTRODUCTION

Insurance has several purposes, including providing guarantees to customers so that they are protected from risks that will be suffered if unexpected events occur . XYZ Insurance , is a company engaged in general insurance services. XYZ Insurance provides various services to customers through insurance products such as losses on buildings, vehicles, goods and so on. Within the company's internal scope, of course XYZ Insurance must be able to expedite information activities in order to provide effective service to customers. To achieve its main goal, it is necessary to combine information technology and business processes to produce an information system that supports the organization to achieve these goals.

To achieve its main goal, it is necessary to combine information technology and business processes to produce an information system that supports the organization to achieve these goals. Information technology is one of the most needed technologies where its main function is to channel all forms of information related to a particular activity. Technological developments can be one of the causes of increasing competition in the business world within the scope of the company. This relates to system quality , information quality and service quality in a management owned by the agency. Increased competition in companies must be in line with improvements in technology and information systems implemented by the companies themselves. Where a technology and system will certainly be very useful and help simplify operational needs within a company.

Information system is a combination of information technology and technology user activities that can support operations within an organization. Information technology can be useful for processing data and information needed in management information activities. While the management information system within the company can be interpreted as a system that is used to present data and information which will then be used to support management operational activities and decision making . In the global competitive environment, success in implementing information systems and solving obstacles and problems has become one of the most important key factors in organizational success. To succeed in information systems, organizations must be involved in evaluating and identifying barriers and problems in implementing systems (Mahdavi & Tarrah Zadegan, 2010).

One example of a company that has successfully implemented an information system in an insurance is the Alborz insurance case study in Iran in the journal *EVALUATING THE SUCCESS OF INSURANCE COMPANIES' INFORMATION SYSTEMS USING DE LONE & MCLEAN MODEL* (Safarkhani & Monfared, 2016) . The success of the information system is found in the existence of a positive and significant relationship between the success of the information system (*net benefit*) at the 99 percent confidence level and user satisfaction. Besides there is a significant relationship between the quality of information and information systems on system user satisfaction in organizations and there is a positive and significant relationship between the use of the system at the 95 percent confidence level on the success of the information system (net benefit *)* .

Currently the CGISS application used by XYZ Insurance's internal parties is experiencing problems with system quality and information quality. Problems using the application such as the integration process between one module and another module experience slight interference, application errors, inconvenience in using the application , unattractive appearance of the application , complicated applications and slow applications which hinder the company's operational activities .

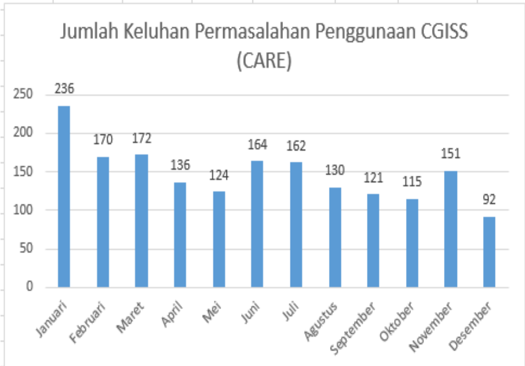


Figure 1 Total 2020 CGISS application complaints

XYZ Insurance employees using the CGISS (CARE) application which is reported for an average of every month in the last 1 year. These complaints are more frequent on the quality of the CGISS (CARE) application . If the application has problems, this will harm employees. The quality of the application must be good because by having a good quality application, the exchange of information will be better so that work and computerized activities will be more effective. In this study the authors want to know for sure, is it true that the quality of the application, the quality of the information produced and service quality is important in user satisfaction in using the CGISS (CARE) application and generates net benefits *for* the company . Therefore, with the CGISS evaluation (CARE) based on the problems obtained, it is hoped that it can improve future system development which has been running since 2012 .

In an effort to find solutions to existing problems. The writer found that according to (Floropoulos et al., 2010) evaluation can help XYZ Insurance to ensure whether they can do the job in providing services as expected. Therefore, the authors consider that it is necessary to evaluate the CGISS (CARE) application using the *Delone and Mclean* Approach for XYZ Insurance so that the expected results can be achieved. (Bin Masrek, 2007) stated, in terms of user aspects and aspects of user satisfaction both in information quality, system quality, and service quality in each dimension or a combination of the three, the D&M method proved able to offer the development of a successful model for the information system .

This research was conducted to identify the factors that influence the implementation of CGISS in XYZ Insurance using the method developed by (DeLone & McLean, 2003) . Research on measurement models for information system success has been carried out, including research on the *Delone and Mclean models* in particular. Research conducted by (Dörr et al., 2013) shows that the *Delone and Mclean model* is more systemic in the analysis that exists in the system literature as well as in the non-empirical literature (Dörr et al., 2013) . The six elements or factors or components or measurements of this model are the quality of the system (*system quality*), information quality (*information quality*), Use (*use*), user satisfaction (*user satisfaction*), individual impact (*individual impact*), organizational impact (*organizational impact*) .

METHODS

Research Design and Measurement

In this study, the model used is the *Delone and McLean model* and two variables from UTAUT. *Delone and McLean's* updated research model uses the variables *information quality, system quality, service quality, use, user satisfaction* and *net benefits* . The combined use *of the intention to use* and *use* variables is based on the fact that this information system is a system built for the internal needs of xyz insurance in daily operations so the authors argue that the *intention to use variable* alone cannot be used as an appropriate measurement tool .

The addition of 2 variables from the UTAUT model, namely *performance expectancy* and *effort expectancy* in the system, greatly influences the intention to use the CARE application . The more *responsive* the CARE application is, *the user* will be interested in using it. So is the ease of use

In accordance with the hypothesis of the relationship between variables that the assumptions have formulated above, the research model put forward by the researcher is as follows (Figure 3):

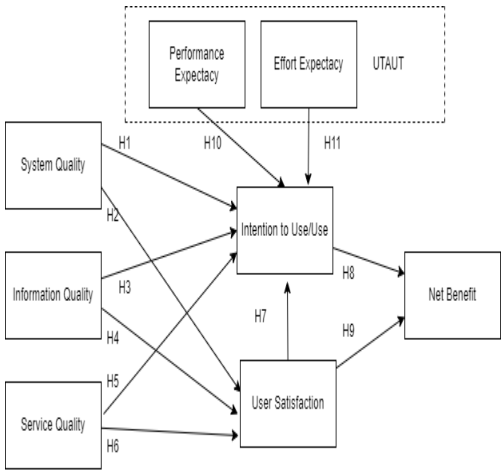


Figure 2 Research Model

Sample and Population Statistics

The population in this study are all application users registered with the CGISS system. These users include all XYZ Insurance internal employees who already have accounts and passwords to log into the CGISS Application. Questionnaire distribution will cover the population in the Jakarta Head Office and XYZ Insurance Branch Office via *google form* .

Based on user data in the field, the total population using the CGISS-based system is 125 people. Based on the Slovin formula , the number of samples of users of the CGISS information system at the head office and xyz insurance branch offices are:

$$n = \frac{125}{1+125(0.05)^2} = 95{,}23 \qquad n = \frac{N}{1+Ne^2}$$

The value of n indicates the number of samples that is as much as 95.23. In this study, the sample that will be used is 100 samples from the entire population of XYZ Insurance employees who are at the head office and branch offices.

Data collection was carried out through a survey of all respondents. The demographic characteristics of the study participants are presented in Table 1.

Table 1. Respondent Demographic Attributes

Characteristics	Frequency (%)
Gender	87.3
Woman	85.4
Man	82.6
Age	
20-30 year	42
31-41 year	45
42-52 year	13
Job Position	
Associate Director	1
General Manager	1
manager	3
Deputy Manager	2
Ast. manager	7
Supervisors	35
officers	51
Department	
Actuary	2
Agency	6
Bandung	2
Bogor	1
Branch Operations	3
BSD Serpong	1
Motor Claims	4
Non Motorized Claims	3
Claims Quality Assurance	2
Finance & Accounting	13
Financial Property	2
Health	2
Internal Audit & Risk Management	2
Information Technology	8
Leasing Direct Dealers	3
Legal & Compliance	2
Poor	1
marine	1
Palembang	1
Properties	1
Samarinda	1
Semarang	3
Surabaya	4
Technical	10
Yogyakarta	1
Operation	20
Medan	1

Convergent validity, Average Variance Extracted (AVE), and Cronbach's loading factors were used in this study to measure the overall validity and internal reliability of the construct. The software used to analyze descriptive statistics and structural equation models (SEM) is smart PLS 4.

RESULTS AND DISCUSSION

Model Measurement

The measurement model that has been developed is followed by carrying out a structural model analysis, consistent with other studies (Venkatesh, 2012; Farah, 2018). The validity of the indicator explained by a loading factor above 0.7 is acceptable and a minimum AVE value of 0.5 indicates a good measure of convergent validity. As explained in Table 2 and Figure 4, all loading factors are above the set value of 0.7. The reliability values of all model constructs measured using Cronbach's ranged from 0.856 to 0.959, higher than the predetermined threshold. This shows that the internal reliability value of the entire construct model is confirmed. This section will analyze the value of convergent and discriminant validity of the study. The average extracted variance (AVE) for all the constructs of the research model is above the proposed threshold of 0.5 (Table 3) and it can be concluded that the convergent validity value is good and feasible to be continued at a later stage. .

Model Structure

The structural model will be assessed based on several tests of research hypothesis models that have been identified previously. The hypotheses to be tested are hypotheses 1 to 11 which are carried out using PLS path modeling and the results are shown in Table 4. The results of the research and testing obtained show that not all modeling constructs have significant influence values (t values < 0.05). SerQ and IQ have significant values (0.000 <t-values <0.007) for User Satisfaction, and US, and IU have significant values (0.000 <t-values <0.009) for Net Benefit .

Table 2 Research Variables with Loading Factor and Reliability.

Indicators	loading factors	Cron α	CR
System Quality (SQ)	-	0.856	0.860
I can make reporting and bookkeeping easier by using the CGISS application (CARE)	0.830	-	-
I can provide various reports when using the CGISS (CARE) application	0.874	-	-
I didn't find the same problem in the CGISS (CARE) application after the solution is implemented and finalized	0.722	-	-
I don't need long to get information after using the CGISS (CARE) application	0.820	-	-
I can get data from each division by using the CGISS (CARE) application	0.735	-	-
Information Quality (IQ)	-	0921	0.924

Indicators	loading factors	Cron α	CR
I get information according to actual data on the CGISS (CARE) application	0.932	-	-
I can get consistent information when using the CGISS (CARE) application	0910	-	-
I can get accurate information by using the CGISS (CARE) application	0.940	-	-
I get data from the complete CGISS (CARE) application according to my work needs	0.817	-	-
Service Quality (SerQ)	-	0.866	0.877
I feel safe in accessing or sending data through the CGISS (CARE) application	0.710	-	-
I feel this CGISS (CARE) application fits my needs.	0.904	-	-
I feel that the services provided by the CGISS (CARE) application are user friendly	0.760	-	-
I feel that the CGISS application provider (CARE) has the most up-to-date *software* .	0.82 1	-	-
I find this CGISS (CARE) application reliable	0.838	-	-
Intention to Use/Use (IU)	-	0.89 4	0.906
I will continue to use the CGISS (CARE) application regularly.	0.8 85	-	-
I need an integrated system to facilitate reporting in carrying out work	0.855	-	-
I always access the CGISS (CARE) application while working here	0.841	-	-
I use _ CGISS (CARE) application every day	0.791	-	-
I feel that the process of using the CGISS(CARE) application is in accordance with this expected by management	0.810	-	-
Users Satisfaction (US)	-	0.923	0.926
I am satisfied with the function of the CGISS(CARE) App Overall	0893	-	-
I have no difficulty operating the CGISS(CARE) Application	0.790	-	-
I am satisfied with the existing CGISS(CARE) App and will be using it again	0910	-	-
I feel that the CGISS(CARE) application provides exactly what is needed at work	0.878	-	-
I feel the CGISS(CARE) application provide services according to what I need at work	0.901	-	-

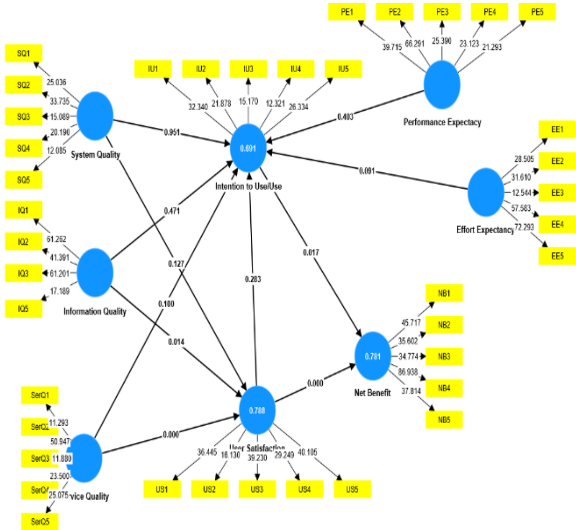
Indicators	loading factors	Cron α	CR
Net Benefits (NB)	-	0.959	0.960
I can finish my work faster with the CGISS Application (CARE)	0.924	-	-
I feel better performance while using CGISS application system (CARE) due to worker performance analysis	0.902	-	-
I do my work more effectively when using the CGISS (CARE) application	0.9 33	-	-
I find it easier to work using the CGISS Application (CARE)	0.9 62	-	-
I feel this CGISS (CARE) application is very useful in completing my work	0917	-	-
effort Expectancy (EE)	-	0.93 1	0.9 36
I feel that the CGISS (CARE) application is easy to use and can be mastered	0.881	-	-
I feel that with the CGISS (CARE) application , complexity can be more structured and what is usually difficult will be easier if you use this application	0.890	-	-
I feel that without the CGISS (CARE) application the process would be more complex and work would be more difficult	0.791	-	-
I learned to operate the CGISS (CARE) application easily	0.925	-	-
I find my interaction with the CGISS (CARE) application clear and easy to understand	0937	-	-
performance Expectancy (PE)	-	0.933	0.935
I feel I work better and more efficiently when using the CGISS (CARE) application	0896	-	-
I feel better work results using the CGISS (CARE) application	0.938	-	-
I feel that the CGISS (CARE) application can support job needs	0869	-	-
I feel my work is much better than before this system existed	0.878	-	-
I find this CGISS (CARE) application very fast and reliable	0.860	-	-

Table 3 AVE Value of Each Latent Variable

Variables	Average Variances Extracted (AVE)
System Quality	0.637
Information Quality	0.812
Service Quality	0.656
Intention to Use/Use	0.701
Users Satisfaction	0.767
Net Benefits	0.861
Effort Expectacy	0.786
Performance Expectations	0.789

Table 4 P Values

Relations Between Variables	T Statistics	P Values
System Quality →Intention to Use/Use	0.061	0.476
System Quality →User Satisfaction	1,527	0.063
Information Quality →Intention to Use/Use	0.721	0.236
Information Quality →User Satisfaction	**2,464**	**0.007**
Service Quality →Intention to Use/Use	1,646	0.050
Service Quality →User Satisfaction	**3,929**	**0.000**
User Satisfaction →Intention to Use/Use	1,073	0.142
User Satisfaction →Net Benefit	**7,552**	**0.000**
Effort Expectancy →Intention to Use/Use	1689	0.046
Performance Expectancy →Intention to Use	0837	0.201
Intention to Use/Use →Net Benefit	**2,384**	**0.009**



Picture 4. Standard Regression Coefficient of the Proposed Model

Managerial Implications

Managerial implications that can be carried out by XYZ Insurance internal parties regarding the CGISS Application (CARE) as an internal activity information system at XYZ Insurance. This research can be used as material for consideration and evaluation regarding motivation, opportunities, processes, problems, and the performance of examiner managers so far. Identification of various obstacles/problems encountered so far can be used as a reference for improving and enhancing the performance of the CGISS (CARE) application in the future.

Based on the research, there is a system quality variable on usage intention (SQ->US) with a value of 0.063. This shows that the quality of the system in using the CGISS (CARE) application must be improved in order to increase the satisfaction of XYZ Insurance employees to use this CGISS (CARE) application. Then from the system side, all modules have been integrated into CGISS (CARE) with the aim of being able to support the daily activities of XYZ Insurance employees.

Improving the quality of information in the CGISS (CARE) application is expected to be carried out continuously and this will be directly proportional to the intention to use and user satisfaction. To further increase user satisfaction, the quality of service must also be improved. And there will be an increasing number of users who will use the CGISS Application (CARE).

Based on the results of several different hypotheses in each discussion and data management, that user satisfaction increases when using information systems as a substitute for manual or conventional activities. The following is an explanation of the implications that occur based on the variables compiled by the author:

1. *Information quality* has a positive influence on *User Satisfaction*
   According to the research results of *Information Quality* on *User Satisfaction* significantly goes in line with the research that has been done that there is a significant relationship between *information quality* and *user satisfaction* (Chong et al., 2010) . The information contained on the platform will affect the user satisfaction of users, this is considered by the factor of accurate information, according to needs and up to date. With xyz insurance while still paying attention

to the quality of the information contained in the system, it can produce higher *user satisfaction and will certainly have a positive impact*

2. *Service quality has a positive influence on User Satisfaction*

   Service Quality research on *User Satisfaction* significantly goes in line with research that has been done that there is a positive and significant relationship between *service quality* and *user satisfaction* (Dirgantara et al., 2020) . *The service quality* provided by the xyz insurance IT team to users is considered good, although there are still some users who feel that the quality of the services received is not sufficient. In this case, xyz insurance can improve services by providing access for users to be able to provide input regarding CGISS and increase the response rate to help if there are problems experienced by users so that users can feel safe and assisted when experiencing problems with the system

3. *Intention to use / use has a positive influence on Net Benefit*

   According to the results of the research , *intention to use / use* significantly affects *Net Benefit , in line with the research that has been conducted that there is a positive and significant relationship between intention to use / use* and *net benefit.* (Ali et al., 2017) . *Net benefits* in this case have both positive and negative impacts from CGISS. Impact positive will make the user to be and continue to use the system

4. *User satisfaction has a positive influence on Net Benefit*

   User Satisfaction research on *Net Benefit* significantly goes in line with research that has been conducted that there is a positive and significant relationship between *user satisfaction* and *net benefits* (Ali, Samsuri, Seman, Brohi, & Shah, 2018). With *net benefits* such as efficient and effective operational processes that are felt when users use CGISS , user satisfaction will be higher and the intention to use CGISS again is because the benefits provided by CGISS make users feel satisfied .

CONCLUSION

Based on the results of the research on the success factor analysis of this information system, it can be concluded that the results of data processing show that 4 of the 11 hypotheses are considered proven, namely that user satisfaction is strongly influenced by two factors The main objectives are as follows: quality of information and quality of service. Information quality has a strong influence on user satisfaction, the better the quality of the information contained in the CGISS application , the higher the satisfaction level of the users of this CGISS application . In addition to the quality of information that affects user satisfaction, Service quality also has a strong influence on user satisfaction. The better the service provided to CGISS users, the higher the satisfaction level of CGISS users . Intention to Use / Use also has a strong influence on the net benefits *of this organization, namely the more orderly administration in* the company's daily operations. Therefore, more and more users are satisfied with this CGISS (CARE) application then the net benefits of this CGISS (CARE) application will also increase . The quality of the system (*system quality*) apparently does not affect the Intention to Use/Use. This is because the intention to use/use the CGISS application is mandatory. System quality (*system quality*) also does not affect user satisfaction (*user satisfaction*). The quality of information (*information quality*) and quality of service (*service quality*) also does not affect the Intention to Use / Use. Testing performance expectations (*performance expectancy*) and business expectations (*effort expectancy*) on the intention to use / use in testing this thesis has no effect .

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