

Modification of DeLon and Mclean Model in the Success of Information System for Good University Governance

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ABSTRACT

Information System (IS) is requirement for private colleges in improving their governance to reach Good University Governance (GUG). From 2006 to 2008 information technology (IT) assistance had been granted to 1,072 private colleges and continued by grant development program. Considering such a big IT grant, there is a need to study the IT grant efficiency and the success in its implementation in private colleges as well as appropriate leadership to reach GUG. This research used a sample of 61 private colleges in East Java under Kopertis Wilayah 7 (Coordinator of Private Higher Learning Institutions-Region 7), consisting of universities, institutes, polytechnics and academies as recipients of IT Grant during a period of 3 years. Each private college was represented by 4 persons as respondents consisting of those managers of IT in the areas of academic, finance, website and library, so that the number of expected respondents were 244. However, only 112 of the data sets were obtained and eligible to analyze. The collection of data was conducted by questionnaires and interviews. Data analysis was done using Path Analysis with Structural Equation Modeling (SEM) to analyze the 7 variables under study, i.e. transformational leadership, system quality, information quality, service quality, individual impact, user satisfaction and GUG. Eleven hypotheses were formulated and examined, and 5 hypotheses were not significant, while 15 hypotheses were significant. The non significant hypotheses were influence of: (1) transformational leadership on user satisfaction, (2) system quality on individual impact, (3) information quality on individual impact, (4) service quality on individual impact, (5) user satisfaction on GUG. Six significant hypotheses were influence of: (1) transformational leadership on individual impact, (2) system quality on user satisfaction, (3) information quality on user satisfaction, (4) service quality on user satisfaction, (5) user satisfaction on individual impact, and (6) individual impact on GUG. Private colleges need betterment efforts, especially in human resources to handle information technology (IT). However, there are many constraints faced to achieve GUG and need attention: (a). availability of human resources mastering technology, (b). supportive policy. Users of IS in private colleges should always improve their knowledge and skills.

Keywords: transformational, leadership, system, information, success, and GUG

INTRODUCTION

Support for information technology (IT) has been implemented by the Directorate General of Higher Education (Higher Education) since 2006 (Dikti,2006), to help colleges, the present is a major requirement for the college (PT) in improving governance in achieving the Good University Governance (GUG). Forms of organization in the IT management have its own character that is distinctive for which the form of required information system must have its own character (Kertahadi,1998). It required leadership style; power-oriented leadership style will be less effective than the leadership style-oriented expertise (expertise) and behavioural (Nimran,1997). Transformational leadership includes three components: idealized influence (charisma), intellectual stimulation, and individual attention (individualized consideration) (Bass and Avolio,1994). The new revision of the theory of transformational leadership, transformational behaviour adds another called inspirational motivation (Bass and Avolio,1999).

According to (Mac Kenzie et al,2001) there are some fundamental differences between transformational and transactional leadership on how to influence subordinates, the study was not enough to produce findings that support transformational leadership model (Tepper and Taylor, 2003). Conflicting evidence emerged with respect to the factor structure of the model, and found a very strong relationship inter-sub dimension (Avolio et al, 1999). (Rafferty,2004) is based on a model developed from the (Bass and Avolio,1994) found five sub-dimension transformational leadership which has discriminant validity between each other. So is the case in higher education leads based information system that the system can be successful.

Information systems success model has been developed by previous researchers (Bailey and Pearson, 1983), several success models of the information systems,(DeLon and McLeanm1992, DeLon and McLean,2002, DeLon and McLean,2003) model obtained a lot of attention from researchers subsequently (McGill et al,2003), (Livari,2005) also examined the empirical model of DeLone and McLean, the results prove that the success of

information systems is influenced by the system quality, information quality and service quality, user satisfaction and individual impact.

Discussing the quality of the system is to feel the ease of use is the most common measure of the system quality because a large amount of research related to TAM (Davis,1989). But the notion that ease of use associated with the development of the overall system quality. (Rivard et al,1997) Develop and test a device that consists of 40 items that measure the quality of the system with eight factors: reliability, portability, hospitality use, easy to understand, effectiveness, ease of maintenance, economical, and certainty. It has created its own index by using the dimensions of quality identified from the model of the original D & M or they review by themselves the System Quality through referrals (Petter,2008, Seddon,1997) saw a connection between the system quality and perceived usefulness. (Seddon, 1997) results concerning the relationship between these two variables, supported by the research results of (Rai et al,2002).

Information quality is often a key dimension of the instruments concerning the end-user satisfaction (Ives et al, 1983); (Doll and Torkzadeh, 1998). As a result, the information quality is often not distinguished as a unique construction, but measured as a component of user satisfactions. Therefore, the size of this dimension is an issue for the successful study of IS. Develop a generic scale of information quality and others have developed their own scale using literature that is relevant to the type of information system under study (Wixom and Watson,2001).

Service quality (Servqual) is as a tool for measuring the service quality (Pitt et al,1995). While Servqual is the most commonly used to measure the service quality of IS, has received some criticism. However, by using factor analysis confirmation Jiang et al,2002) found that Servqual is a satisfactory tool for measuring the quality of IS services. Another measure of service quality has included the expertise, Satisfaction, and capabilities of supporting staff (Yoon et al,1998). The most widely used by the user of instrument satisfaction is (Doll and Torkzadeh, 1998). instrument of End User Computing Support (EUCS) and (Ives et al, 1983) instrument of user information satisfaction (UIS). In a comparison between the Doll and Torkzadeh's EUCS and UIS, (Seddon and Yip,1992) found advantages EUCS instruments and UIS in the context of accounting IS. Individual impact is closely linked to performance, namely improving the performance of individual users of the system (Mason,1978) shows the sequence of impacts ranging from the received information, understanding information, application information is a little market specific issues and decisions to change behavior by changing the organization's performance (Chervani et al,1992), use the decision effectiveness measurement to measure the impact of information systems.

One of the derivative concepts, then, even involves the implementation of the corporation, which is Good Corporate Governance (Josua,2006), (Trakmen,2008), suggested a model of university governance, namely: University governance by academic staff; Corporate governance: Trustee governance; Stakeholder governance ; Amalgam models of governance. The measurement of GUG on the colleges is adopted from the good corporate governance (GCG) included four indicators (Ramaswamy et al,2008): a) Fairness, b) Transparency, c) Responsibility, d) Accountability.

THE STUDY

Type of Research

The type of research conducted is survey research, that is by taking a sample of the population using the questionnaire as a suitable data collection tool (Singarimbun and Effendi,1986). Research survey conducted for the purpose is behavioural research in the implementation of information systems of private colleges (Astuti,2006) which provides an explanation for the relationship between variables through research and testing previously formulated.

Location of Research

The research site is in private colleges (*PTS*), which have received grant funding of ICT in the province of East Java with some following consideration criteria: 1) The *PTS* should have received a grant from the Higher Education ICT, 2) The *PTS* should have been running the grant of ICT, especially in the areas of Academic, Finance, Library and Web as a medium of information, 3) The *PTS* should have been running the college information system in the form of online or offline (Tajuddin et al,2014).

Population and Sample

Sample is equal to population or referred to saturated sample, respondents are 244 people of management led-level of information systems on *PTS*, which are 4 MIS leaders of each *PTS*; Academic Management, Financial Management, Library Management and Website, so that 4 x 61 *PTS* = 244 samples. The *PTS* samples have

received grant funding from the ICT Directorate General of Higher Education from 2006 to 2008, East Java, where the number of private colleges received the funding of ICT is as much as 61 *PTS*. The detailed description of the ICT grants recipients of *Kopertis* Region VII East Java is as follows: Academy: 3 *PTS*; Polytechnic: 2 *PTS*; College: 28 *PTS*; Institute: 4 *PTS*, and University: 23 *PTS*.

Technique of Data Collecting

In this research, data collection is conducted by: questionnaire, interview; documentation; observation and depth interview.

Operational Definition of Research Variable

1. Transformational Leadership Variable

Based on the model developed by (Pounder,2001), promoted to five sub-dimension transformational leadership is composed of (Rafferty,2004): a) Vision; b) Inspirational Communication; c) Supportive Leadership; d) Intellectual Stimulation; and e). Personal recognition. In this study, transformational leadership will be measured through five sub-dimensions on the adaptation of measurement developed by (Bass,1990) using a five-point Likert scale, namely: Vision is measured using 8 (eight) question items, inspirational communication is measured by using 7 (seven) question items, supportive leadership is measured by using 8 (eight) question items, intellectual stimulation is measured using 11 (eleven) question items, and personal recognition is measured using 7 (seven) question items that developed from (Rafferty,2004).

2. System Quality Variable

Quality system means the quality of hardware and software combination in information systems. The focus is on performance of the system which refers to how well the capabilities of hardware, software, policies, and procedures of information systems can provide information for the needs of users (DeLon and McLean,2004). Indicators used are 5 (five) indicators used by (Wixsom and Watson,2001), namely: a) Ease of Use, b) System Flexibility, c) System Reliability, c) Data Accuracy, d) Human Factor.

3. Information Quality Variable

Information Quality refers to the output of the information system, concerning the value, benefits, relevance, and urgency of the information produced (Pitt et al,1995). This variable describes the quality of information perceived by users as measured by 4 (four) indicators used (Wixsom and Watson,2001), namely: a) Accuracy of information, b) Completeness of information, c) Format Information, d) Currency.

4. Service Quality Variable

Service quality variable of the information system regarding the quality of the resulting system whether the user is willing or not and to what extent the system can assist users in generating jobs. This variable is measured using (DeLon and McLean,2004) indicators: a) Quick responsiveness, b) Insurance, c) Empathy, d) Service afterwards (Following up), e) Online affectivity.

5. User Satisfaction Variable

User satisfaction is a response and feedback which is raised by users after using the information system. User attitudes towards information systems are subjective criteria about how like the user to the system used. This variable is measured by four (Seddon and Kiew,1996); (McGill et al,2003) indicators consisting of: a) Software satisfaction. b) Efficiency, c) Effectiveness, d) Satisfaction.

6. Individual Impact Variable

Individual impact is the influence of information on user behaviour is closely linked to performance, which is improving the performance of individual users of the system. (Mason,1978) Describes the impact sequence starting from receiving information, understanding information, application of information to a particular problem and change the decision behaviour, with the result of organizational performance changes. Impact can also mean to have contribution to the user, a better understanding of decision making, increase productivity of decision making, change user activity or change user's perception on the importance or usefulness of the information systems. The individual impact variables (Goodhue,1998) are as follow: a) Effectiveness and Productivity, b) Important and Valuable.

7. Good University Governance (GUG) Variable

Good university governance itself is not a standard concept in its application, except in the case of basic managerial principles. These applications can vary, according to the conditions and ideologies that embraced by a nation or society. For example, good university governance in the United States are usually applied by giving full autonomy, both in terms of academic and managerial and financing, to higher education institutions as long

as it can be justified. Consequently, government influence is relatively weak and vice versa, the authority of the executive managers and board of a university to be strong.

The importance of autonomy in achieving academic excellence (i.e. in terms of teaching and research) for higher education, but not the same thing applies in terms of managerial and financing. This disagreement is usually associated with important functions for the community colleges and high cost of higher education. On current trends, the high cost of higher education is usually considered to be a burden the state and society, so that universities be better trying to find independent sources of financing. In the measurement of the college adopted the GUG of good corporate governance (GCG) includes four indicators (Ramswamy et al,2008): a) Fairness, b) Responsibility, c) Transparency, and d) Accountability

Analysis Method using Path Analysis (Gozali,2007) and Structural Equation Modelling (*SEM*) (Hair et al,1998).

FINDINGS

Description of Research Variable

The research is conducted by distributing questionnaires to respondents involved in the management of information and communication technology (ICT) at private colleges in the province East Java. The improper questionnaire to be analysed is returned questionnaires, but the respondent's answers are incomplete, inconsistent, not eligible as samples. The results showed that only 30 private colleges with 120 respondents, after data verification, only 112 respondents are eligible.

Clustering results of the 112 respondents based on the form of college are grouped into five sections those are 13 universities by 47 respondents, 1 institute by 4 respondents, 13 colleges by 49 respondents, Polytechnic by 8 respondents and 1 Academy by 4 respondents. Based on gender is dominated by 64 men and 48 women. Based on the age is classified into 4 intervals; = <25 years is 5 people, 24 people are 26-35 years, 36-45 years is 51 people and the fourth group is > 45 years is 32 people. Based on the study are grouped into five levels of education; 3 Diploma, 50 S1, 51 Masters, 8 Doctoral, and no other. Based on work Satisfaction or work duration; under 5 years is 13 people, 27 people are 5-10 years, 11-15 years work Satisfaction is 27 people, and over 15 years is 45 people.

Construct Validity and Reliability

Validity is the valid observed variables that actually represent the construct of unobserved variables. The construct validity test is necessary in a behavioural study to ensure that the operational variables measured the desired construct properly (Hair et al,1998).

The validity measured in this study is construct validity. The construct validity is measured through convergent validity and discriminant validity. Convergent validity is demonstrated confirmation of construct validity through measurement of a particular measurement method. Whereas discriminant validity is a measurement that indicates that a construct is different from the other construct (Hair et al,1998).

Convergent validity and discriminant validity can be measured through the use of factor analysis. Convergent and discriminant validity of the measurement by the author referred to the measurements presented by (Hair et al,1998), measuring convergent validity through the variance extracted, while discriminant validity is measured by comparing the average squared of correlation (variance correlation) among constructs with the variance extracted of each construct. Alpha value of extracted variance of each variable is greater close to or greater than 0.5. Variance extracted value indicates all variables analysed have adequate convergent validity.

Calculation of the discriminant validity of each variable is presented below. In Appendix 3 shows the mean variance correlation among variables, and the results compared to the obtained average variance extracted. All the analysed construct variance extracted is greater than its average variance of correlation. So it can be said that all the analysed construct has good discriminant validity.

Structural Model Test

1. Assumption Test

Analysis through structural equation modelling is performed using two-stage approach (Hair, et al., 1998), several advantages of the two-stage approach compared to one-stage approach, of which it is possible to test all the patterns of relationship coefficients contained in the model, allowing for understand whether any structural model will provide an acceptable fitness value, minimize interpretational confounding through the estimation of measurement models first.

2. Data Normalization Test

Normality of the data can be tested by observing the value of skewness and kurtosis which are usually presented in descriptive statistics. Statistical value used to test for normality is the z-value. When the z value is greater than the critical value, it can be assumed that the data distribution is not normal. This critical value can be determined based on a specified level of significance. At the 0.01 level, if the value of z greater than $\pm 2:58$ then the assumption of data normality is rejected.

3. Outliers

Test the presence or absence of outliers, can be seen with the Mahalanobis distance (Md). Mahalanobis distance is a measure distances far-near from the centre of data "average" with each observation point. In this case the observation point is the respondent's number of questionnaire. Examination of the multivariate outliers performed using Mahalanobis criterion at the level of $p < 0.001$. Mahalanobis distance is evaluated using the number of degrees of freedom parameter in the model used is = 114 which is obtained from statistical tables = 166.41. The rule of making decisions, if Md from the point of observation > 166.41 then said that it is the outlier observation point, whereas if Md from the point of observation < 166.41 it is said that the observation point is not an outlier.

4. Analysis of Fit Model

Measurement model is measured from the loading factor (standardize coefficient) on each indicator to latent variable. Factor loading values indicate the weight of each indicator as a measure of each variable. Indicator with a large factor loading indicates that the indicator variable as the strongest (dominant) measure. The results of confirmatory factor analysis of indicators of the four variables in the first model can be seen in the following table.

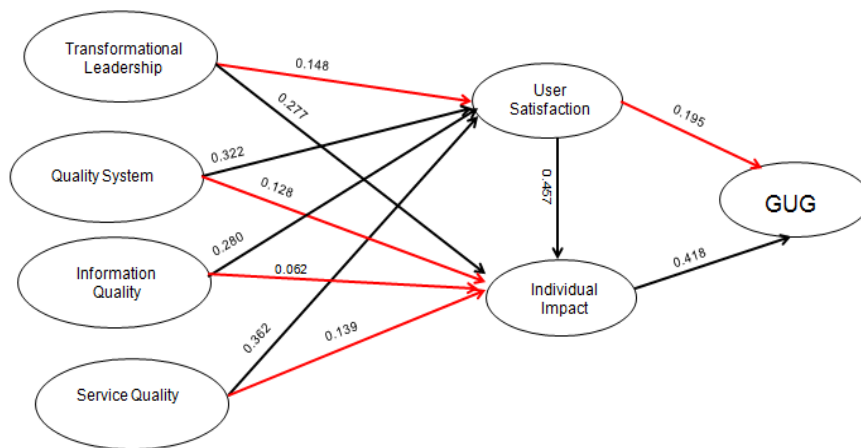


Figure 1. SEM Result Structural Model

Based on the Figure 1, the results of structural model testing is presented as follows:

1. There is no significant influence of Transformational Leadership on User Satisfaction. It is seen from the p -value $>$ alpha of 0.05. This means that regardless of the high value of Transformational Leadership, will have no influence on the value of User Satisfaction.
2. There is a significant influence of Quality System to User Satisfaction. It is seen from the p -value $<$ alpha of 0.05. Because the coefficient is positive indicating the direction of their relationship. This means that the higher the value of the System Quality, the higher the value of User Satisfaction.
3. There is a significant influence on Information Quality to User Satisfaction. It is seen from the p -value $<$ alpha of 0.05. Because the coefficient is positive indicating the direction of their relationship. This means that the higher the quality of information, the higher the value of User Satisfaction.
4. There is a significant influence on the Service quality to User Satisfaction. It is seen from the p -value $<$ alpha of 0.05. Because the coefficient is positive indicating the direction of their relationship. This means that the higher the value of service quality, the higher the value of User Satisfaction.
5. There is a significant influence Transformational Leadership to Individual Impact. It is seen from the p -value $<$ alpha of 0.05. Because the coefficient is positive indicating the direction of their relationship. This means that the higher the value of transformational Kepemimpina, the higher the value of individual impact.
6. There is no significant influence of the impact of System Quality to Individual Impact. It is seen from the p -value $>$ alpha of 0.05. This means that regardless of the value of the System Quality, will have no influence on the level of the individual influences.

7. There is no significant influence of Information Quality to Individual Impact. It is seen from the p-value > alpha of 0.05. This means that regardless of the quality of information, will have no influence on the level of the Individual Impact.
8. There is no significant influence of Service Quality to Individual Impact. It is seen from the p-value > alpha of 0.05. This means that regardless of the Service Quality, will have no influence on the Individual Impact.
9. There is a significant influence of Individual Impact to User Satisfaction. It is seen from the p-value < alpha of 0.05. Because the coefficient is positive indicating the direction of their relationship. This means that the higher value of user satisfaction, the higher value of the individual impact.
10. There was no significant influence of User Satisfaction to Good University Governance. It is seen from the p-value > alpha of 0.05. This means that regardless of the value of User Satisfaction, will have no influence of the Good University Governance.
11. There is a significant influence of Individual Impact to Good University Governance. It is seen from the p-value < alpha of 0.05. Because the coefficient is positive indicating the direction of their relationship. This means that the higher value of user satisfaction, the higher value of the individual impact.

In addition to testing the direct influence, in the SEM also known as indirect influence. Indirect influence is the result of multiplying two indirect influences. Revealed a significant indirect influence if the both direct influence of the shape it is significant. Here are presented the results of the indirect influence:

Table 1. SEM Result Structural Model: Indirect Influence

Indirect Influence	Direct Influence Coefficient		Indirect Influence Coefficient	Remarks
	X1 → Y1	Y1 → Y2		
X1 → Y1 → Y2	X1 → Y1 = 0.148	Y1 → Y2 = 0.457	0.068	X1 → Y1 → Y2
X2 → Y1 → Y2	X2 → Y1 = 0.322	Y1 → Y2 = 0.457	0.147	X2 → Y1 → Y2
X3 → Y1 → Y2	X3 → Y1 = 0.280	Y1 → Y2 = 0.457	0.128	X3 → Y1 → Y2
X4 → Y1 → Y2	X4 → Y1 = 0.362	Y1 → Y2 = 0.457	0.165	X4 → Y1 → Y2
Y1 → Y2 → Y3	Y1 → Y2 = 0.457	Y2 → Y3 = 0.418	0.191	Y1 → Y2 → Y3

Source: Primary Data Processed

Note: * stated significant at 5% error rate

Based on the above tables and figures, the results of structural model testing are presented as follows:

1. Indirect influence of Transformational Leadership to Individual Impact through User Satisfaction, indirect influence coefficients obtained for 0.068. Because the direct influence (Transformational Leadership to User Satisfaction, and Individual Impact to User Satisfaction) one of which is not significant, it can be concluded there is no significant indirect influence of Transformational Leadership to Individual Impact through User Satisfaction. This means that regardless of the value of Transformational Leadership, will not influence at high and low value of individual influences, although changing the value of User Satisfaction.
2. Indirect influence of the Quality System to Individual Impact through User Satisfaction, indirect influence coefficients obtained for 0.147. Due to the direct influence (Quality System to the User Satisfaction, and the Individual Impact User Satisfaction) are both significant, it can be concluded there is a significant indirect influence of the Individual Impact System Quality through User Satisfaction because the coefficient of the indirect influence is positive indicating a direct relationship. This means that the higher the value of the Quality System, the higher the value of individual impact, if the User Satisfaction is also increases.
3. Indirectly influence of Information Quality to Individual Impact through User Satisfaction, indirect influence coefficients obtained for 0.128. Due to the direct influence (Information Quality to User Satisfaction and User Satisfaction to Individual Impact) are both significant, it can be concluded that there are significant indirect influences between the qualities of information on the Individual Impact through User Satisfaction because the coefficient of the indirect influence is positive indicating a direct relationship. This means that the higher of Information Quality, the higher value of Individual Impact, if the User Satisfaction is also increase.
4. Indirect influence of the Individual Impact to Service Quality through User Satisfaction, indirect influence coefficients obtained for 0.165. Due to the direct influence (Service Quality to User Satisfaction and User Satisfaction to Individual Impact) are both significant, it can be concluded that there are significant indirect influences between the Individual Impact to Service Quality through User Satisfaction because the coefficient of the indirect influence is positive indicating a direct relationship. This means that the higher value of Service Quality, the higher value of Individual Impact, if the User Satisfaction is also increase.
5. Indirect influence of User Satisfaction to Good University Governance through Individual Impact, the indirect influence coefficients obtained for 0.191. Because the direct influence (the Individual Impact to User Satisfaction, Individual Impact to Good University Governance) are both significant, it can be concluded that

there are significant indirect influences between the User Satisfaction to Good University Governance through Individual Impact because the coefficient of the indirect influence is positive indicating a direct relationship. This means that the higher value of User Satisfaction, the higher value of Good University Governance, if the Individual Impacts is also increase.

Descriptive data analysis carried out by studying the frequency distribution of respondents' answers to introductory question items about the identity of respondents, while the inferential statistical data analysis is done through a review of respondents' answers on the research variables. Inferential analysis through structural equation modeling (SEM) techniques on the results of questionnaire data collection. The SEM results of data processing are as follow:

Tabel 2.SEM Result Structural Model: Direct Influence

Inter-Variable Relationship	Coefficient	P-value	Remarks
Leadership Transformational (X1) → User Satisfaction (Y1)	0.148	0.150	Non Significant
System Quality (X2)→ User Satisfaction (Y1)	0.322	0.005	Significant
Information Quality (X3) → User Satisfaction (Y1)	0.280	0.011	Significant
Service Quality (X4) → User Satisfaction (Y1)	0.362	0.002	Significant
Leadership Transformational (X1) → Dampak Individu (Y2)	0.277	0.006	Significant
System Quality (X2)→ Individual Impact (Y2)	0.128	0.234	Non Significant
Information Quality (X3) → Individual Impact (Y2)	0.062	0.550	Non Significant
Service Quality (X4) → Individual Impact (Y2)	0.139	0.221	Non Significant
User Satisfaction (Y1) → Individual Impact (Y2)	0.457	0.002	Significant
User Satisfaction (Y1) → <i>Good University Governance</i> (Y3)	0.195	0.222	Non Significant
Individual Impact (Y2) → <i>Good University Governance</i> (Y3)	0.418	0.011	Significant

Source: Primary Data Processed.

Influence of Transformational Leadership towards User Satisfaction

Based on the analysis, the coefficient of the relationship between Transformational Leadership and User Satisfaction is 0.148 with p-value is 0.150. Because the p-value > 0.05 indicates that the hypothesis that "the relationship between Transformational Leadership and User Satisfaction" is rejected. This means that regardless of the value of Transformational Leadership, will have no influence on the level of User Satisfaction value.

Influence of Quality towards User Satisfaction

Based on the analysis, the coefficient of relationship between the System Quality and User Satisfaction is 0.322 with p-value is 0.005. Because the p-value > 0.05 indicates that the hypothesis that "the relationship between System Quality with User Satisfaction" is received. Because the relationship is positive coefficient indicates a direct relationship. This means that the higher value of System Quality, the higher value of User Satisfaction.

Influence of Information Quality towards User Satisfaction

Based on the analysis, the coefficient of relationship between Information Quality and User Satisfaction is 0.280 with the p-value is 0.011. Because the p-value < 0.05 indicates that the hypothesis that "the relationship between User Satisfaction and Information Quality" is received. Because the relationship is positive coefficient indicates a direct relationship. This means that the higher Information Quality, the higher value of User Satisfaction.

Influence of Service Quality towards User Satisfaction

Based on the analysis, the coefficient of relationship between Service Quality and User Satisfaction is 0.362 with a p-value of 0.002. Because the p-value < 0.05 indicates that the hypothesis that "the relationship between Service Quality and User Satisfaction" is received. Because the relationship is positive coefficient indicates a direct relationship. This means that the higher the value of service quality, the higher the value of User Satisfaction.

Influence of Transformational Leadership towards Individual Impact

Based on the analysis, the coefficient of relationship between Transformational Leadership and Individual Impact is 0.277 with a p-value is 0.006. Because the p-value < 0.05 indicates that the hypothesis that "the relationship between Transformational Leadership and Individual Impact" is acceptable. Because the relationship

is positive coefficient indicates the direction of the relationship. This means that the higher value of Transformational Leadership, the higher value of Individual Impact.

Influence of System Quality towards Individual Impact

Based on the analysis, the coefficient of relationship between System Quality and Individual Impact is 0.128 with p-value is 0.234. Because the $p\text{-value} > 0.05$ indicates that the hypothesis that "the relationship between System Quality with Individual Impact" is rejected. This means that regardless of the value of Quality System, will have no influence on the level of Individual Impact.

Based on the analysis of indirect influences between the Quality System to Individual Impact through User Satisfaction, obtained coefficients of the indirect influence of $0.322 \times 0.457 = 0.147$. Due to the direct influence (System Quality to the User Satisfaction, and the Individual Impact to User Satisfaction) are both significant, it can be concluded that there are significant indirect influences of the System Quality to Individual Impact through User Satisfaction. Because the coefficient of the indirect influence is positive indicating a direct relationship. This means that the higher value of System Quality, the higher value of Individual Impact, if the value of the User Satisfaction is also increase. From the above shows that the influence of the System Quality (X2) to Individual Impact (Y2) through the intermediate variable, User Satisfaction (Y1). Thus User Satisfaction (Y1) is an intervening variable influences that bridged between System Quality (X2) and Individual Impact (Y2).

Direct Influence of Information Quality towards Individual Impact

Based on the analysis, the coefficient of relationship between Information Quality and Individual Impact is 0.062 with p-value is 0.550. Because the $p\text{-value} > 0.05$ indicates that the hypothesis that "the relationship between Information Quality and Individual Impact" is rejected. This means that regardless the value of Information Quality, the higher value of Individual Impact.

Based on the analysis of indirect influences between Quality of Information and Individual Impacts through User Satisfaction, obtained coefficients of the indirect influence is $0.280 \times 0.457 = 0.128$. Due to the direct influence (Information Quality to User Satisfaction and User Satisfaction to Individual Impact) are both significant, it can be concluded that there are significant indirect influences between the Information Quality and Individual Impact through User Satisfaction. Because the coefficient of the indirect influence is positive indicating a direct relationship. This means that the higher Information Quality, the higher value of Individual Impact, if the value of the User Satisfaction is also increase. From the above shows that the influence of Information Quality (X3) to Individual Impact (Y2) through the intermediate variable, User Satisfaction (Y1). Thus User Satisfaction (Y1) is an intervening variable that bridged influences between Information Quality (X3) and Individual Impact (Y2).

Influence of Service Quality towards Individual Impact

The relationship hypothesis testing between Individual Impact and Service Quality is presented in Table 5.18. Based on the analysis, the coefficient of relationship between Service Quality and Individual Impact is 0.139 with p-value is 0.221. Because the $p\text{-value} > 0.05$ indicates that the hypothesis that "the relationship between Service Quality and Individual Impact" is rejected. This means that regardless of the Service Quality, will have no influence on the level of Individual Impact.

Based on the analysis of indirect influences between Individual Impact and Service Quality through User Satisfaction, obtained coefficients of the indirect influence of $0.362 \times 0.457 = 0.165$. Due to the direct influence (Service quality to User Satisfaction and User Satisfaction to Individual Impact) are both significant, it can be concluded that there are significant indirect influence of Individual Impact to Service Quality through User Satisfaction. Because the coefficient of the indirect influence is positive indicating a direct relationship. This means that the higher value of Service Quality, the higher value of Individual Impact, if the value of User Satisfaction is also increase. From the above shows that the influence of Service Quality (X4) to Individual Impact (Y2) through the intermediate variable, User Satisfaction (Y1). Thus User Satisfaction (Y1) is an intervening variable that bridged influences between Service Quality (X4) and Individual Impact (Y2).

Influence of User Satisfaction towards Individual Impact

The hypothesis testing of the relationship of User Satisfaction and Individual Impact is presented in Table 5.18. Based on the analysis, the coefficient of relationship between User Satisfaction and Individual Impact is 0.457 with p-value is 0.002. Because the $p\text{-value} < 0.05$ indicates that the hypothesis that "the relationship between User Satisfaction and Individual Impact" is acceptable. This means that the higher value of User Satisfaction, the higher value of Individual Impact.

Influence of User Satisfaction towards Good University Governance

The relationship hypothesis testing between User Satisfaction and Good University Governance is presented in Table 5.18. Based on the analysis, the coefficient of relationship between User Satisfaction and Good University Governance is 0.457 with p-value is 0.002. Because the p-value <0.05 indicates that the hypothesis that "the relationship between User Satisfaction and Good University Governance" is received. This means that the higher value of User Satisfaction, the higher value of Good University Governance.

Based on the analysis of indirect influences between User Satisfaction and Good University Governance through Individual Impact, the coefficient obtained by the indirect influence is $0.457 \times 0.418 = 0.191$. Because the direct influence (Individual Impact to User Satisfaction and Individual Impact to Good University Governance) are both significant, it can be concluded that there are significant indirect influences between the User Satisfaction and Good University Governance through Individual Impact because the coefficient of the indirect influence is positive indicating a direct relationship. This means that the higher value of User Satisfaction, the higher value of Good University Governance, if the Individual Impacts is also increase. Result shows that the influence of User Satisfaction (Y1) to Good University Governance (Y3) through the intermediate variable, Individual Impact (Y2). Thus the Individual Impact (Y2) is the of intervening variables that bridging influence between User Satisfaction (Y1) and Good University Governance (Y3).

Influence of Individual Impact towards Good University Governance

The relationship hypothesis testing between Individual Impact and Good University Governance is presented in Table 5.18. Based on the analysis, the coefficient of relationship between Individual Impact and Good University Governance is 0.418 with p-value is 0.011. Because the p-value <0.05 indicates that the hypothesis "the relationship between Individual Impact and Good University Governance" is received. Because the coefficient of relationship indicates the influence of both positive marked unidirectional. This means that the higher value of Individual Impact, the higher value of Good University Governance.

CONCLUSIONS

This research contributes to the successful model of information system by adding confirmatory factor analysis to the five (5) research variables of information system success based on the DeLone and McLean's theory that is the system quality, information quality, service quality, user satisfaction and individual impact. The addition of CFA will help to identify the validity and reliability of each indicator becomes instrument of the five variables in this research. The research also found of the two hypothesis proposed towards GUG in which one hypothesis is proved directly influences to GUG, that is the relationship between individual impact and GUG, while indirectly, is the relationship between user satisfaction through individual impact to GUG.

There are eleven hypothesis are constructed in this research that is relationship exists in the transformational leadership theory, the success model of information system. After the hypothesis testing proposed in this research, five of eleven hypotheses are not significant if directly related, whereas if it is indirectly related, only one hypothesis is not significant.

Compared with the results there are some differences primarily due to model differences in the used five variables namely system quality, information quality, service quality, and individual impact. From this DeLone and McLean's five variables, namely Hypothesis H2, H3, H4, and H9, while H6, H7, H8, adopted the model of Seddon. The results show that Hypothesis H2, H3, H4 and H9 provide the same hypothesis with research of DeLone and McLean. Meanwhile, H6, H7 and H8 opposed against Seddon and Kiew. The results of this research on transformational leadership is that the transformational leader who behaves in his leadership, will be more effective, more satisfied to subordinates, and better capability to create an extra effort to subordinates in carrying out the responsibilities. Implication of these results is for future research in the same topic.

Valid instrument is developed using samples data collected from the developed countries, confirmatory analysis and cross-cultural, validation using a large sample gathered elsewhere is required for further generalization of the instrument. While exploratory factor analysis can be a satisfactory technique during the early stages of research on the construction, subsequent use of confirmatory factor analysis (CFA) seems necessary at a later stage. The advantage of applying CFA as compared to the classical approach to determine convergent and discriminant validity is widely recognized.

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