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**THE EFFECT OF QUALITY SYSTEM AND QUALITY INFORMATION  
TOWARD USER SATISFACTION AND IMPACT OF INDIVIDUAL:  
PERSPECTIVE OF SUCCESS MODEL DELONE & MCLEAN  
(EMPIRICAL STUDY OF FINANCIAL INFORMATION SYSTEMS PALOPO  
CITY GOVERNMENT)**

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**Abstract**

The implementation of system within government organization to support information needed by all management level in order to make decision. The point of a tool used to achieve government goal in giving financial information as a part of the management information system of local government, so in this research focus on the role of Regional Information System toward government organization how the SI success is applied in practice. This study aims to evaluate whether the SI was successful and have a positive impact toward user satisfaction and impact on individual by using model of DeLone and McLean (1992). This research use path analysis form. By the sampling method is purposive random sampling is a sampling method based on the certain criteria. While in testing validity and reliability on the result of preliminary testing, is conducted by PLS 4.0 program. The result shows that of the five hypotheses which are built in this research there are four hypotheses that can be accepted: (1) Quality of system significance has positive effect toward user satisfaction. (2) Information quality has significant effect on user satisfaction; (3) Information quality has effect directly and indirectly in positive significantly on impact individual; (4) User satisfaction has significant positive effect toward impact individual. While one of hypothesis is rejected namely the quality of system has effect not significant directly or indirectly on impact individual. The quality of system, by the employees does not give motivation effect because they more focus on quality information is produced regardless the form of quality of the existing system.

**Keywords:** *Regional Information System (SI), model of DeLone and McLean success, Impact of individual and user satisfaction.*

**Background**

DeLone and McLean (1992) conducted the deepest of literature study on the success of information system. They found that the success of information system can be represented by qualitative characteristic from the information system itself (*system quality*), the output quality of the information system (*information quality*), consumption of the output (*use*), the user of response of information system (*user satisfaction*), the influence of information system to user habit (*individual impact*), and its effect toward performance of organization (*organizational impact*).

Empirical research on the model of DeLone and McLean (1992) conducted by McGill et al. (2003) found that *perceived information quality* and *perceived system quality* is a significant predictor for *user satisfaction*. While *user satisfaction* was also a significant predictor for the *intended use* and *perceived individual impact*.

Another study conducted by Livari (2005) shows the result that *perceived system quality* and *perceived information quality* is a significant predictor for *user satisfaction*, but no significant effect on the intensity of use of the system, and *user satisfaction* was also a significant predictor for *individual impact*. The study result Livari (2005) is different from the findings of McGill et al. (2003) only two variables influence the antecedents of the intensity of use of system. It can make the argument research gap that encourages the *research gap* empirical testing of the model of DeLone and McLean (1992) on different object. Research Livari (2005) use an object on the use of system in

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*mandatory*, so that the intensity of the use of system is not an indicator of success developed information system.

Model of DeLone and McLean (1992) stated that the success of information system is influenced by the *perceived information quality* and *perceived system quality* is a significant predictor for user satisfaction. While user satisfaction was also a significant predictor for intended use and perceived individual impact.

Many researches has been conducted to identify the factors that cause the success of information system, one of the very famous research is research conducted by DeLone and McLean (1992) is a successful model of information system developed by them. Since introduced in 1992 and refurbished in 2003, the model of success information system developed by DeLone and McLean 91992) (*D&M IS Success Model*), has been widely applied in several research to explain the success of an information system. In 2005 *D&MIS Success Model* was developed in the public sector by Livari (2005), to see the model of successful implementation of financial information system and the accounting in the city of Oulu, Finlandia, as the result of the reform in national financial system and the accounting in Praja city. Livari propose seven hypotheses to test the construct relations in the model.

Referring to the research of Livari (2005) and still has not been many research in the field of information system in the domain of public sector accounting in Indonesia, researcher will conduct testing *D&MIS Success Model* toward the user of Regional Management Information System (SIMDA) the government of Palopo city.

The implementation of system within government organization to support information needed by all the management level in order to make decision. The point is a tool used to achieve government objectives in giving financial information as part of management information system of local government, so in this research focus on the role of SI toward government organization is how SI success applied in practice. In other word, what is the success of information system and how to make the information system to be successful (Jogiyanto, 2007:1).

The problem is researched can be formulated in a research question how much the success of SI when evaluated by using model of DeLone and McLean (1992); and see the relationship between variable according to the model. DeLone model success and McLean (1992) represented by 6 variables but in this research we adaptation of Livari (2005) which uses 5 variables. Based on the model problem formulation can be formulated in the following research question:

1. Is the system quality (*system quality*) has positive effect toward user satisfaction (*user satisfaction*)
2. Is the information quality (*information quality*) has positive effect toward user satisfaction (*user satisfaction*)
3. Is the information quality (*information quality*) has positive effect toward impact of individual and indirect effect toward the impact of individual through user satisfaction as intervening.
4. Is the information quality (*information quality*) has positive effect toward impact of individual and indirect effect toward the impact of individual through user satisfaction as intervening.
5. Is the user satisfaction has the effect significantly toward the impact of individual.

## Method

### Sampling Method

Sampling method is purposive random sampling which is a sampling method based on the specific/certain criteria. Criterion of sampling of respondents are those who

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have minimum education Strata 1 accounting department and has worked using administration software and finance, minimum one kinds of software at least for one year. The size of sample is determined based on the number of respondents that return list of question. The period of this research began since the questionnaire start to be spread, namely in December 2015 and the limit of return questionnaire which is specified as the last of research, dated 28 April 2016.

#### **Data Processing Technique**

This research used the form of path analysis. While in doing test validity and reliability on the result of preliminary test, was done by program Warp PLS 4.0. The data have been collected is entered to be done validity and reliability test.

Respondents in this research are the end user (*end user*) using SI on public sectors in the Government Palopo City. A number 60 questionnaires were sent.

The Information system is a set of related component which has function to collect, process, store, and distribute information to support the creation of satisfaction and observation in organization (Laudon and Laudon, 2000). The development of information technology responded by organization by designing computer technology-based information system or website. Bodnar and Hopwood (2000) states that computer technology-based information system is a group of hardware and software which is designed to change the data become useful information. The use of hardware and software that is intended to produce information quickly and accurately.

The design process of information system need several approaches, namely technical approach, behavioral approach, and combined (Laudon and Laudon, 2000). The technical approach involved emphasis normative mathematical models to learn information system. Besides that the technical approach also emphasize on the technology prowess physical and formal of the system.

Behavioral approach is needed because of behavioral problems such as system utilization, implementation, and creative design that have impact on changing behavioral and attitudes. Individual response toward information system is often appearing behavior attitude. Information system development process besides attention the approaches above also attention several factors such as economic factor. King et al. (1994) and Laudon (1985) express that information system development process consider internal factor that influence the adoption and design of information system, namely individual and organization value system, norms, as well as strategic interest and need of organization; and external factor that come from the environment outside organization.

#### **Results and Discussion**

##### **Evaluation Measurement Model (Outer Model) by construct reflexive**

Outer model is measurement model that connects indicator with the latent variable. This model is used to know the validity and reliability that connects indicator with latent variable. The indicator in this research was reflective because latent variable indicator affects the indicator.

##### **Value Loading Factor**

Based on the result of convergent validity test with the parameter of value loading factor can be presented in the table 1 as follows:

**Table 1**  
**The Value of Loading Factor**

	<i>System Quality</i>	<i>Information Quality</i>	<i>User Satisfaction</i>	<i>Individual Impact</i>
KS.1	0.708			
KS.3	0.709			
KS.5	0.773			
KS.7	0.718			
KS.9	0.624			
KI.2		0.687		
KI.3		0.750		
KI.4		0.791		
KI.5		0.780		
KI.6		0.605		
KP.1			0.644	
KP.3			0.925	
KP.4			0.758	
KP.5			0.875	
KP.6			0.851	
KP.7			0.635	
DI.2				0.657
DI.3				0.828
DI.5				0.804
DI.6				0.728
DI.7				0.667

Data Source: Data Processed

From the table 1 shows that the value *loading factor* for each indicator has value above 0.60. So, can be concluded that indicator forming constructs *System Quality*, *Information Quality*, *User satisfaction*, and *Impact Individual* categorized valid. There is factor that has value under 0.60, so declared dropped from the model. To construct *system quality* comprises nine indicators, there are four indicators considered invalid so is dropped namely KS.2, KS.4, KS.6 and KS.8. Then, to construct *information quality* that comprise six, only one indicator is below 0.60 namely KI.1. Next, construct *user satisfaction* comprises eight indicators is stated below 0.60 is PK.2 and KP.8. While construct *Individual Impact* comprises ten indicators, only five are above 0.60 and the rest  $\leq 0,60$  so, this indicator is dropped from the model that is DI.1, DI.4, DI.8, DI.9 and DI.10.

From the table 1 above can be obtained value of *loading factor* for each construct that is already above 0.60.

#### **The Value of Average Variance Extracted (AVE)**

From the table 2 the result of convergent validity testing with parameter the value of *Average Variance Extracted (AVE)* can be presented in the table5.2 as follows:

**Table 2**  
*Average Variance Extracted (AVE)*

	<i>System Quality</i>	<i>Information Quality</i>	<i>User Satisfaction</i>	<i>Individual Impact</i>
<i>Average Variance Extracted (AVE)</i>	0.501	0.527	0.623	0.547

Data Source: Appendix 3b, processed (2015)

From the table 2 above shows that the value of *Average Variance Extracted (AVE)* for each construct namely has value above 0.50, it means that the four construct categorized valid. Thus, to test validity convergent consisting of parameter namely value of *cross loading* and *Average Variance Extracted (AVE)* has been categorized valid.

#### Designing Structural Model (Inner Model)

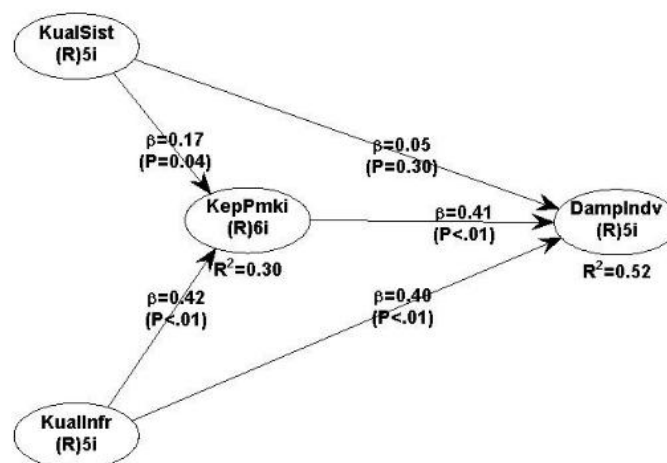
In assessing the structural model or *inner model* with Warp PLS 4.0 can be done by looking at the *Rule of Thumb* structural model is as follows:

There is the result of structural model testing or inner model in this research can be presented in the following figure:

**Figure 1**

#### The Result Analysis of Structural Model (*Inner Model*)

Source: The Result of Data Process



#### Direct Effect and Indirect Effect

The analysis of direct influence (*direct effect*), the indirect effect (*indirect effect*), and the total effect (*total effect*) between variables in the model, is used to compare the effect of variable constructs. The direct effect is coefficient of all coefficient line with arrows one end, while the indirect influence is the effect that emerge through a variable between (intervening variable) while the total effect is the effect of the various relationship. The result of influence test is presented in the following table:

**Tabel 3**  
**The Result of Path Coefficients Direct and Indirect**

Path		Effect			P-Value	
		Direct	Indirect	Total	Direct	Indirect
System Quality	↘ User Satisfaction	0,170	-	0,170	0,042	-
Information Quality	↘ User Satisfaction	0,419	-	0,419	0,001	-
System Quality	↘ Individual Impact	0,051	0,070	0,121	0,298	0,154
Information Quality	↘ Individual Impact	0,399	0,173	0,572	0,001	0,007
User Satisfaction	↘ Individual Impact	0,412	-	0,412	0,001	-

Data Source: The Result of Data Processing

Table 3 above shows that probability value at 5% level concluded five lanes significantly and two lanes were not significant. The interpretation of table 5.29 can be explained as follows:

- The *System Quality* has direct influence positively and significantly toward *User Satisfaction* with  $P = 0,042 (< 0,05)$ , this coefficient indicates that by increasing *system quality* will be followed by increasing *user satisfaction* significantly.
- The *Information Quality* has direct influence positively and significantly toward *User Satisfaction* with  $P = 0,001 (> 0,05)$ , this coefficient indicates that by increasing *information quality* will be followed by increasing *user satisfaction* significantly.
- The *System Quality* is not direct impact significantly toward individual impact with  $P = 0,2987 (> 0,05)$ , this coefficient shows that by increasing system quality, so it is not has effect directly toward individual impact significantly.
- The *System Quality* has indirect effect positive and not significant toward *individual impact* through user satisfaction as intervening with  $P = 0,154 (> 0,05)$ , this coefficient shows that by increasing *system quality* indirectly so it does not affect toward *individual impact* significantly.
- The *Information Quality* has effect directly significantly toward Individual Impact with  $P = 0,001 (< 0,05)$ , this coefficient shows that by increasing *system quality*, so it directly affects toward *individual impact* significantly.
- The *Information Quality* has indirect influence positively and significant toward *individual impact* through *user satisfaction* as intervening with  $P = 0,007 (< 0,05)$ , this coefficient shows that by increasing *information quality* indirectly so has the effect toward *invidual impact* significantly.
- The *User Satisfaction* has the effect directly positive and significant toward *Individual Impact* with  $P = 0,001 (< 0,05)$ , this coefficient shows that by

increasing *user satisfaction* directly so it will have an impact toward individual significantly.

#### The Value of Adjusted R-Squared

The Value of Adjusted R-Squared in this research is as follows:

**Table 4**  
**R-Squared Coefficient**

Endogen Variable	Value of R-Squared
<i>User Satisfaction</i>	0,305
<i>Individual Impact</i>	0,522

Data Source: The Result of Data Processing

Based on the table 5.4 above is acquired the value of R-Squared to construct *User Satisfaction* namely amount 0.305 which means that the influence of construct *system quality* and *information quality* in explaining construct *user satisfaction* is 30.5% and the remaining 69.5% influenced by other constructs outside the model this research. R-Squared value is included in the weak category. Furthermore, the value of R-Squared to construct *Individual Impact* that is 0.522 which means that the influence of construct *system quality*, *information system*, and *user satisfaction* in explaining construct *individual impact* is 52,2% and the remaining 47.8% influenced by other variables outside the research model. The value of R-Squared is categorized moderate.

#### Discussion Hypothesis Testing Results

The result and discussion of research hypothesis testing can be summarized in the table 5.5 below is as follows:

**Tabel 5**  
**The Results Summarized of Hypothesis Testing**

Path		Hypothesis	P-Value	Result	
<i>System Quality</i>	↘ <i>User Satisfaction</i>	H1	0,042	Received	
<i>Information Quality</i>	↘ <i>User Satisfaction</i>	H2	0,001	Received	
<i>System Quality</i>	↘ <i>Individual Impact</i>	H3	<i>Direct</i>	0,298	Rejected
			<i>Indirect</i>	0,154	
<i>Information Quality</i>	↘ <i>Individual Impact</i>	H4	<i>Direct</i>	0,001	Received
			<i>Indirect</i>	0,007	
<i>User Satisfaction</i>	↘ <i>Individual Impact</i>	H5	0,001	Received	

Data Source: The Result of Data Processing

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The result of hypothesis testing and in this research can be explained in detail as follows:

**1. The effect of system quality and information quality toward user satisfaction**

*System quality* and *information quality* has effect directly positively and significantly toward *user satisfaction*, it means by increasing *system quality* and *information quality* is followed by increasing *user satisfaction*. It means that the respondents have positive perception toward information system success. It means the respondents consider that each feature and applications owned by *information system of regional management (SIMDA)* Palopo city that they use either ease, usability, high-power appeal so perceived well because have benefit toward the activity of financial report and management in Palopo city. It can be concluded that *system quality* and *information quality* has positive effect toward *user satisfaction* acceptable.

**2. The effect directly and indirectly of system quality toward Individual Impact**

*System quality* has positive effect not significant directly toward *individual impact*, it means that by increasing *system quality* not followed by increasing *User Satisfaction*. It means that the majority of respondents considered that although SIMDA offered various feature and facilities that are easy to use be used by employees in Palopo city, but respondents considered that they have to adjust by the level of SIMDA benefit toward employees' motivation.

*System quality* has positive effect not significant indirectly toward *Individual Impact* through *User Satisfaction*, it means that construct *User Satisfaction* cannot be able play a role in mediating between *System Quality* toward *Individual Impact*.

It can be concluded that third hypothesis stating that *System Quality* has positive effect toward *Individual Impact* cannot be acceptable.

**3. The Effect Directly and Indirectly of Information Quality toward Individual Impact**

*Information Quality* has significant positive effect directly toward *Individual Impact*, it means that by increasing information quality so will increase *Individual Impact*. It means the respondents considered that the benefit acquired from the use of SIMDA was felt very positive effect toward spirit and motivation of employee work.

*User Satisfaction* has significant positive effect indirectly toward *Individual Impact* through *user satisfaction*, it means that construct *User Satisfaction* to be able play a role in mediating between *Information Quality* toward *Individual Impact*. Where the respondents considered that the benefit that they have acquired from the use of SIMDA in supporting the development of employee information need, in fact was perceived well, it is drawn from the more they are motivated because the information which is produced from system is accurate in providing information for interested parties.

It can be concluded that the fourth hypothesis which states that *information system* has positive effect toward *individual impact* can be accepted. The acceptance of this research hypothesis is consistent with Livari model (2005).

**4. The Effect User Satisfaction toward Individual Impact**

*User Satisfaction* has effect positive directly and significantly toward *individual impact*, it means that by increasing *User Satisfaction* so was followed by increasing *Individual Impact*. It means that the effect of the existence and the use of information system will affect to performance, decision making, and degree of individual learning within organization. The existence of new information system will be a motivation and challenge for individual in organization to work better, which has impact to performance of organization. So, the fifth hypothesis can be accepted/proven.



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## Conclusion

Based on the subject matter, the purpose and discussion, it can be argued conclusion the result of research showed that of the five hypotheses which are built in this research there are four hypotheses can be accepted: (1) System quality significant positive effect toward *user satisfaction*. (2) *Information quality* significant effect toward *User Satisfaction*; (3) *Information quality* directly and indirectly affect positively significant toward *Individual impact*; (4) *User satisfaction* significant positive affect toward *Individual Impact*. While one hypothesis was rejected namely *System Quality* has effect insignificant directly and indirectly toward *Individual Impact*. System quality, by the employee does not provide motivation effect because they emphasize on information quality which is produced without see the shape of quality of existing system. The findings of this research provide important contributions in the study of information system success model DeLone and McLean in the public sector.

This study also provides empirical support for the success model of information system in the context of information system application in local government by employees in Palopo city in supporting public service activities. However, the problem lies in consistency to make the information is the output of this system are utilized by important parties in decision making and on the ease that has been given.

The success of information system is very determined by human resources to operate not just the system quality, so the development of these resources needs to be taken so that the system performance can really give informative benefit. Make output information from the system as the information in determination decision or policy in the context of management control SKPD.

## References

- Baile, J. E. and S.W. Pearson. (1983). Development of a Tool for Measuring and Analyzing Computer User Satisfaction' *Management Science* 29 (May)
- Bodnar, George, dan Hopwood, W. (2006). *Sistem Informasi Akuntansi*, Penerbit: Andy Jogjakarta, Edisi 9. Diterjemahkan oleh Julianto Agung Saputra dan Lilis Setrowati.
- DeLone, WH., dan McLean, ER. (1992). Information Systems Success: The Quest for the Dependent Variable. *Information System Research*, 3(1), 60-95.
- Doll, WJ, and G.Torkzadeh. 1988. The Measurement of End-user Computing Satisfaction. *MIS Quarterly* 12, June.
- Edberg, DT., dan Bowman, BJ. (1996). User-Developed Applications: An Empirical Study of Application Quality and Developer Productivity. *Journal of MIS*, 13(1), 167-185.
- McGill, T., Hobbs, V., dan Klobas, J. (2003). Users Developed Application and Information System Success: A Test of Delone and McLean's Model. *Information Resource Management Journal*, 16 (1), 24 – 45.
- Livari, J. (2005). An Empirical Test of the DeLone-McLean Model of Information Systems Success. *The Database for Advances in Information Systems*, 26(2), 8-27.
- Istianingsih, dan S.H. Wijayanto. (2008). Pengaruh Kualitas Sistem Informasi, Perceived Usefulness, dan Kualitas Informasi Terhadap Kepuasan pemakai Akhir Software Akuntansi. Pontianak: *Simposium Nasional Akuntansi XI*, Hal: 1-51.
- Ives, B., M. Olson, and S. Baroudi. (1983). The Measurement of User Information Satisfaction. *Communications of the ACM*, October.
- Jogiyanto. (2007a). *Model Kesuksesan Sistem Teknologi Informasi*. Yogyakarta. Penerbit Andi.

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- King, J.L., V.Gurbaxani, K.L.Kraemer, F. W. McFarlan, K. S. Raman, and C.S.Yap. 1994. Institutional Factors in Information Technology Innovation. *Information System Research* 5: 2 (June).
- Laudon, Kenneth C., (1985). Environment and Institutional Models of Systems Development. *Commucation of the ACM* 28 Number 7 (July)
- Laudon, Kenneth C., and Jane P. Laudon, (2000). Organization and Technology in The Networked Enterprise. *Management Information System*, Six Edition, International Edition. www.prenhall.com/laudon.
- Landrum, Hollis, and Victor R.Prybutok. (2004). A Service Quality and Success Model for the Information Service Industry. *European Journal of Operational Research (EJO)*. ISSN: 0377-2217. Volume 156. August. ProQuest Company. 2005.
- Livary, Juhani. (2005). An Empirical Test of The DeLone-McLean Model of Information System Success. *Database for Advance in Information System (DFA)*. ISSN: 1532-0936 .Volume 36. ProQuest Company.
- Mahmood, M.A., J.M. Burn, L.A. Geomoets, and C. Jacquez. (2000). Variable Affecting Information Technology End-user Satisfaction: A Meta-Analysis of the Empirical of the Empirical Literature. *International Journal of Human Computer Studies*, 52: 4.
- Markus, M.Lynne, and Mark Keil. (1994). If We Build It, They Will Come: Designing Information Systems That People Want To Use. *Sloan Management Review* (Summer)
- Seddon, Peter, and Siew-Kee Yip. (1992). An Empirical Evaluation of User Information Satisfaction (UIS) Measures for Use with General Ledger Accounting Software, *The Journal Information Systems*, Volume Six, Number one, Spring.
- Sitinjak, Tumpal JR., dan Sugiarto. (2006). *Lisrel. Edisi Pertama*. Yogyakarta: Graha Ilmu.