International Journal of Economics, Commerce and Management
United Kingdom Vol. V, Issue 12, December 2017
http://ijecm.co.uk/ ISSN 2348 0386

THE IMPACT OF MANAGEMENT INFORMATION SYSTEM SUCCESS ON PHYSICAL ASSET MANAGEMENT PERFORMANCE: CASE STUDY IN BANDUNG CITY, INDONESIA

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Abstract

One of the strategies that must be implemented to optimize the benefits gained on the asset is by adopting Management Information System (MIS). The purpose of MIS application is to achieve integrated and planned asset management in order to provide the necessary data and information within a short time for decision making. Bandung City, Indonesia has implemented MIS to manage their physical asset. However, there are still many problems related to management of its physical assets. Against this background, the purpose of this research is to analyze the implementation of MIS in physical asset management of Bandung City and examine potential information that can be pursued as an opportunity to enhance asset management performance. This study uses quantitative methods with survey approach to collect primary data from 58 respondents. The criteria used to measure the success of MIS implementation include technical and beliefs aspect. These criteria are analyzed for their impact on the performance of physical asset management. There are nine hypotheses proposed in the research using a significance level of 5 percent, out of which there are two *unsupported hypotheses. Moreover, based on statistical analysis it can be concluded that the impact of MIS implementation on the management of physical assets in Bandung city is only 21.5%.*

Keywords: Management Information Systems (MIS), Physical Asset Management, D&M IS Success Model, TAM

INTRODUCTION

Due to decentralization policies, local governments in Indonesia are required to develop financial mechanisms to explore their local potentials in order to support regional development and improving the quality of services to communities. One solution to achieve those goals is through optimize the management of their assets. Proper asset management based on efficient and effective management principles is important to give local governments the strength in regional economic development (Siregar, 2004). In addition, in local financial management, one of the most strategic areas is the physical assets. It is because the asset has the largest portion in local government financial statements and its existence greatly affect the regional development, which, in the end, it may affect the quality of local government services to the community (Batara, Rachmat, Sadik&Ahmad, 2015).

In fact, based on the audit results of Audit Board of the Republic of Indonesia, there are still many problems in the management physical assets of local government in Indonesia. In 2016, the summary of audit report by the Audit Supreme Agency of the Republic of Indonesia showed that only about 51 percent of all local government financial statements in Indonesia have received unqualified opinion. In the report, the Audit Supreme Agency of the Republic of Indonesia stated that the main problem that lead the phenomenon was the reporting of physical assets on the balance sheet. Based on these conditions, it can be concluded that the performance of physical asset management of local government in Indonesia is weak.

According to Azhari & Ross (2010), the concept of asset management was first initiated by the private industry. Implementation of the concept has proven to deliver positive results and generate significant profits for private sector companies (Summerell in Hanis, Trigunarsyah, and Susilawati, 2010). The success of the private sector is being considered by government authorities and public companies. However, in public organizations, the main objective of asset management is to optimize asset utilization to meet government and social operational needs and economic responsibility for the general public. (Abdullah, Razak, Hanafi, and Salleh, 2011).According to Mardiasmo (2004), the management of physical assets is a crucial policy for local governments that must be planned and implemented properly and one of the strategies that should be performed to make that happen is by adopting Management Information System (MIS). Siregar (2004) emphasized the importance of MIS implementation in every stage of the management of physical assets so that asset treatment can be monitored clearly. The research of Batara et al. (2015) concludes that to achieve a well-planned and integrated asset management and able to provide the necessary data and information in a short time, a decision supporting system is required. According to Jooste &Vlok (2015), the use of Information Systems (IS) in asset management is a challenge which if managed well, it will help organizations manage their assets more effectively. However, many asset managers find it difficult to obtain reliable asset data and information even though they have implemented MIS in asset management (Brous et al., 2016).Therefore, it is necessary to analyze the factors that can be used as a measure of successful implementation of MIS.

In the last decade, many researchers were conducting a study to identify the factors that contribute to the successful application of MIS. The researchers considered so many varied aspects that led to the growing perspectives on the research is being so vast. Ultimately, that situation causes the variables that evolve in research in this area became so broadly to defined (Delone& McLean, 1992). One model that is widely used as a reference in research related to the implementation of MIS is the Technology Acceptance Model (TAM). The model was introduced by Fred Davis in 1986 to describe the individual acceptance behavior (Surendran, 2012). In 1992, Delone and McLean introduced the D&M Success Model. The model is a taxonomic and interactive model that can be used as a framework for to conceptualize and operationalize the successful implementation of IS (Delone and McLean, 2003). Unlike the TAM model that focuses on user behavior, the D&M Success Model also emphasizes the technical elements in measuring the success of MIS measurements.

Bandung City has implemented an IS in managing its physical asset (Supreme Audit Agency of the Republic of Indonesia, 2016). The IS is integrated through planning, procurement, administration, recording, to reporting. However, there are many problems related to physical asset management in Bandung City. The Supreme Audit Agency of the Republic of Indonesia found that physical assets in Bandung City is not based on proper acquisition value or fair value, there are many physical assets whose existence is unknown and does not have any detail, and also there are lands used for public infrastructure and facilities which have not been recorded. This indicates that the performance of physical asset management Bandung has not run well.

This paper aims to analyze the implementation of MIS in physical asset management of Bandung City and examine potential information that can be pursued as an opportunity to develop asset management through the MIS implementation, and also to identify the obstacles and major problems encountered in an effort to enhance the performance of physical assets management.

LITERATURE REVIEW

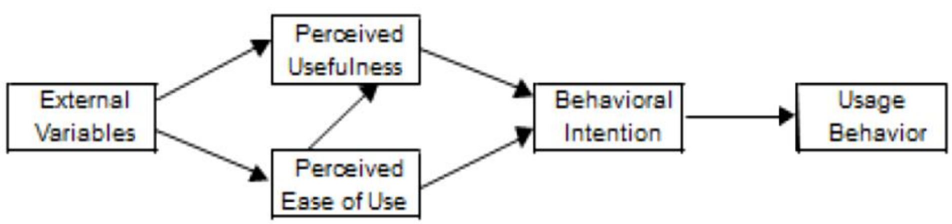
Management Information Systems Success

Measuring the success of MIS implementation is very crucial because it will help us to understand the benefits derived from management actions related to MIS implementation and value of IS implementation investment (Delone & McLean, 2003).The concept or model that became the reference in measuring the success of MIS adoption in this study is as follows:

Technology Accepting Model (TAM)

TAM is one of the most popular research models to predict the use and acceptance of information and technology systems by individual users. This model was introduced by Fred Davis in 1986 to describe the individual acceptance behavior (Surendran, 2012). There are two main variables or categories that are relevant to "computer use behavior" in TAM framework. The variables are perceived usefulness (PU) and perceived ease of use (PEOU). The TAM model has been evaluated several times. In 1996, Davis along with Venkatesh introduced the final TAM model. They introduce the term external variable that affects perceived usefulness and perceived ease of use for IS acceptance. The purpose of the final TAM model is to explain the determinant factors on the acceptance of general computer usage that helps to explain the behavior of users (Lai, 2017).

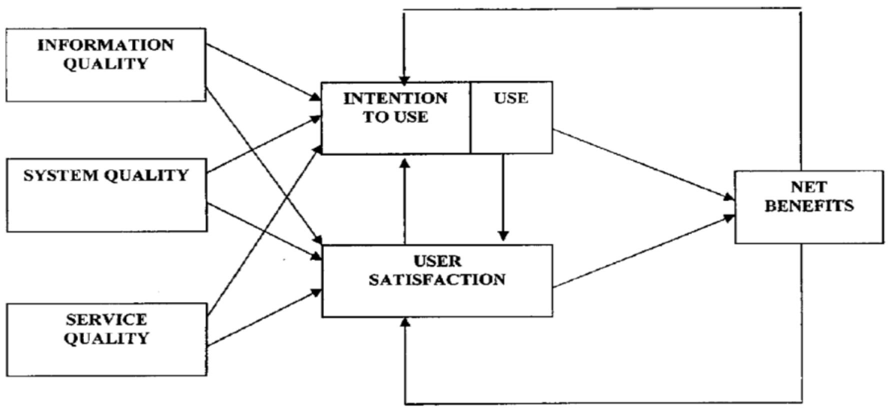
Figure 1. Final Version of Technology Acceptance Model (TAM), (Venkatesh & Davis, 1996)



D&M IS Succes Model

Another model that has been widely used to measure the success of MIS implementation is the D&M IS Succes Model which was first introduced in 1992 by William H. Delone and Ephraim R. McLean. This concept is a taxonomic and interactive model that can be used as a framework to conceptualize and operationalize the successful implementation of IS (Delone and McLean, 2003). The taxonomy introduced six dimensions of successful SIM implementation: system quality, information quality, use, user satisfaction, individual impact, and organizational impact.

Figure 2. 10 Years Updated D&M IS Success Model (Delone and McLean, 2003)



And then, after 10 years, Delone and McLean updated the model. The changes made by Delone and McLean include the addition of service quality dimension and the unification of individual variable impact and organizational impact into net benefit.Furthermore, the impact or net benefit of IS implementation continues to grow not only in terms of organization in general. The choice where the impact should be measured will depend on the characteristics of the system, how the system is measured and the purpose of the system developed (Delone & McLane, 2003). The impact of MIS adoption which analyzed in this research is to the performance of physical asset management.

Physical Asset Management Performance

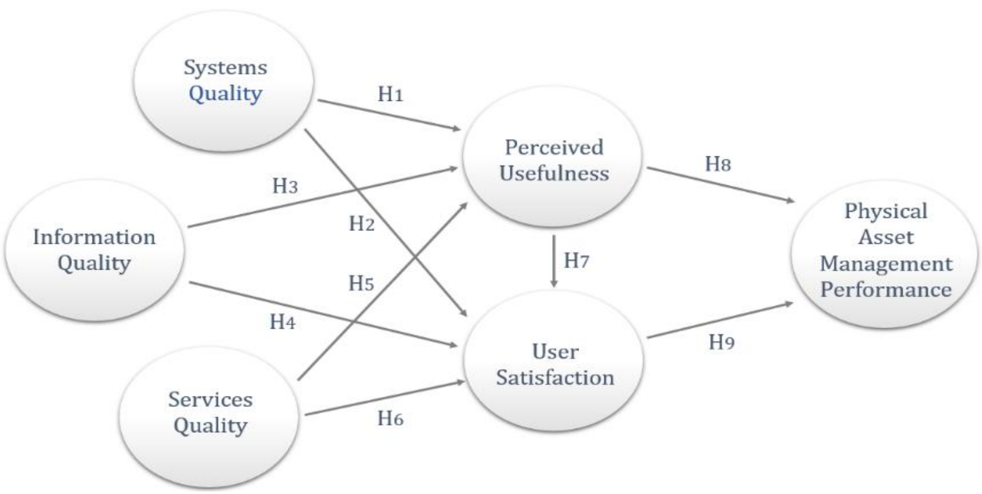
Ouertani, Parlikad, and McFarlane (2008) mentioned that the concept of asset management is very broad because it depends on the perspective of the type of assets we analyze and the purpose of the analysis. Based on the perspectives of physical assets, Mitchell and Carlson in Schuman and Brent (2005: 567) define asset management as "a strategic, integrated set of comprehensive processes (financial, management, engineering, operating and maintenance)" to gain greatest lifetime effectiveness, utilization and return from physical assets (production and operating equipment and structures) ". Ouertani et al. (2008:29) defines asset management as "the process of organizing, planning and controlling the acquisition, use, care, refurbishment, and / or disposal of physical assets to optimize their service delivery potential. . . ". Kaganova in Rymarzak and Trojanowski (2013:7) defines asset management as "a process of making decisions and their implementation related to real estate acquisition, use and disposal."Meanwhile Hasting (2010) defined physical assets management as activities to identifying needed assets, identifying funding needs, acquiring assets, providing logistics & maintenance and disposal of assets.

Based on these definitions, it can be concluded that the performance of physical asset management can be measured through planning, acquisition, operation, maintenance and disposal. The dimensions are also used by the Government of Australia and the Government of Scotland in the management of its public physical assets. Therefore, these dimensions can also be applied to the management of public sector assets.

CONCEPTUAL FRAMEWORK

Based on the above literature and assumptions, the framework of this research is as follows:

Figure 3. Conceptual framework



In constructing the research model, researchers adopted the TAM model and the D&M IS Success model to measure the successful implementation of MIS. The research model is divided the variables into three levels or categories: technical, beliefs and impact. This is similar to Delone and McLean's statement that the D&M IS Success Model consists of three components: the creation of a system, the use of the system, and the consequences of this system use.

Technical Level

The technical level is defined as "the accuracy and efficiency of the communication system that produces information" (Shannon and Weaver in Delona& McLean, 2003). At this level, the variables used are systems quality, information quality and services quality. Systems quality is a desirable characteristic of an IS. The indicator used to measure the quality of the system are ease of use, system flexibility, system reliability, and ease of learning, as well as system features of intuitiveness, sophistication, flexibility, and response times. Information quality is the desired characteristic of the IS output. The indicator used to measure the quality of information are accuracy, completeness, conciseness, consistency, relevance, timeliness, amount of information, accessibility, and understandability (Al-Mamary et al., 2013). While services quality is the quality of support received by the user system from the IS department or IT support personnel. The indicator used to measure the quality of the service are responsiveness, accuracy, reliability, technical competence, and empathy of the personnel staff (Petter et al. in Al-Mamary et al., 2014).

Beliefs Level

Fishbien and Adjen in Lai (2017) define beliefs as "a link between an object and some attribute". At this level, the variables used are perceived usefulness and user satisfaction. Perceived usefulness is defined as the user's belief that the implementation of a particular information system will improve their performance (Fred Davis in Al-Mamary et al., 2013). The indicator used to measure this construct include: enables me to accomplish tasks more quickly, enhances the effectiveness of the job, easier to do my job, improves job performance, and improves job productivity (Al-Mamary et al., 2013). Meanwhile, user satisfaction is defined as user response to the use of the output of an IS (Halawi, et al. in DeLone& McLean in Al-Mamary et al., 2014). The indicator used to measure this construct include: the system meets my needs, satisfied with the system efficiency, satisfied with the system effectiveness, and overall, I am satisfied with the system (Seddon &Kiew in Al-Mamary et al., 2014).

Effect of Systems Quality on Perceived Usefulness and User Satisfaction

The higher the quality of the system, lead to the higher the user's confidence that the implementation of the system will improve their performance and the higher the user satisfaction in implementing the system. Landrum et al., Hwang et al., Park et al., Chen in Al-Mamary et al. (2013) supports that there is a positive relationship between IS quality with Perceived usefulness. Meanwhile, related to user satisfaction in using the system, Wu and Wang, Livari, Landrum et al., Hussein et al., A. Halawi et al. in Al-Mamary et al. (2013) supports that there is a positive relationship between IS quality and user satisfaction.

Based on previous research that describes the relationship between system quality to perceived usefulness and user satisfaction, so the hypothesis is proposed as follows:

H_1 : *There is positive relationship between MIS quality and perceived usefulness.*

H_2 : *There is positive relationship between MIS quality and user satisfaction.*

Effect of Information Quality on Perceived Usefulness and User Satisfaction

The higher the quality of information, lead to the higher the user's confidence that the implementation of the system will improve their performance and the higher the user satisfaction in implementing the system. Hwang, et al. and Park et al. in Al-Mamary et al. (2014) supports that there is a relationship between quality information and perceived usefulness. Meanwhile, related to user satisfaction in using the system, Landrum et al., Wu and Wang, Livari, Caniëls&Bakens, and A. Halawi et al. in Al-Mamary et al. (2013) support that there is a positive relationship between the quality of information with user satisfaction.

Based on previous research that describes the relationship between information quality to perceived usefulness and user satisfaction, so the hypothesis is proposed as follows:

H_3 : *There is positive relationship between information quality and perceived usefulness.*

H_4 : *There is positive relationship between information quality and user satisfaction.*

Effect of Services Quality on Perceived Usefulness and User Satisfaction

The higher the quality of service, lead to the higher the user's confidence that the implementation of the system will improve their performance and the higher the user satisfaction in implementing the system. Cheng and Hwang, et al. in Al-Mamary et al. (2014) support that the higher the quality of service then perceived usefulness will also increase. Meanwhile, related to user satisfaction in using the system, Petter and Fruhling, and Lin and Lee in Al-Mamary et al. (2014) supports that there is a positive relationship between the quality of service and user satisfaction.

Based on previous research that describes the relationship between service quality to perceived usefulness and user satisfaction, so the hypothesis is proposed as follows:

H_5 : *There is positive relationship between services quality and perceived usefulness.*

H_6 : *There is positive relationship between services quality and user satisfaction.*

Effect of Perceived Usefulness on User Satisfaction

The higher the user's belief that the use of the system will improve their performance, lead to the higher the user satisfaction in implementing the system. This is supported by Landrum et al., Hwang et al., Park et al., Lai, Wang and Chou and Ainin, Bahri and Ahmad in Al-Mamary et al.

(2013) which states that perceived of usefulness will have a positive and significant relationship to user satisfaction.

Based on previous research that describes the relationship between perceived usefulness and user satisfaction, so the hypothesis is proposed as follows:

H_7 : *There is positive relationship between perceived usefulness and user satisfaction*

Impact of MIS in Physical Asset Management Performance

According to Mardiasmo (2004), MIS has a big role to improve the effectiveness of physical asset management. Batara et al. (2015) states that in order to achieve the planned and integrated physical asset management objectives, and able to provide the necessary data and information in a short time, an information support system of decision support systems is required. This is also supported by Siregar's(2004) statement which emphasizes that the development of MIS is very important to be applied to control and supervise every stage of physical asset management.

Based on the audit of Scotland (2009), The Department of Treasury and Finance of Australia (2000), and the Home Affairs Regulation of the Republic of Indonesia No. 19 (2016), the performance of physical asset management is can be measured through: need assessment, whole-life costing, procurement Accountability, procurement assessment, administration, valuation of asset, condition monitoring, routine maintenance, retirement, and renewal.

Effect of Perceived Usefulness and User Satisfaction on Physical Asset Management Performance

Based on the literature, perceived usefulness and user satisfaction are related to physical asset management. This is also supported by Hasting (2010) which states that the higher the motivation of the user or personnel in using MIS and the more extensive the system is used, the perceived benefits in the application of physical asset management will be higher.

Based on previous research that describes the relationship between perceived usefulness and user satisfaction to the physical asset management performance, so the hypothesis is proposed as:

H_8 : *There is positive relationship between perceived usefulness and physical asset management performance.*

H_9 : *There is positive relationship between user satisfaction and physical asset management performance.*

RESEARCH METHOD

This study uses quantitative methods with survey approach. The research instrument uses rating scales method which is intended to measure perceptions of respondents to any questions or statements submitted to the questionnaire. The rating scale apply intervals from one to ten. The number one to show the perception of "strongly disagree" while the number ten to show the perception of "strongly agree".

The population in this study is all government employees in every unit of local government in Bandung. The sample selection uses purposive sampling technique. This technique limits the number of samples in a particular person who can provide the specific information desired according to the research objectives(Sugiyono, 2013). The sample in this research is a staff who responsible for maintaining and recording the assets of each unit in Bandung City.

66 questionnaires have been distributed, but only 58 questionnaires have been filled and deserve to be further processed in this research. The secondary data are obtained from a variety of references, articles, journals, scientific publications, and all files and records belong to Bandung City related to the management of physical asset management.

ANALYSIS

Data analysis in this research uses Partial Least Squire - Structural Equation Modeling (PLS-SEM) analysis. The approach is part of the Structural Equation Modeling (SEM) model that is widely used to test the relationship of a theory. The Author used SmartPLS 3.0 software to perform model evaluation. In the research, PLS-SEM is used to measure the quality of Asset Management Information System and physical asset management performance as well as to analyze the relationship between MIS implementation and physical asset management performance in Bandung City.

PLS-SEM analysis is divided into two sub models namely measurement models (outer model) and structural model (inner model). According to Ghozali & Latan (2015), an outer model evaluation was conducted to assess the validity and reliability of the model. Indicators of latent variables in PLS-SEM can be either reflective or formative form. The outer model with reflective indicators is evaluated through the convergent and discriminant validity of the latent construct indicator while the indicator block uses composite reliability and Cronbach alpha.

Table 1. Summary of the Rule of thumb Evaluation Model (Reflective)

Validity and Reliability	Parameter	Rule of Thumb
Convergen Validity	Loading Factor	>0.6 for exploratory research
	AVE	>0.5 for exploratory research
Discriminant Validity	AVE square root and correlation between construct	AVE square root > correlation between construct
Reliability	Cronbach's Alpha	>0.6 for exploratory research
	Composite Reliability	>0.6 for exploratory research

Meanwhile, the evaluation of structural model aims to predict the relationship between latent variables. The model evaluation is based on the percentage of variance that can be observed from the value of R-Squares and Average Variance Extracted (AVE).The significance value used in this study was 5% (one-tailed).

Hypothesis Testing

Hypothesis is analyzed through coefficient value of path or inner model to know the relationship between variables through bootstrapping procedure. The value of the parameter coefficient and significance value indicate the direction of influence between constructs (whether positive or negative) and the level of significance in testing the hypothesis (Ghozali&Latan, 2015). The hypotheses in this study are supported if the value of the parameter coefficient has a positive value (+). The significance value used in this study is 1.64 (one-tailed, significance level = 5%).

Inner model analysis is performed on the coefficients of structural equations by specifying a certain level of significance.

The form of structural model equation in PLS-SEM is as follows:

$\eta_j = \Sigma_i \beta_{ji} \eta_i + \Sigma_i \gamma_{jb} \xi_b + \varsigma_j$

where;

η : Endogenous latent variables (dependent)

ξ : Exogenous latent variables (independent)

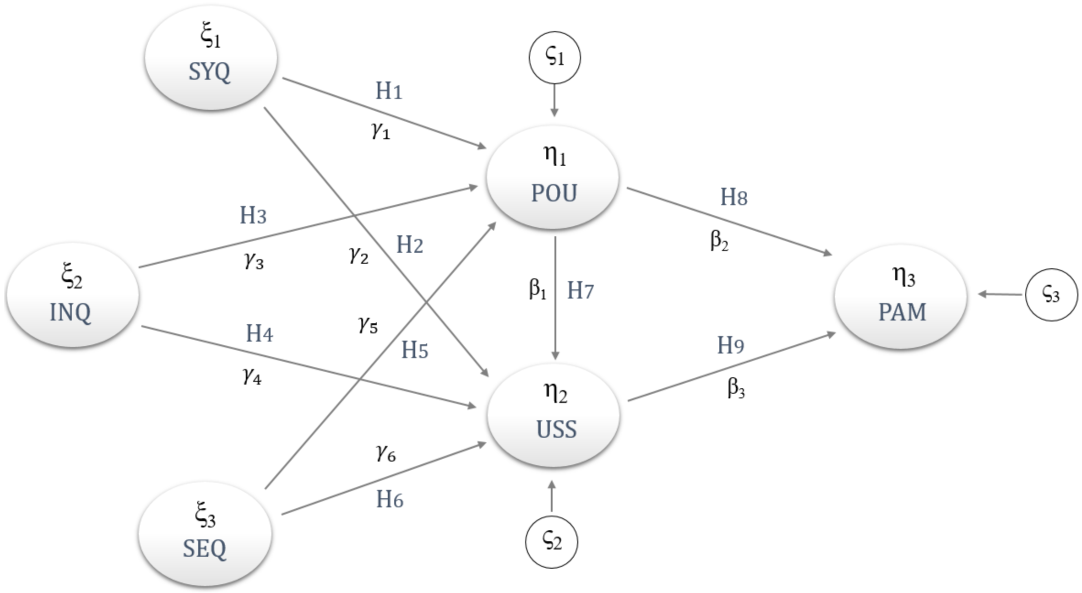
γjb : The path coefficient that connects endogenous latent variables with exogenous

βji : The path coefficient that connects endogenous latent variables with endogenous

ςj : Latent variables inner residual

Equation analysis of structural model above is intended to test the hypothesis proposed. In this study, to analyze the proposed hypothesis, the researcher uses 3 structural models.

Figure 4. Structural Model



Keys

SYQ	:	Systems Quality	POU	:	Perceived of Usefulness
INQ	:	Information Quality	USS	:	User Satisfaction
SEQ	:	Services Quality	PAM	:	Physical Asset Management Performance

Structural Model 1

Structural model 1 tested hypotheses 1, 3, and 5, which analyzed the relationship between the four latent variables of SYQ (System Quality), INQ (Information Quality), SEQ (Services Quality), and POU (Perceived of Usefulness). POU acts as an endogenous construct, while the other constructs (SYQ, INQ, SEQ) are positioned as exogenous constructs. The equation of structural model 1 is as follows:

POU = γ_1 SYQ + γ_3 INQ + γ_5 SEQ + ς_1

Structural Model 2

Structural model 2 tested hypotheses 2, 4, 6, and 7, which analyzed the relationship between the five latent variables of SYQ (System Quality), INQ (Information Quality), SEQ (Services Quality), POU (Perceived of Usefulness), and USS (User Satisfaction). USS acts as an endogenous construct, while the other constructs (SYQ, INQ, SEQ, POU) are positioned as exogenous constructs. The equation of structural model 2 is as follows:

USS = γ_2 SYQ + γ_4 INQ + γ_6 SEQ + β_1 POU + ς_2

Structural Model 3

Structural model 3 tested hypotheses 8 and 9, which analyzed which analyzed the relationship between the three latent variables of POU (Perceived of Usefulness), USS (User Satisfaction), and PAM (Physical Asset Management Performance). PAM acts as an endogenous construct, while the other constructs (POU & USS) are positioned as exogenous constructs. The equation of structural model 3 is as follows:

$PAM = \beta_2 \, POU + \beta_3 \, USS + \varsigma_3$

Model Evaluation

Based on the calculation of PLS Algorithm, it is found that one indicator (SYQ3) has a loading factor of less than 0.6, therefore the indicator is removed from the model evaluation and re-calculated. In Figure 5, it can be observed that all output outer loading results correlation output between the indicator with the construct has a value above 0.5. The measurement model used in this study also meets the requirements of AVE in which each research construct is entirely a value above 0.5 as can be seen in Table 2.The table also shows that the value of cronbach's alpha and composite reliability measurement model in this study is more than 0.7. Therefore, it can be concluded that this research model has fulfilled the reliability requirement. Then in table 3 shows that all AVE square root values in the construct are larger than the correlation between the latent constructs. Therefore, it can be concluded that the measurement model of this study has fulfilled the discriminant validity requirement.

Based on Figure 5, it can also be observed that the R-square for each endogenous construct namely perceived of usefulness, user satisfaction and physical asset management performance are 0.716, 0.872 and 0.215. This indicates that the implementation of MIS simultaneously impacts on the physical asset management performance only 21.5%. Based on interviews and observations, the cause of the contribution of MIS implementation in the management of physical assets is very small is the user does not optimize the use of managerial features in information system such as planning, monitoring of asset conditions, maintenance, displacement. Therefore, it can be concluded that so far, the use of asset management information system in Bandung is only limited as a tool for recording asset data only.

Figure 5. PLS Algorithm Result

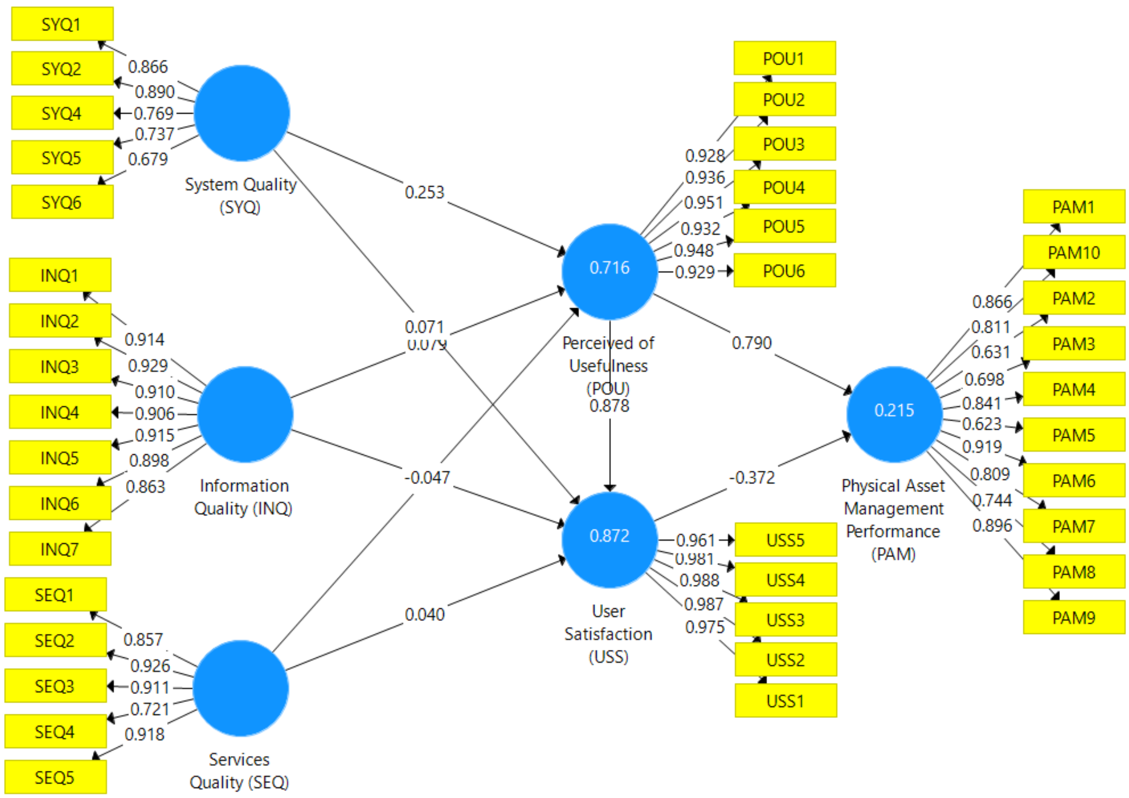


Table 2. Construct Reliability and Validity

Validity and Reliability	AVE	Cronbach's Alpha	Composite Reliability
Information Quality (INQ)	0.819	0.963	0.969
Perceived of Usefulness (POU)	0.879	0.972	0.978
Physical Asset Management Performance (PAM)	0.624	0.931	0.942
Services Quality (SEQ)	0.757	0.918	0.939
System Quality (SEQ)	0.958	0.852	0.893
User Satisfaction (USS)	0.964	0.989	0.991

Table 3. Discriminant Validity

Construct	INQ	POU	PAM	SEQ	SYQ	USS
INQ	**0.905**					
POU	0.415	**0.938**				
PAM	0.573	0.444	**0.790**			
SEQ	0.361	0.806	0.428	**0.870**		
SYQ	0.379	0.576	0.380	0.440	**0.792**	
USS	0.359	0.932	0.364	0.762	0.577	**0.979**

Hypothesis Testing Result

Table 4. The result of hypothesis Testing

Hypothesis		Path Coefficient	T_{value} (Statistic)	T_{table} (5%, One Tailed)	Supported/Not Supported
H_1	SYQ →POU	0.253	2.500	1.640	Supported
H_2	SYQ →USS	0.071	1.086	1.640	Supported
H_3	INQ →POU	0.079	0.813	1.640	Supported
H_4	INQ →USS	-0.047	0.975	1.640	Not Supported
H_5	SEQ →POU	0.666	7.403	1.640	Supported
H_6	SEQ →USS	0.040	0.530	1.640	Supported
H_7	POU →USS	0.878	10.705	1.640	Supported
H_8	POU →PAM	0.790	2.116	1.640	Supported
H_9	USS →PAM	-0.372	0.831	1.640	Not Supported

Hypothesis Test of Structural Equations 1

Hypothesis:

H_1 There is positive relationship between MIS quality and perceived usefulness.

H_3 There is positive relationship between information quality and perceived usefulness.

H_5 There is positive relationship between services quality and perceived usefulness.

Result:

POU = 2.50 SYQ + 0.81 INQ + 7.41 SEQ + 7.41 POU + ς_2

The result of the structural model equation shows that all exogenous constructs (System Quality, Information Quality, Services Quality) have positive relationship with Perceived of Usefulness. Therefore, it can be concluded that hypotheses 1, 3 and 5 are supported. Meanwhile, based on the level of significance, it can be concluded that only System Quality and Services Quality that affect Perceived of Usefulness significantly while INQ does not.

Hypothesis Test of Structural Equations 2

Hypothesis:

H_2 There is positive relationship between MIS quality and user satisfaction.

H_4 There is positive relationship between information quality and user satisfaction.

H_6 There is positive relationship between services quality and user satisfaction.

H_7 There is positive relationship between perceived usefulness and user satisfaction.

Result:

USS = 1.09 SYQ - 0.97 INQ + 0.53 SEQ + 10.70 POU + ς_2

The result of the structural model equation shows that only three exogenous constructs (System Quality, Information Quality, Perceived of Usefulness) have positive relationship with User Satisfaction while Information Quality has not. This indicates that the higher quality of information generated by the system does not increase the satisfaction of the users. Therefore, it can be concluded that only hypotheses 2, 6 and 7 are supported. Based on interviews and observations, hypothesis 4 is not supported because the use of managerial features in the asset management information systems is not optimal. This leads to the use of such information systems although it is believed to improve user performance but there is dissatisfaction in overall implementation. Meanwhile, based on the level of significance, it can be concluded that only Perceived of Usefulness that affect User Satisfaction significantly while the other constructs (SYQ, INQ, SEQ) do not.

Hypothesis Test of Structural Equations 3

Hypothesis:

H_8 There is positive relationship between perceived usefulness and physical asset management performance.

H_9 There is positive relationship between user satisfaction and physical asset management performance.

Result:

PAM = 2.17 POU - 0.83 USS + ς_3

The result of the structural model equation shows that only Perceived of Usefulness have positive relationship with Physical Asset Management Performance while User Satisfaction has not. This indicates that the higher the user satisfaction in the application of the system does not improve the performance of physical asset management. Therefore, it can be concluded that only hypothesis8 is supported. Based on interviews and observations, it can be concluded that hypothesis 9 is not supported because the use of managerial features in the asset management information systems is not optimal. This leads to user dissatisfaction in the implementation of the information system as a whole. In the end, it causes the contribution of information system implementation on the performance of physical assets management is not optimal. Meanwhile, based on the level of significance, it can be concluded that only Perceived of Usefulness that affect Physical Asset Management Performance significantly while User Satisfaction does not.

CONCLUSION

Based on the subject matter, the purpose of research and discussion, the conclusion of the study are as follows:

1. The evaluation of structural model of research indicates that the amount of contribution of information system implementation on physical asset management performance is only 21.5%. It is because there are managerial features in information systems managed by Bandung City that is not implemented optimally by the user.
2. The analysis of the hypothesis shows that there are two hypotheses (H4 and H9) are not supported. The hypothesis is not supported due to not optimal use of management features in asset management information systems such as planning, updating the condition of assets, control over the transfer etc. This leads to the use of such information systems although it is believed to improve user performance but there is dissatisfaction in overall implementation. It ultimately affects the non-optimal contribution of the application of the information system in improving the performance of physical asset management.

WAY FORWARD

This research can be used as a conceptual framework for researchers or managers who intend to study or review the value of investment in MIS implementation. The exogenous (independent) constructs in this study only adopt the TAM and I&S Success Model models, while there are many other constructs can be used to measure the success or application of MIS for future research, such as top management support, end-user training, computer self-efficacy, and user experience. Moreover, the impact can also be developed in accordance with the purposes and the objectives of research, such as the quality of management decision-making, human resource performance, risk management performance and many more.

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