

Second Order Model for Measuring the Impact of Information Technology on the Quality of Accounting Information Systems Research at Higher Education in Bandung

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Abstract: The quality of accounting information systems is the ability of accounting information systems to provide accounting information which is appropriate with the user's needs in the decision making process. The quality of accounting information system is influenced by the quality of the information technology used. Various findings indicate that the accounting information systems that is used in various organizational units in Indonesia is generally not qualified for instance they are not integrated, not safe to use, difficult to use, difficult to access, not flexible and efficient and they often had problems/errors. Likewise, the information technology used in the accounting information systems is generally inadequate. It is because generally the communication network problem is still bad and not integrated well. Based on some phenomenon found, a research is redone that aims to determine how much the influence of the quality of information technology to drive the quality of accounting information systems at universities in Bandung City Indonesia. The method used in this research is the descriptive and verification research method with 37 universities of samples. To test the influences of the two variables it was used statistical tool of Structural Equation Modeling (SEM) based on component or variance known as Partial Least Square (PLS) while the hypothesis is tested by using t-test with SPSS 2.0 for microsoft Windows application. The results of this research produce empirical evidence that the quality of information technology has a significant effect on the quality of accounting information systems at universities in Bandung City, Indonesia.

Key words: The quality of accounting information systems, the quality of information technology, universities in Bandung, Indonesia, SEM

INTRODUCTION

Accounting information system is a system to collect, record, store and process financial data to produce financial information that is used for decision making (Romney and Steinbart, 2012). Further, Bodnar and Hapwood states that accounting information system is a set of resources such as people and equipment designed to transform data into information related to financial matters to be used in the process of decision-making by its various users. Likewise, according to Hall states that accounting information system is a set of various sub-systems which functions in financial transaction processing to produce financial information that is useful to its various users.

Generally, accounting information systems exist throughout organizations in any organizational forms (Bockholdt, 1996) and became one of the most important information systems for an organization (Wilkinson, 1996). The system of accounting information is used by organizations to manage various financial transactions

activities. Furthermore, Romney and Steinbart (2012) states the primary function of accounting information systems in an organization is to provide accounting information required in the decision making process.

Stair and Reynolds argues that accounting information system used by an organization with the aim to reduce costs and increase revenues by providing useful information for managers in making better decisions. Furthermore, Ismail and King (2014) state that accounting information system designed by an organization with the aim to transform financial data into financial information that can be used as a basis for decision making for its users.

But the conditions that presently occur shows that the quality of accounting information system have not been fully owned by various organizations in Indonesia as proposed by the general director of lion group (Hiyari *et al.*, 2013) which states the accounting information that have not been qualified in Lion group caused by its accounting information system which is not integrated yet.

Furthermore, founder strategic Indonesia-Christovito Wiloto states that accounting information systems in banking sector is still weak and insecure. Similarly, according to a member of BPK-RI, Masykur whom concerned the existence of the transactions and asset inventory reports recording which are incorrect on a number of ministries and state institutions. The low quality of accounting information system was also stated by Stephen *et al.* (2015) as the minister of research, technology and higher education who states that accounting information system in Universities in the Republic of Indonesia is generally inflexible and inefficient.

Azhar Susanto states the problem of communication networks is one key to success in building the quality of accounting information system. Without qualified communication network facilities, companies will have difficulty in sending data from one location to another. It can cause disruption in the process of data processing into information and distribute to the various management at various locations which would finally complicate management in decision-making process. From the above description, it can be said the use of communication network becomes very dominant in today's business world. A similar opinion was expressed by Davis *et al.* (2009) who states that the use of information technology has an influence on the implementation of accounting information systems. Similarly, according to Gelinas and Dull (2008) information technology improves the quality of information produced to be used as a basis for decision making.

Turban defines information technology as the technology used in Hardware, Software, networks of an accounting information system of the organization. Thomson and Baril argues that information technology is not the same as information systems although some people consider the both use is the same thing. Information technology is a representation of one component of information systems that can be defined as the use of information technology for more specific form. According to William and Sawyer (2005) computer technology is one of essential components of information technology. Further, Taber *et al.* (2014) argues that the computer will deliver more effective and efficient way bin processing data transaction. In addition to computer technology, Ronald and Baril (2003) states communication technology is important components for information technology.

Furthermore, Ronald and Baril (2003) argue that information technology can be viewed from the computer capacity and network capacity point of view. According to Wilkinson (1996) information technology

used can be seen on the main components of information technology such as: a variety of equipment used in inputting the data, data processing component, data communication component and information-producing components. The same opinion of information technology also proposed by Bockholdt is that technology used in computer systems, teleprocessing networks, data storage and processing method and file processing method.

But in today's business world many companies that do not have the quality of information technology as proposed by Tait and Vessey (1988), Minister of Communication and Information in 2009-2014 period, who states that at present the quality of information and communication technology in Indonesia is still problematic because there is still a gap between central and local in the information access (<http://www.antaraNews.com/berita>). The statement is also strengthened by Hamed *et al.* (2011) in his capacity as the chief technology Officer of Sinarmas securities who argued that the information technology in Indonesia have not been inadequate due to the network quality in the country is not good, so it often lost data packets and network degradation that are not conducive to transactions that require punctuality as securities trading through e-Trading system (www.swa.co.id).

Further, Agus Martowardojo in his capacity as the minister of finance through www.buletininfo.com also argued there is not optimal quality of information technology in directorate general of tax. Based on the various problems, it is necessary to re-study the concept of the quality of information technology and its influence on the quality of accounting information systems.

MATERIALS AND METHODS

Information technology: Information technology according to Barganoff is a technology used in hardware, software and other related system component used by organizations to support the information system. Similar as the statement by Obrien and Maracas (2009) argues that information technology is various types of hardware, software, networking and data management components required by a system to operate. Meanwhile, according to Hurt (2008) information technology is the technology required to produce information which is used in computer equipment and software which is used to convert, store, protect, carry out the delivery process and bring back the needed information anytime and anywhere. Similarly, according to Ronald and Baril (2003) information technology is hardware and software that is packaged as a device to capture, store, process and produce content/information in digital form.

Based on the statement above, information technology can be regarded as the technology uses hardware, software, network communications needed to do the data processing which comes from various location to become the information and distribute it to any locations.

Characteristics of information technology: Ronald and Baril (2003) consider information technology by using the criteria of computer capacity and network/communication capacity. While William and Sawyer (2005), consider information technology with the criteria of computer technology and communication technology. Another opinion is expressed by Bockholdt (1996) states that information technology is a technology that is used in computer system, teleprocessing networks, data storage and processing method and file processing method. Meanwhile, Wilkinson (1996) states that the characteristics of information technology include: various devices for entering data, processing data, data communicating from place to place and generating information. Then, Obrien and Maracas (2009) argues that information technology has the dimensions of computer hardware, computer software, data resources management and telecommunication and network. Based on the above explanation, it can be said that the characteristics or dimensions of information technology include:

- Computer technology (Taber *et al.*, 2014; William and Sawyer, 2005; Ronald and Barill, 2003; Wilkinson, 1996; Boockholdt, 1996)
- Communication technology (William and Sawyer, 2005; Ronlad and Barill, 2003; Wilkinson, 1996; Zee, 2003; Boockholdt, 1996)
- Computer Software (Obrien and Marakas, 2008)

Accounting information system: Accounting information system according to Kieso *et al.* (2010) is a system that records and process transaction data and communicate accounting information to the decision-makers. Romney and Steinbart (2012) states accounting information system is a system to collect, record, store and process data to produce information used in the decision-making process. Furthermore, Obrien and Marakas (2009) states that accounting information system is an information system that records and report the activities of business transactions and the cash/funds flow in an organization to further produce financial statements.

Based on the definitions accounting information system is an information system that perform accounting data processing activity into the accounting information that can be used by its various users in the decision-making activities.

Quality of accounting information systems: DeLone and Mclean (1992, 2003) used the term of success or effectiveness to indicate the quality of information systems. Marshall and John (2003) states that quality of accounting information system is the ability measurement of accounting information systems to be able to provide accounting information needed by managers at the appropriate and precise time. The same as the opinions Nicolaou (2000) stated the quality of information systems is the availability of accounting information as required in decision-making activities. Meanwhile, according to Deghanzade the quality of accounting information system is a condition of information user satisfaction in getting the desired information. The same as previous statements of Stair and Reynolds argues that the quality of accounting information system is user satisfaction on information systems and valuable information which is generated.

Based on the various statements it can be said that the quality/success/effectiveness of accounting information system is the ability of accounting information systems to be able to provide accounting information which is appropriate to the user's needs as well as a condition of user's satisfaction of information systems in gaining the information that is needed in the decision-making process.

Seddon and Yip (1992) developed a model of information systems effectiveness by using five dimensions: system quality, perception of information quality to the use level, user satisfaction and use of information systems. Baltzan measure the quality of accounting information systems in point of view: usability, user satisfaction, the rate of change (flexibility) and finance (financial). While Stair and Reynolds states that an effective information system is the condition of user satisfaction to information systems and the conditions in which the information system can be received and used (system use) by an organization.

Furthermore, Bockholdt (1996) states that the quality of accounting information system if the achievement of objectives in generating information is accurate and timely, sensible use of time in its development (efficient), meet the organization needs and give satisfaction to its users. In this study the quality of accounting information systems is limited to the dimensions of the information systems use and system user satisfaction to the desired information.

The influence of the quality of information technology on the quality of accounting information systems: The quality of accounting information system is influenced by several factors. Information technology is one of the factors that influence the quality of accounting

information systems, as stated by Choe (1996) that the development of information technology likely to improve the quality of accounting information system implementation in an organization. Similarly expressed by Ward and Peppard (2002) who states information technology is used to enhance the organization's ability to provide, process, store, transmit and share information. The same as the opinion of Wilkinson (1996) who suggest that information technology have a positive influence on the quality of accounting information systems.

Furthermore Laudon and Laudon also stated that the quality of accounting information system will be influenced by an organization management understanding of information technology used in the accounting information systems. The opinion was reinforced by Bodnar and Hapwood who states that the accounting information system and information technology has a very strong relation.

Some of the previous studies results such as the research of Petter provide empirical evidence that information technology influences the successful implementation of accounting information systems. Further the research conducted by Mejia *et al.* (2010) provides empirical evidence that information technology has positive influence on the effectiveness of accounting information systems. Similar research conducted by Abadi *et al.* (2003) which provides empirical evidence that there is significant influence of information technology application to the accounting information system. Based on the theories and the results of the studies, the hypothesis expressed in the research is: the quality of information technology affects the quality of accounting information system.

Research method and unit of analysis: The method used in this research is the descriptive and explanatory research method. The unit of analysis is the Public and Private Universities in the city, so that the population in this study was 60 public and private universities in Bandung City. Based on the population, the samples are 37 universities selected through simple random sampling technique using the Slovin equation as follows:

$$n = \frac{N}{1 + N(e)^2}$$

It can obtain the number of samples as follows:

$$= \frac{60}{1 + 60(0.1)^2}$$

37.5 rounding to 37

Where:

n = Sample size

N = Population size

e = The percent of inaccuracy tolerance due to sampling that can be tolerated or desirable, e.g. is 5, 10% and more

The unit of observation in this study is the individuals who work in the accounting department as an organizer of accounting information systems at universities. This research is the primary data with a questionnaire as the data collection method.

Validity test done is used to determine the feasibility of the items in a list of questions to define a variable and reliability tests to measure the reliability of the measured object. Data analysis was using descriptive and verification analysis. Descriptive analysis was done by using a categorization score inter quartile range. Verification analysis that is used to test the hypothesis in this study is using Structural Equation Modeling (SEM) of component or a variance-based which is known as Partial Least Square (PLS). The following describes the stages in statistical test by using SEM component-based (PLS).

Specifications of measurement model: Measurement model or outer model is specified by the variables operationalization by considering the relationship orientation whether it is reflective or formative. In this specification of measurement model, firstly it is performed: defining latent variables and observed variables that exist in the research is: the quality of information technology (ξ_1) and the quality of accounting information system (η_1).

Determining the relationship orientation on predefined variables whether they are in reflective or formative manifold. In developing the measurement model in this study, it is directed at the higher order models or hierarchical component models. Higher order models or hierarchical component models involves second order testing that includes two orders of variables.

For the quality of information technology variable (ξ_1) measurement models reflective-shaped in the first order consists of computer technology (η_3), communication technology (η_4) and data storage and processing method (η_5) and reflective at the second order.

For the quality of information accounting information systems variable (H_1), measurement models reflective shaped in the first order consists of system use (η_1) and user satisfaction (η_2) reflective at the second order.

Specifications of structural model: Inner model is often referred to as inner relation structural model dan substantive theory which is to describe the relation between latent variables based on a substantive theory. In this study, structural models (inner model) to test the hypothesis it can be described as follows: “accounting information technology affects the quality of accounting information systems”. Thus, in this study the above specifications can be written as follows:

$$\eta_1 = \gamma_{11}\xi_1 + \zeta_1$$

Where:

η_1 = Quality of AIS

γ = The path coefficient between the latent variables

ξ_1 = Quality of information technology

ζ = Measurement error

RESULTS AND DISCUSSION

Testing the validity and reliability: All gauges items for the quality of accounting information systems variable and the quality of information technology variable is valid because it has the $r_{count} > 0.30$, so it can be concluded that the measuring tool in the form of a questionnaire statement has a good level of validity.

Reliability test results both for the two variables (the quality of accounting information systems is 0.927 and the quality of information technology is 0.864) indicates that $r_{count} > 0.7$ can be summed that the questionnaire statement as the research variable measurement is reliable (Fig. 1).

Descriptive analysis: The grand mean of calculations results for respondents score about the quality of information technology (Table 1) is 3.96 at the Quartile 4 (Q_4) or intervals of 3-4 which is into the good category. The magnitude of 3.85 that is obtained is equivalent to 79.2% ($3.96/5 \times 100$). The score which is obtained does not reach 100% as it is expected. So that the ideal level to be expected with the actual conditions that there is a gap of 20.8%. This gap shows the quality of information technology has not reached the ideal level.

The effectiveness of accounting information systems variable was measured by two dimensions with 8 indicators. From the research data it is obtained by the respondent's assessment for 8 indicators used to measure the effectiveness of accounting information systems variables in this study as shown in the following table in annexes

The calculation result of the grand mean score of respondents about the effectiveness of accounting

Table 1: Significance tests the impact of quality of information technology toward quality of accounting information systems

Path coefficient	T_{count}	t_{kritis}	Kesimpulan
0.547	3.789	1.96	Signifikan

PLS calculation results

information systems (Table 2) is 3.92 at the Quartile 3 (Q_3) or intervals of 3-4 into the category good enough. The amount of 3.92 obtained is equivalent to 78.4% ($3.92/5 \times 100$). The score obtained does not reach 100% as it is expected. So that between the ideal levels to be expected with the actual conditions there is a gap of 21.6%. This gap shows the effectiveness of accounting information systems has not reached the ideal level.

Verification analysis

Structural equation model: In this study, the researchers used Structural Equation Modeling (SEM) with Partial Least Square (PLS) approach to address the research issues related to the quality of information technology influence on the quality of accounting information systems. Structural Equation Modeling (SEM) Model used is a model approach to the Second Order of which there are two stages in indicator relation of shaping variables it is from the indicator (manifest variables) form a dimension, then the dimension form variables. In this case the variables dimensions and the variables studied are latent variables. The calculation result of full model hypothesized is obtained by the help of Smart PLS 2.0 as follows (Fig. 2).

Structural equation model for the effect of accounting information system on the information quality which is calculated using SEM approach Partial Least Square (PLS) can be expressed in the following equation:

$$\eta_1 = 0.547\xi_1 + 0.290$$

Measurement model testing

Convergent validity: Convergent validity of the measurement model is assessed based on the correlation between the item score/component score which is estimated (loading factor values). The size is said to be high if it is correlated with the construct which is measured > 0.70 . However, according to Chin (1998) Ghazali (2006), Mcleod and Schell (2007) to study the early stages of the development measurement scale of loading value at 0.5-0.6 is considered adequate. In this study, it will be used the loading factor limit of 0.60. Because the model of Structural Equation Modeling (SEM) Model used is an approach model to the second order, then there are two stages of measurement model, the indicator of dimension and the dimension of variable.

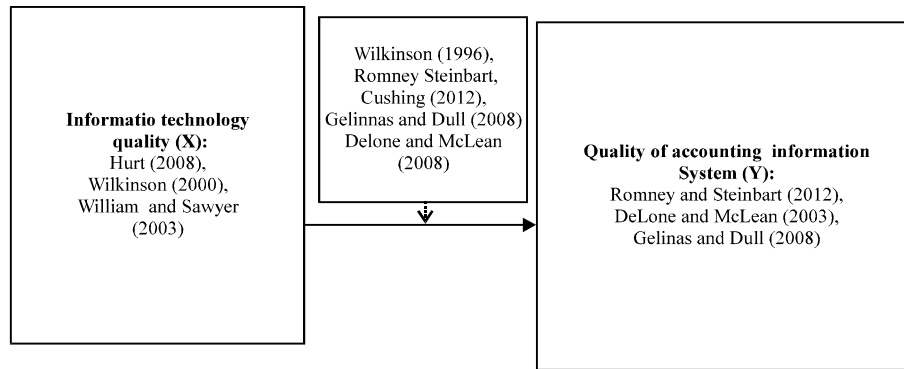


Fig. 1: Conceptual frame work

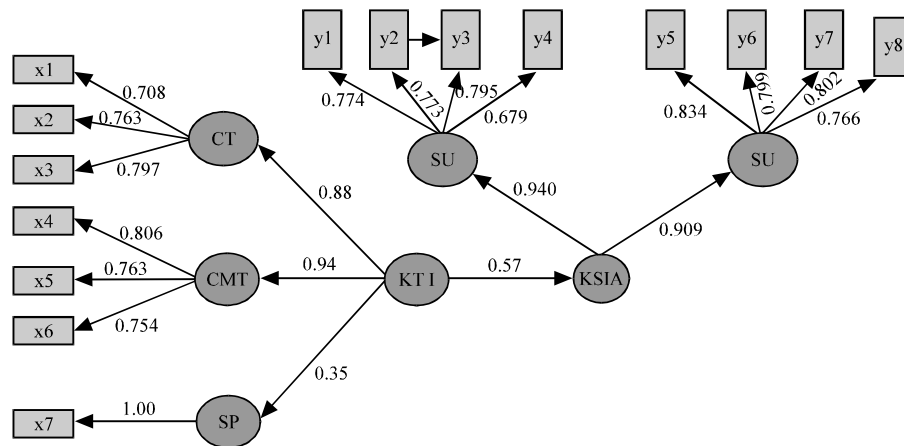


Fig. 2: Calculation results for full structural equation model EI: Quality of Information technology; CT: Computer Technology; CMT: Communication technology; SP: Methods of storage and processing data; MSG: Quality of accounting information systems; SU: System Usage; US: User satisfaction

Table 2: Recapitulation of descriptive score on the quality of information technology variable

Indicators/Dimensions	-----Actual score -----	-----Average score-----	Criteria
Reliability of IT application	173	3.46	Good enough
Ease of use of computer technology	197	3.94	Good enough
Security information	202	4.04	Good
Computer technology	- 572	- 3.81	Good enough
Connect peripheral device at remote locations with a single central processor	201	4.02	Good
Component used of teleprocessing networks are: LAN, client server, WAN	178	3.56	Good enough
Mainframe transfer data across communication link to devices at remote location	221	4.42	Good
Communication technology	- 600	- 4.00	Good
A computer system stores accounting record on secondary storage devices until needed	214	4.28	Good
Data storage and processing methode	- 214	- 4.28	Good
Total score	-	-	-
Average (grand mean)	1386	3.96	Good enough

Measurement model of the quality of accounting information systems variable: The results based on Table 3 shows the dimensions of user satisfaction and system usage has been appropriately used as a measurement model for the effectiveness of accounting information system variables (Table 3 loading factor is >0.6). Furthermore, based on Table 4 it can be concluded

all eight indicators used was appropriate to represent the dimensions of the measurement model of the quality of accounting information systems variable (t_{count} values is >1.96).

Measurement model of the information technology quality variable: There are three manifest variables that

Table 3: Recapitulation of descriptive score on the effectiveness of accounting information variables systems

Indicators/Dimensions	-----Actual score -----	-----Average score-----	Criteria
Flexible	192	3.84	Good enough
Accesible	189	3.78	Good enough
Efficient	216	4.32	Baik
Provides correct and timely information	200	4.00	Baik
User satisfaction	797	-	3.99
Security	196	3.92	Good enough
Processing integrity	188	3.76	Good enough
Availability	190	3.80	Good enough
Ease to use and usefulness	197	3.94	Good enough
System usage	771	-	3.86
Total score	1568	-	-
Average (grand mean)	-	-	3.92

Description: Average = (actual score) divided by (the number of respondents times the amount of the question item)

make up the information technology quality variables, namely of computer technology, communication technology and data storage and processing method. For each variable it is obtained the factors values in shaping the information technology quality variable as follows.

Calculation results of loading factors value for the three manifest variable of latent variables on the information technology quality (x) with values ranging between 0.8-1 is already above the average for a loading factor of 0.6. the calculation result of the outer model value or correlations between construct with (loading factor) variables have already met convergent validity. The loading factor values above which are recommended of 0.60 thus constructs (manifest variables) for information technology quality will not be eliminated from the model.

T_{count} value obtained for each loading factor for 3 manifest variables of information technology quality (x) latent variables is more than 1.96 so it can be said that the manifest variables used is worth in measuring information technology quality (x_2) variables. Based on loading factor calculations and the $t_{statistic}$ it is known that there are 7 indicators of information technology quality that have a positive and significant relation in determining the information technology quality.

Discriminant validity: discriminant validity was done to see how the validity of the construct formed if it is compared with the other constructs whether any concept of each latent variable is different from the other variables. Criterion validity can also be seen from discriminant validity based on the Average Variance Extracted (AVE). A good construct is if it has ave is above 0.50. On the Table 5, it will be served ave values for all variables.

It is obtained the Average Variance Extracted (AVE) values to x_1 construct (information technology quality) of 0.5117, average variance extracted (AVE) value to y construct (quality of accounting information systems) at

Table 4: Measurement model of the quality of accounting information systems variable

Varibel manifes	Loding Faktor	Measurement model	t_{hitung}
User satisfaction (Y_1)	0.916	$Y_1 = 0.916 Y + 0.162$	49.807
System usage (Y_2)	0.942	$Y_2 = 0.942 Y + 0.112$	65.868

Table 5: The Indicator measurement models of the quality of accounting information systems (Y) variable dimension

Varibel manifes	Loading factor	Measurement model	t_{hitung}
$Y1.1 < -Y1$	0.7679	$Y_{11} = 0.7679 X_1 + 0.410$	13.1839
$Y1.2 < -Y1$	0.7707	$Y_{12} = 0.7707 X_1 + 0.406$	11.5414
$Y1.3 < -Y1$	0.7990	$Y_{13} = 0.7990 X_1 + 0.362$	14.3516
$Y1.4 < -Y1$	0.7008	$Y_{14} = 0.7008 X_1 + 0.509$	12.3391
$Y2.1 < -Y2$	0.8422	$Y_{21} = 0.8422 X_2 + 0.291$	17.9928
$Y2.2 < -Y2$	0.8164	$Y_{22} = 0.8164 X_2 + 0.333$	14.6540
$Y2.3 < -Y2$	0.7895	$Y_{23} = 0.7895 X_2 + 0.377$	10.5291
$Y2.4 < -Y2$	0.7545	$Y_{24} = 0.7545 X_2 + 0.431$	11.2357

0.5323. The results of discriminant validity based on the Average Variance Extracted (AVE) shows the construct meets the good construct minimum value for AVE which is > 0.5 .

Composite reliability: Composite Reliability is a measure of internal consistency. The limit values to indicate the reliability of latent variables (constructs) which is formed the manifest variables as to form the appropriate structural model is 0.6 (Ghozali, 2006). For all three constructs they are used as a variable which is hypothesized that information technology quality and the quality of accounting information systems, it is gained the reliability composite value.

Based on Table 6-10, it can be concluded that all constructs meet the reliably criteria. This is indicated by the composite reliability value above 0.70 as the recommended criteria. Information technology quality (X) latent variables which are formed by three manifest variables has Composite Reliability (C-R) value of 0.8794. This means that information technology quality latent variable has high consistency. The quality of accounting Information systems (Y) latent variables are formed by two manifest variables have a Composite Reliability (C-R) value of 0.8880. This means that the effectiveness of accounting information systems latent variables have high consistency.

Table 6: Measurement model of the information technology quality variable (X)

Variabel manifes	Loding factor	Measurement model	t _{hitung}
Computer technology (X ₁)	0.889	X ₁ = 0.889 X ₂ +0.209	30.458
Communication technology (X ₂)	0.948	X ₂ = 0.948 X ₂ +0.100	90.035
Data storage and processing methode (X ₃)	0.805	X ₃ = 0.805 X ₂ +0.352	19.605

Table 7: The measurement indicator of dimensional models information technology quality variable (X)

Variabel manifes	Loading factor	Measurement model	t _{hitung}
X.1.1<-X.1	0.708	X ₂₁₁ = 0.708X ₂₁ +0.498	4.770
X.1.2<-X.1	0.763	X ₂₁₂ = 0.763X ₂₁ +0.418	9.756
X.1.3<-X.1	0.797	X ₂₁₃ = 0.797 X ₂₁ +0.364	17.963
X.2.1<-X.2	0.806	X ₂₂₁ = 0.806 X ₂₂ +0.350	13.141
X.2.2<-X.2	0.737	X ₂₂₂ = 0.737 X ₂₂ +0.456	7.661
X.2.3<-X.2	0.754	X ₂₂₃ = 0.754 X ₂₂ +0.431	16.033
X.3.1<-X.3	1.000	X ₂₃₁ = 1X ₂₃	

Tabel 8: Value Average Variance Extracted (AVE) latent variables

Variabel laten	AVE
Quality of information technology (X ₁)	0.5117
Computer technology (X ₂₁)	0.5733
Communication technology (X ₂₂)	0.5876
Data storage and processing methode (X ₂₃)	1.0000
Quality of accounting information systems (Y)	0.5323
User satisfaction (Y ₁)	0.5787
System usage (Y ₂)	0.6408

Table 9: Composite reliability value of latent variabel

Variabel laten	Composite reliability
Quality of information technology (X ₁)	0.8794
Computer technology (X ₂₁)	0.8008
Communication technology (X ₂₂)	0.8102
Data storage and processing methode (X ₂₃)	1.0000
Quality of accounting information systems (Y)	0.8880
User satisfaction (Y ₁)	0.8457
System usage (Y ₂)	0.8770

Table 10: Significance tests the impact of quality of information technology toward quality of accounting information systems

Path	coefficient	T _{count}	t _{table}	Kesimpulan
0,547		3.789	1.96	Signifikan

PLS calculation results

Hypothesis testing: Information technology quality is hypothesized to affect the quality of accounting information systems. The following are the results of the significance test of these hypotheses through statistical hypothesis as follow:

- $H_{0y2} = 0$: Information technology quality does not affect the quality of accounting information systems
- $H_{ay2} \neq 0$: The quality of information technology affects the quality of accounting information systems

The first hypothesis testing results show that the variable relation between the information technology quality with the quality of accounting information system is indicated by the path coefficient at 0.547 with t_{count} is

3.789. t-statistic value is greater than t_{critical} (1.960). This result means that the information technology quality affects the quality of accounting information system which means it is appropriate to the second hypothesis (Hypothesis is accepted).

The big direct influence of the information technology quality on the quality of accounting information systems is $(0.547 \times 0.547 \times 100\%) = 29.9\%$. This means that the Information Technology quality affects 29.9% on the quality of accounting information systems if there are no other variables which are considered.

The low quality of information technology at several institutions in Indonesia as stated by the Minister of Communication and Information 2009-2014 period Chief technology Officer of Sinarmas Securities-Hermawan Hussein *et al.* (2007) and the Finance Minister-Agus Martowardojo it is provable through the research that shows the quality of information technology in universities in Bandung City is included in the category of good enough but it has not reached the expected level (100%) yet with the equivalent value of 79.2% which means that there is still a gap of 20.8%. This gap shows the information technology quality has not reached the ideal level yet which means the Universities in Bandung may otherwise do not have sufficient quality information technology. This condition shows the problems that low quality of information technology may also occur at some other agencies. In order to improve the quality of information technology an organization must improve the quality of computer technology, communication technology, a method of data storage and data processing that is used. Further, empirical evidence shows computer technology dimension, communication technology and data storage and processing methods used are suitable/appropriate models to measure the concept of information technology quality.

Based on the questionnaires results which were distributed to the respondents it is noted that computer technology which is not optimal is due to the use of IT applications that do not have the sufficient capacity and speed yet to allow the processing, storage and data retrieval be done easily and quickly and there are personal computers that do not easy to use. Furthermore, inadequate communication technology due to the persistence of the personal computer is not connected to the internet network so it is not able to conduct online transactions.

Then, it can be seen that the various problems related to information systems that are not effective also experienced at universities in Bandung City are caused by users who are not satisfied (user satisfaction) and the system could not be fully used because there is computer

program that has not been able to accept various forms of data input formats of which can be tailored to the user's needs, computer programs could not be accessed easily and often impair down time/slow are not able yet to provide accounting information that is timely, transaction processing could not be well integrated and the SIA application is difficult to access and is often slow/down time.

The influence of information technology quality on the information quality is 43.1% with the direction of the positive relation which means that the better the company's information technology quality will lead to the more effective accounting information system used. Hypothesis testing results showed that the information technology quality significantly influence the effectiveness of accounting information systems at universities in Bandung City.

The research results conducted at universities in Bandung City can be said to strengthen the previous theory proposed by Ward and Peppard (2002). Based on hypothesis testing, this study supports the research that has been done by Mardi (2011), DeLone and McLean (2003), Ein-Dor and Segev (1978) who found empirical evidence that the information technology quality affects the quality of accounting information systems.

CONCLUSION

Information technology affects the quality of accounting information systems. The problem is there is not quality of accounting information systems yet at universities in Bandung City because not all of the universities in Bandung City have had information technology quality.

RECOMMENDATION

The study result was to answer the problems why the study was conducted but there are some things that need to suggest in which the results of these studies show the value of little effect.

SUGGESTIONS

As for suggestions that will be presented are as follows.

Practical aspects (trouble shooting): The quality of accounting information system that is low can be improved by increasing user satisfaction and the use of accounting information systems (system usage). The low quality of information technology can be improved by

increasing the capacity of computer technology, communication technology capacity as well as the use of storage and data processing methods which are adequate on an organization.

Theoretical aspects (science development): The suggestions that can be submitted related to the science development in order to be used as a reference for next researchers who are expected to get the same results/conclusions (replicability), increase the confidence in the research that has been done and improve the results usefulness to be widely accepted (generalizability) they can be done in as follow.

The researchers then are expected to add the sample in order to obtain more optimal research results. The next researchers then used the different research units/locations with it is used in this study thus strengthening the support for the linkage theories which have been put forward by the experts earlier.

The researchers then expected to conduct research using different test equipment for statistically to the one used in this study in order to test a theoretical model that is used whether it will produce the same effect when it is tested using different statistical testing techniques.

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