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Understanding AIS User Knowledge, AIS Quality, and Accounting Information Quality

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ABSTRACT

Objective – Nowadays, computer-based systems are used more to create, store and transfer information. Reliable accounting information will have impact on decision making. In other words, the success of an organization will depend heavily on the accounting information quality owned. Accounting information is generated from accounting information systems. The objective of this research is to know the extent if the knowledge influence of accounting information users towards implementation quality of accounting information systems and implication towards accounting information quality.
Methodology/Technique – Instrument of data collection is using enclosed questionnaire filled by managers/chief of accounting and finance as well as branch chief of 63 insurance companies in Indonesia. SEM-PLS is used as a tool for processing data and hypothesis testing.
Findings – The result of this research obtained empirical evidence that quality of accounting information systems implementation is influenced by knowledge of accounting information systems use and quality of accounting information influenced by quality of accounting information systems implementation.
Novelty – The result of this study is consistent with theories and strengthens previous research results. The result contributes to the development of science, especially in the field of AIS.
Type of Paper: Empirical

Keywords: AIS; User Knowledge; Accounting Information.
JEL Classification: M15, M41.

1. Introduction

Issues regarding accounting information systems (AIS) experienced by many insurance companies in Indonesia as stated by Julian Noor (2015) as Executive Director of General Insurance Association of Indonesia is that 50% public insurance companies still do not have an integrated information system. Yet in the era where all organization's activities are centered on information technology, organization will not be able to operate or survive without AIS (Gelinas and Dull, 2008). AIS is a collection of resources such as human & equipment, designed to transform financial data and others to financial information (Bodnar & Hopwood, 2014). The good business decision can be made based on the quality of information (McGilvray, 2008). Gelinas and Dull (2008) state that without an information quality manager cannot make good decisions. So it can be said that the success of the organization is influenced by quality information (Baltzan, 2013). The qualified accounting information

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is provided by good AIS (Xu, 2009). Information is generally said to be qualified if the information is accurate, reliable and confident to the user when information is used (Schermerhorn, 2011).

Human resources are an important element in the success of implementation of information systems (O'Brien & Marakas, 2010). This human resource is the users of information systems (O'Brien & Marakas, 2010). Users of information systems are various parties that interact with systems, regularly such as employees, manager for supplier (Stair & Reynolds, 2012). Information systems will fail if the users cannot understand and cannot use the information systems properly (Satzinger et al., 2002). Users of information systems need to have knowledge, skills, control of information systems (O'Brien & Marakas, 2010). In the context of using information systems, apart from the employees, managers are also user of information systems in organizations (McLeod & Schell, 2007). A manager who knows how to work with situation of organization systems will be more successful than a less skilled manager in implementing information systems (Laudon & Laudon, 2012). Rocheleau (2006) explained about the technical knowledge and skill required at the time information systems applied. The objective of this research is to measure (1) the influence of user knowledge of AIS toward successful implementation of AIS and (2) the influence of the successful implementation of AIS toward accounting information quality.

1.1 User Knowledge of AIS and AIS Quality

User knowledge affects the implementation of accounting information (Rocheleau, 2006). Furthermore, Rocheleau (2006) says that the implementation of information systems requires not only technical skill but also technical knowledge. The implementation of information systems will fail if the users do not understand and cannot use the information systems correctly (Satzinger et al., 2002). Stairs & Reynolds (2012) add that the implementation of information systems requires personnel motivation and competence. Information systems can give benefit if employees donate their knowledge (O'Brien & Marakas, 2010). Thus, knowledge, skills and cleverness of individual staff who is involved will be important (Ward & Pepperd, 2002). The kind of knowledge that allows someone to contribute in the development of information systems includes computer knowledge, information knowledge, fundamentals of business, systems theory, the process of developing information systems and modelling information systems (McLeod & Schell, 2007). The explanation of the theory above is supported by a research conducted by Thong (1996) toward companies in Singapore that have been categorized successful in implementing information systems. Aziz & Salleh (2014), conducted similar research in various companies in Malaysia, Ismail & King (2007), Ang et al (2001) conducted it on public companies in Malaysia and identified that managing knowledge is one of organizational factors that affects information systems.

Based on theories used in this research as have been explained above and some of the results of the research supporting theories, so the proposed hypothesis is H1: User knowledge of AIS affects the quality of information systems implementation

1.2 Quality of AIS and Accounting Information Quality

Information systems quality according DeLone & Mclean (2003) is a term for success. Frameworked from DeLone & McLean (1992), the success of information systems is the interaction of six main variables, i.e. systems quality, information quality, usage, user satisfaction, impact on individual and impact on the organization. Quality systems refer to ease perception of using the systems. Information quality refers to perception about information quality attribute such as accuracy, relevance, reliability and completeness. According to Hall (2011), accounting information quality leans directly on systems development life cycle activities which generate AIS. This system gives accounting information to internal and external users. Boockholdt (1999) states that AIS occurs in various organizations, whether private companies, partnership company, nonprofit foundation and household. The complexity of each AIS will be different, but each has three common main things, that are: same structure, same process and same objection. In order to be effective,

information obtained from AIS in an organization must support information needed for management parties (Leitch & Davis, 1992). AIS will generate accounting information (Wilkinson et al, 2000). The accounting information quality provided by a good AIS and that is an important factor in the success of the systems (Xu, 2009). The research conducted by Xu (2009) shows that information quality is one of competitive advantages for an organization. In AIS, quality of information is provided for successful implementation of the systems. Other research is conducted by Carolina (2015), and Rapina (2014). A research conducted by Salehi et al (2010) said that quality of AIS improves quality of information (financial statements). The result of the research revealed the existence of a gap between information systems that should actually happen. Meanwhile, research of Jing Gao (2011) found that dimension of information quality affected by AIS.

Based on theories in this research mentioned above and some of the latest researches that support the theories, the proposed hypothesis is H2: Quality of implementation AIS affects the accounting information quality

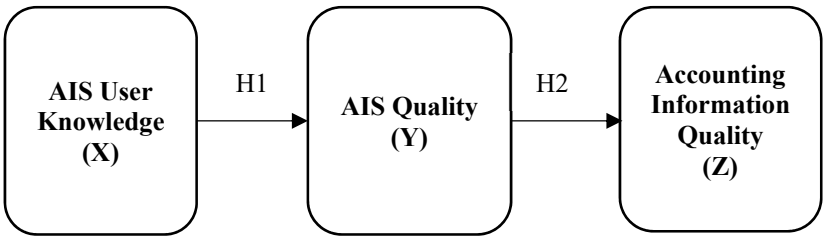

Figure 1. Theoretical Framework

2. Method

The type of research conducted is verification research and explanatory research or causal study. The objective of this research is to find out what and how the factors affect a variable in order to test hypothesis. The analytical unit in this research is the insurance companies operating in Indonesia. The unit of observation in this research is an internal user of AIS. Based on the opinion from Whitten & Bentley (2007), the intended respondents in this research are middle managers. Respondents who filled out questionnaires are chief of accounting department or branch leader. Furthermore, each respondent's answer will be seen as an average value (mean) as a representation of response analysis unit. Structural Equation Modelling (SEM) with valuation model parameters using the PLS method (Partial Least Square) is used in this research to test the hypothesis of this research. In this research, the minimum sample size taken by using power analysis, is 59 observations in order to obtain 80% statistical power and to detect the smallest value of R2 which is 0.50% with a 5% chance of error. A sample is collected and can be processed from 63 insurance companies.

3. Result

Based on the result of the data processing using PLS, a path diagram is obtained as shown in Figure 2.

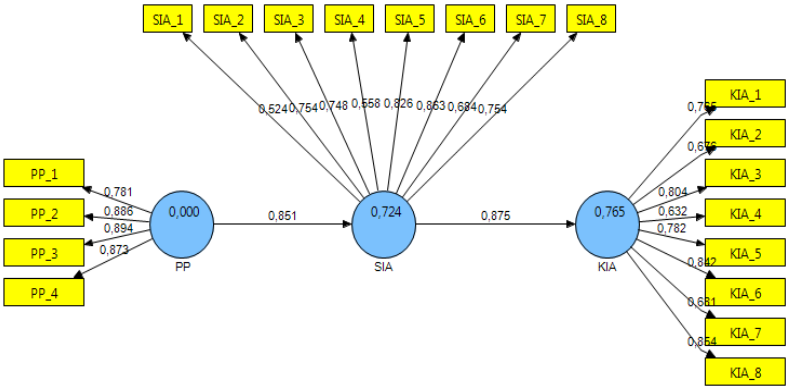

Figure 2. Path Diagram

Table 1. Summary Test Results Confirmatory Factor Analysis of Each Variable Latent

Latent Variable	Indicator	Weighting Factors	Composite Reliability	Variance Extracted	Cronbach's Alpha
User Knowledge of IS	PP_1	0.781	0.918	0.739	0.881
	PP_2	0.886			
	PP_3	0.894			
	PP_4	0.873			
Accounting Information Systems	AIS_1	0.524	0.895	0.522	0.864
	AIS_2	0.734			
	AIS_3	0.748			
	AIS_4	0.558			
	AIS_5	0.826			
	AIS_6	0.863			
	AIS_7	0.684			
	AIS_8	0.754			
Information Quality	IQ_1	0.764	0.914	0.575	0.898
	IQ_2	0.678			
	IQ_3	0.804			
	IQ_4	0.632			
	IQ_5	0.782			
	IQ_6	0.841			
	IQ_7	0.680			
	IQ_8	0.854			

Summary of test results on confirmatory factor analysis of each latent variable shows that each indicator is valid to measure latent variables. With the value of composite reliability and value of Cronbach's alpha is greater than 0.7, it means each indicator is consistent in measuring latent variables. Furthermore, the value of AVE for latent variable user knowledge of AIS is 0.739 which shows that on average 73.9% information that's contained in each indicator can be represented by latent variable of user knowledge of AIS. the value of AVE quality of implementation of AIS is 0.522, which means that on average 52.2% information contained in each indicator can be represented by a latent variable implementation of AIS. The value of AVE for implementation

of AIS is 0.575, which shows that on average 57.5% information that contained in each indicator can be represented by a latent variable of AIS.

Table 2. Summary of Hypothesis Testing

Sub Stucture	Path	Coefficient	$t_{statistic}^{*}$	R^2
First	PP ➔ AIS	0,512	23,306	0,765
Second	AIS ➔ IQ	0,844	40,298	0,723

Coefficient of Determination (R-square) presented in table 2 shows that the user knowledge of AIS affects 76.5% toward the quality of AIS implementation. The quality of AIS implementation affects 72.3% on the quality of accounting information. Based on the test result as summarized in table 2, it can be concluded that all hypotheses proposed in this research can be accepted. It can be seen from the value of t statistic which is greater than t critical (1.96). The result of this research provides empirical evidence that the more knowledgeable the users are, the better the quality of AIS implementation becomes and it will improve the quality of accounting information.

4. Discussion

The majority of AIS owned by insurance companies in Indonesia is a software that is purchased from a foreign vendor and can be adapted to a local condition in the company. AIS implementation in insurance companies is influenced by the experience of the AIS users and the suitability of formal education that they have. AIS will fail if the users cannot understand and cannot use the information systems properly. From what has described above, it can be said that as more inability of the application AIS adopts informal skills and experience possessed by the users of accounting information system will lead to the more successful implementation of accounting information systems. Standard Operating Procedure (SOP) as a set of written work instructions must be understood by all personnel in the company and the idea is socialized to all the personnel in the company. Having the knowledge of how to follow work procedure will make the user will not find difficulty in using the application accounting information systems. The quality accounting information generated by AIS is applied to have fully adopted the concept of systems integration, especially integration between existing function in the company. The concept of integration is also represented by the inability of the information system to facilitate the combination of information from different sources to support business decisions, characterized by the integration of their integrated (reconnection) parts in a good company among levels in the same sector or between levels.

The result of this study is consistent with theories and strengthens previous research results. It can be concluded that the quality of AIS implementation is affected by user knowledge of AIS and the quality of accounting information is affected by the quality of AIS implementation. The result contributes to the development of science, especially in the field of AIS. This research has not revealed all variables that can affect AIS quality, so other researchers are expected to examine other variables. The result of this research can also be used as a basis by other researchers who are interested in conducting a research in the field of AIS by using the same methods on different unit of analysis and sample with the expectation that the conclusion or the result will be the same (replicability), so it can support the result of this research.

References

Ang, C.L., Davies, M.A., & Finlay, P.N. (2001). An Empirical Model of IT Usage in The Malaysian Public Sector. *Journal of Strategic Information Systems*, *10*(2), 129-174

Aziz, N.M., & Salleh, H. (2014). Case Studies of The Human Critical Success Factors in Information Technology Implementation in Malaysian Constuction Industry. *Journal of Building Performance*, *5*(1), 1-9

Baltzan, P. (2013). *Business Driven Technology*. Fifth Edition. USA: McGraw Hill Irwin.

Bodnar, G.H & Hopwood, W.S. (2014). *Accounting Information Systems*. Eleventh edition. UK: Pearson Education.

Boockholdt, L.J. (1999). *Accounting Information Systems.* Fifth Edition. USA: Mc Graw Hill International Edition.

Carolina, Y. (2015). Towards AIS Success And Its Implications to Information Quality And User Satisfaction. *International Journal of Applied and Business Economic Research*, *13*(7), 5029-5042

DeLone, W & McLean, E. (2003). The DeLone and McLean Model of Information Systems Success: A Ten-Year Update. *Journal of Management Information Systems, 19*(4), 9–30.

DeLone, W & McLean, E. (1992). Information Success The Quest For Dependent Variable. *Information Systems Research, 3*(1), 60-95

Gelinas,U.J. & Dull,R.B. (2008). *Accounting Information Systems*. USA: Thomson-South Western.

Hall, J.A. (2011).*Accounting Information Systems*. Seventh edition. USA: Cengage Learning.

Ismail, N.A & King, M. (2007). Factors Influencing The Alignment of Accounting Information Systems in Small and Medium Sized Malaysian Manufacturing Firms. *Journal of Information Systems and Small Business*, *1*(1-2), 1-20.

Jing Gao, M.W. (2011). *Exploring Information Quality in Accounting Information Systems* Adoption. IBIMA Publishing.

Julian Noor. (2015) Interview [17/12/15].

Laudon, K.C & Laudon, J.P. (2012). *Management Information Systems Managing The Digital Firm*. Twelveth edition, USA: Pearson Prentice Hall.

Leitch, R.A., & Davis, K.R. (1992). *Accounting Information Systems Theory and Practice*. Second Edition. Prentice Hall International Editions

McGilvray,D.(2008). *Executing Data Quality Projects: Ten Steps to Quality Data and Trusted Information.* Elsevier Science Publishers.

McLeod, R & Schell, G.P. (2007). *Management Information Systems*. Tenth Edition. USA: Pearson Education Inc. Upper Saddle River.

O'Brien, J.A & Marakas, G.M. (2010). *Introduction to Information Systems*. Fifthteen edition. USA: McGraw Hill.

Rapina.(2014).Factors Influencing The Quality of Accounting Information System And Its Implications on The Quality of Accounting Information, *Research Journal of Finance and Accounting*, *5*(2), 148-154

Rocheleau, B. (2006). *Public Management Information Systems*. USA: Idea Group Publishing.

Salehi, M., Rostami, V., & Abdolkarim M. (2010). Usefulness of Accounting Information Systems in Emerging Economy: Empirical Evidence of Iran. *International Journal of Economics and Finance, 2*(2), 186-195.

Satzinger, J.W., Jackson, R.B., & Burt, S.D. (2002). *Systems Analysis and Design in a Changing World*. Second Edition. Canada: Course Technology.

Schermerhorn, J.R. (2011). *Introduction to Management*. International Student Version. Asia: John Wiley and Sons

Stair, R & Reynolds, G. (2012). *Fundamentals of Information Systems*. Sixth Edition. USA: Cengage Learning.

Thong, J.Y.L., Yap, C.S. & Raman, K.S. (1996). Top Management Support, External Expertise and Information Systems Implementation in Small Business. *Information Systems Research*. *7*, 248-67.

Xu, H. (2009). Data quality issues for accounting information systems' implementation: Systems, stakeholders, and organizational factors. *Journal of Technology Research*, *1*, 1.

Ward, J & Peppard, J. (2002). *Strategic Planning for Information Systems*. Third Edition. USA: John Wiley and Sons Inc,

Whitten, J.L., & Bentley, L.D. (2007). *Systems Analysis and Design Methods*. Seventh Edition. New York: The McGraw-Hill Companies Inc.

Wilkinson, J.W., Cerullo,M.J. & Raval, V. (2000). *Accounting Information Systems: Essential Concepts and Applications.* Fourth Ed. USA: John Wiley and Sons, Inc.