

## The Influence of User Involvement on Accounting Information System Quality

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**Abstract:** Background of this study was based on the argument that there were correlation between user involvement and quality of accounting information system. This study aims to examine: the influence of user involvement on the quality of the information system of accounting information system. This study was conducted at 55 universities in the city of Bandung. The data used in this study is the collection of primary data with media data through questionnaires. Respondents of this research is the head of the accounting information system. The method used was PLS 2.0. The hypotheses are: there are significant user participation on the quality of the information system of accounting information system. The results of this study are as follows participation of users of information systems significant positive effect on the quality of accounting information systems.

**Key words:** User involvement, quality of accounting information system, quality, results, significant, effect

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### INTRODUCTION

Accounting information systems provides a great benefit to achieving organizational goals of the company. Typically, a system is said successful if it met three conditions namely: the use of the system increases, the user perception of the quality of the system is better than before or increased user satisfaction information. The development of technology is growing very rapidly including in the field of communication. One of the effects of communications technology is development of data processing. The information system continues to change so that the necessary adjustments each time. Adjustments are made if problems arise or if there is a need (Romney *et al.*, 2006). Several factors affect the performance of information systems accounting includes the involvement of users in system development information, top management support, system development formalization information, training and user education, organization size, capability personal technical information system, the existence of information systems steering committee and the location of information systems department.

A system running effectively assessed, if it can meet the needs and desires of various constituencies within the organization, either individually or as a group (Gibson *et al.*, 1991). Information systems related to human behavior in organizations. Technical aspects and influence behavior for the benefit of users of business information systems. Although, computer-based information systems and highly dependent on information technology but the system is designed,

operated and used by people in organizations with backgrounds different (O'Brien and Marakas, 2008).

According to Gelinas *et al.* (2014), the system is a group of elements that depend on each other together to achieve a goal. Hall (2012) argues that "a system is a group of two or more interrelated components or subsystems that serve a common purpose". That system is a group of components or sub-systems that have the same goal. While the definition according to O'Brien and Marakas (2008) system is a group of interconnected elements or interact to form a unity. Based on expert opinion can be concluded that the system is a collection of two elements/components or more interconnected and work together in harmony to form a force to achieve one goal. Information systems related to human behavior in organizations. Technical aspects and influence behavior for the benefit of users of business information systems. Although, computer-based information systems and highly dependent on information technology but the system is designed, operated and used by people in organizations with backgrounds different (O'Brien and Marakas, 2008). In the development of information systems, organizations need to proactively engage its human resources with strategic decisions. In other words, required the active participation of the user or the employee, so that, the developed system can run effectively. Some results of the research found that active participation in the development of the system has a positive relationship with the success of the system (Ives *et al.*, 1983).

DeLone and Mclean (2003) develop a parsimonious model of the so-called information system success model

name DeLone and McLean (D and M IS Success Model) has six elements. These 6 elements or components include quality system (system quality), the quality of information (information quality), use, user satisfaction individual impact and organizational impact. Gelinas *et al.* (2014), the information system is a system consisting of a computer-based set of components and component manuals are built to collect, store and manage data and generate information for the user. The information system is defined as a combination of human, hardware, software, network communications and data sources that collect, process and distribute information within an organization (O'Brien and Marakas, 2008). Information system can be defined as a set of formal procedures in which the data is collected, processed into information and distributed to the users (Hall, 2012). Azhar (2008) explains that, the information system is a collection of sub-systems both physical and non-physical are interconnected with each other and work together in harmony to achieve the goal of process data into useful information. Jones and Rama (2006), accounting information system is a subsystem of a management information system that provides accounting information, financial and other information obtained from routine processes accounting transactions.

According to Gelinas *et al.* (2014), specific information system is a subsystem of the information system serves to collect, process and report information relating to the financial aspects of a business events. Based on expert opinion can be concluded that the information system is a system consisting of a set of components and component-based computer manually by collecting, entering, processing and storing of data to manage, control and reporting of information to achieve the goals that process data into information useful. Accounting information systems assumed as an information system of an organization that will provide the information needed by the user information. Meanwhile, Hall (2012), accounting information system is a subsystem that processes financial transactions and non-financial direct influence on the processing of financial transactions.

Formal user involvement, either directly or individually will be more easily accomplished in an organization that is designed with a flat structure (relatively decentralized) but the reverse is not the case with too hierarchical organizational structure (Jones and Rama, 2006). Gibson *et al.* (1991) said that, user participation will encourage the achievement of individual effectiveness will further encourage the effectiveness of the group and in turn will lead to organizational effectiveness. The level of participation and user satisfaction will affect the success of the system where user participation can improve the performance of

information systems. As described above, it is known that participation has a positive relationship with user satisfaction but on a different scale and volatile.

**Literature review:** Greenberg *et al.* (2009) participation is the active involvement in the learning process, active participation leads to more effective learning. Some important reasons user involvement in the design and development of information systems according to Azhar (2008) are:

- Needs users
- Knowledge of local conditions
- Reluctance to change
- Users feel threatened
- Improving democracy

Seddon (1997) states that, the use of information systems is an emergent behavior due to the advantages over the use of information systems. A number of benefits that can arise from participation of users during the development process of information systems which is a better quality systems increase knowledge about the users of information systems, the commitment of the larger users and the system is more acceptable to users. User participation is expected to increase the acceptance of the system by users is to develop realistic expectations of the capabilities of the system, provide a means of bargaining and conflict resolution around the issue of system design and minimize the presence of the resistance to change from user to information that is developed. The success or failure of an information system is developed, will be influenced by factors bebarapa both from within and outside the organization/company. One factor is the participation of users. According to Bodnar *et al.* (2010) in the development stage of the system, especially in the survey system, one of the goals in the survey system is to build a cooperative relationship with the users of the system. Furthermore, Bodnar *et al.* (2010) explains that building cooperative relationships is a crucial thing, the success or failure of a system development project will depend on the magnitude of the quality of the relationship between the development team with individuals who work in the system. Then, Romney *et al.* (2006) state that the system analisis stages which prepared the feasibility study is the input of management, accountants and users (user). Based on the above understanding can be concluded that user participation is used to indicate a real personal intervention in the development of information systems from planning to implementation. According to Azhar (2008) some things that must be considered to be an effective user support, namely:

- Promote two-way communication
- Provide an integrated network
- Recognizing the plurality of user
- Having a dynamic capability
- Easily handles user wishes
- Easily identify user needs
- Availability of adequate resources such as finance, time, effort and expertise

Stair and Reynolds (2016), a system is a set of elements or components that interact to accomplish goals. The elements themselves and the relationships among them determine how the system works. Systems have inputs, processing mechanisms, outputs and feedback” definition of the system according to O’Brien and Marakas (2010) is as a system is defined as a set of interrelated components with a clearly defined boundary, working together to achieve a common set of objectives by accepting inputs and producing outputs in an organized transformation process. definition of the system according to Hall (2012) is: a system is a group of two or more interrelated components or subsystems that serve a common purpose. Definition of the system proposed by Azhar (2004) that defines a system as a collection/group of parts/components of any physical or non-physical well interconnected to achieve a certain goal. Based on expert statements can be concluded that the system is a collection of components that work together in harmony to achieve the goals. Laudon and Laudon (2012) as follows: an information system can be defined technically as a set of interrelated components that collect (or retrieve), process, store and distribute information to support decision making and control in an organization. In addition to supporting decision making, coordination and control information systems may also help managers and workers analyze problems, visualize complex subjects and create new products. Information systems contain a significant information about people, places and things within the organization or in the environment surrounding it. By Bateman and Snell (2004) “information system an arrangement of people, data, process and information technology that interact to collect, process, store and provide as output the information need to support an organization”.

By Stair and Reynolds (2016) definition of information systems are an Information System (IS) is a set of interrelated elements or components that collect (input) manipulate (process) store and disseminate (output) of data and information and provide a corrective reaction (feedback mechanism) to meet an objective”. The information system is a collection of components that are interconnected and work together to process the financial data into financial information. By Bagranoff *et al.* (2010), an accounting information system is a collection of data

and processing procedures that creates needed information for its users. By Hansen and Mowen (2007), accounting information system is a system consisting of interrelated manual and computer parts, using process such as collecting, recording, summarizing, analyzing (using decision models) and managing data to provide output information to users. Operationally, an AIS uses processes to transform inputs into outputs that satisfy the overall objectives of the system. By Bodnar *et al.* (2010), an accounting information system is a collection of resources such as people and equipment, designed to transform financial data into information. This information is communicated to a wide variety of decision makers.

## **MATERIALS AND METHODS**

The research method used was quantitative research with survey approach. Type of survey approach in this research is. In-person interview: “an in-person interview consists of an interviewee asking the respondent questions in a face to face situation. The interview may take place at the respondent’s home or a research office. Self-administered questionnaires, respondents fill out self-administered questionnaires themselves. Samples used consisted of 55 universities in Bandung, West Java Indonesia. The reason why this study conducted only in Bandung is that is only a preliminary survey or a pilot study. The result of this preliminary study will continued by further research using bigger area and the improvement of research design if necessary to determine the involvement of users in the development of the system on the quality of accounting information systems, we used measurement tools created by Wold (1985) called partial least square. Partial least squares is a statistical technique that combines generalize and factor analysis, Principal Component Analysis (PCA) and regression analysis, through a separate estimation procedure (partial) between indicators of the latent variables. As stated by Wold (1985) partial least squares is a powerful method of analysis because it is not based on many assumptions. The questionnaire consists of 4 parts: first: a questionnaire concerning demographic data, second are the primary statements, third is a questionnaire about user involvement in development system and fourth is the opinion of respondents about the quality accounting information system.

## **RESULTS AND DISCUSSION**

The results of the research are: base on of questionnaires and interviews conducted most of the user of information system have a technical educational background (33 people/60%) with most working experience between 1-5 years (30 people/54%).

Table 1: Convergent validity test of research model (path diagram)

Convergent/Indicators/Item	Loading	t-statistic	Classification
<b>User involvement (PP)</b>			
X1.1	0.8212	33.019	Valid
X1.2	0.8120	158.659	Valid
X1.3	0.4404	41.942	Valid
X1.4	0.7639	22.768	Valid
X1.5	0.7841	30.035	Valid
X1.6	0.7359	40.511	Valid
<b>Quality of accounting information system (y)</b>			
Y1	0.6573	49.607	Valid
Y2	0.8120	9.740	Valid
Y3	0.4510	3.417	Valid
Y4	0.6231	7.046	Valid
Y5	0.7656	16.768	Valid
Y6	0.7270	18.035	Valid
Y7	0.7373	22.511	Valid
Y8	0.6209	14.059	Valid
Y9	0.6451	45.332	Valid
Y10	0.5675	18.672	Valid
Y11	0.5143	28.615	Valid
Y12	0.6227	29.901	Valid
Y13	0.7450	38.221	Valid
Y14	0.7272	5.054	Valid
Y15	0.6561	30.320	Valid
Y16	0.7334	41.045	Valid

Table 2: Composite reliability test

Variables	Composite reliability ( $\rho_c$ )	Information
PP	0.8102	Reliable
KSIA	0.8990	Reliable

measured values  $\geq 0.5$  or  $\geq t$ -statistics should be 1.96 (two-party test) at a significance level of 0.05. If one indicator has a value of t-statistic  $< 1.96$ , then the indicator should be discarded (dropped) because it indicates that the indicators are not good enough to accurately measure the construct (Ghozali, 2006).

Based on the convergent validity of the test results in Table 3, it can be seen that all the items of user participation indicators (KP), quality of accounting Information Systems (KSIA) has a value of t-statistics  $> 1.96$ , means: indicators or items used in measuring the construct are valid user Participation (PP) information systems.

**Composite reliability test:** To assess whether an indicator can really be trusted to measure a construct, the structural equation performed using composite reliability ( $\rho_c$ ) or construct reliability. An indicator is a good construct forming when a correlation  $\geq 0.7$  (Chin, 1998). Composite reliability as a measure of internal consistency that can only be used to construct with reflective indicators whereas the type of formative indicators measured using the weight of the outer models (Table 2).

Based on the test results of composite reliability, for exogenous latent variables have  $> 0.7$ , meaning the indicators used completely trustworthy (reliable) to measure construct.

**Parameter estimation and test of significance:** Based on the results of the bootstrap estimates, the value of the parameter coefficients for the structural model (inner model) as follows: provided the value of the coefficient parameters to track user participation on the quality of accounting Information for 0411 units with a value of t-statistics 5.712 ( $5.712 > 1.96$ ).  $H_0$  is rejected, it means: there is a significant direct effect on the participation of the user was quality of accounting information systems.

Based on the parameters of the path coefficients obtained by testing the inner workings of the model, the results of the study found that: user participation significant positive effect on quality of accounting information systems. Furthermore, the coefficient parameters obtained incorporated into a mathematical equation as follows:

$$X1Y1 = 0.411$$

**Explanation:** Coefficient parameters of the path between user participation in information systems accounting

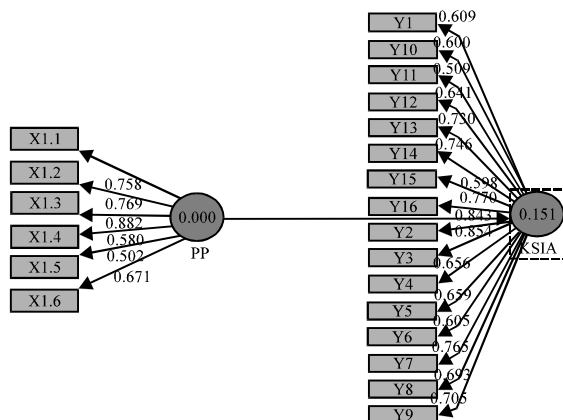


Fig. 1: Model line beginning at the Partial Least Square using software SmartPLS3

**Testing results:** Evaluation measurement model (validity and reliability) structural equation model using PLS does not assume the existence of a particular distribution for parameter estimation, the parametric techniques to test the significance of the parameters is not required (Chin, 1998). Evaluation of the PLS Model predictions based on measurements that have the properties of non-parametric (Fig. 1).

**Convergent validity test:** To determine whether an indicator is forming construct (latent variable) be testing the convergent validity of the measurement model with reflective indicators assessed by the correlation between the item score with a score that is calculated to construct size of individual reflexive as valid if it has a correlation (loading) to construct (latent variable) that wants to

Table 3: Coefficient parameters line

Relationship of causality	Path parameter coefficient	Average sub sample (bootstrap)	SE (bootstrap)	t-statistic
PP->KSIA	0.411	0.460	0.061	5.712

Data processing, Smart PLS 2.0 for Windows, 2014

Information systems quality () of 0411 that is to say; each increase of 1 unit user participation will result in increased quality of accounting information system by 0411 units (Table 3).

## CONCLUSION

In general, accounting information system user participation in Bandung West Java universities could be said better. But there are still some deficiencies found in user participation as not many employees/users of the system information that is directly involved in the manufacturing process or information systems improvements are made, it is because of unfamiliarity users of the information system or other factors. So, the system sometimes not made in accordance with the needs of employees or the condition existing work in the field. The result show that information system user participation significant positive effect on the quality of accounting information systems.

## SUGGESTIONS

For further research, suggested additional data collection techniques such as interviews, multiply the number of respondents, conducted a pilot study to ensure that the items in the questionnaire questions can be correctly understood by the respondents. For further research, adding other contextual variables thought to correlate with the characteristics of management accounting information systems such as market competition, business strategy and interdependence.

Because this study was limited to universities in Bandung alone, it is recommended for further research using a sample population and more broadly for example, colleges that exist in one particular province, so that, the conclusions generalize more broadly.

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