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Investigating the Role of Management Accountants in Indonesia

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ABSTRACT

Literature highlight the role of management accountants as business partners in managerial decision making process besides the traditional role as information providers. This study investigates the role of management accountants in Indonesia by adopting the DeLone and McLean Information System Success Model (2003). Data were collected by conducting surveys to acquire the perception of managers on the role of management accountants. Using structural equation modeling, the results show that both management accounting information quality and management accounting service quality have significant relationship with user satisfaction. Furthermore, the satisfaction of managers is positively related to net benefits received by managers. Therefore, management accountants in Indonesia may have fulfilled the role as business partners.

INTRODUCTION

There are two roles of management accountant in organization as suggested by literature. First is the role of accountant as an information provider. The accountant does its traditional role as merely a provider of information to the users. Sathe (1982) called the role as *independence role* where accountant has authority and independent work in an organization. The independent role is also associated with *beancounter* stereotype. This label has meanings that accountant is honest and trustworthy person, but narrow minded and lack of vision (Friedman & Lyne, 2001). However, when environmental changes, globalization, and fierce competition increase the complexity of business operation,.management accountants are encouraged to play in more strategic role and to involve more in decision making process than act solely in keeping records. Management accountant can act an internal consultant (Corrigan, 1997; Granlund & Lukka, 1998) to assist managers in decision making process. Thus, management

accountant expands his role as a service provider. Sathe (1982) called such emerging role as *involvement role* where accountant gets involved in managerial decision making. A strong management accountant (or controller, according to Sathe, 1982) is an accountant who can manage the dual roles. The collaboration between management accountants and other functions in business organization makes management accountant become a business partner, as an equal partner for manager in managerial decision making (Siegel & Sorensen, 1999).

In the same way as Sathe (1982), Mouritsen (1996) defines the independence level of management accountant as maintenance the financial data, or book-keepers, who are detached from organizational activities. In contrast, the involvement level of accountant is described as being intermediaries among departments in business. Management accountants focus on the alignment of products and customers with the firm operation. In doing so, they have to interact with organization members and other people outside the organization. Coad (1999) argues that to achieve the business partner status management accountants should have learning goals orientation instead of performance goal orientation. Performance goal orientation refers to achieving success with less effort. Here, Success or failure is associated with ability of individuals, which is given. They do not like negative comment or changing environment. On the other hand, learning goal orientation is about increasing competence. Individuals with high learning goal orientation believe that capability can be expanded. They attach success or failure to level of effort. There is a chance for learning in a changing environment.

Discussions on emerging role of management accountant encourage management accounting research. Study in Finland shows that the management accountants (controller) began to act as actors in decision-making, driven by more internationally-oriented Finnish firms (Granlund & Lukka, 1998). In Italy, management accountants are not being too involved in managerial decision-making process; nevertheless, they gave positive impact to firm performance (Zoni & Merchant, 2007). In Japan, management accountants have influenced the behavior of other organization members to act in accordance with the objectives of the company. The practice of management accounting is always integrated with the strategy of the company to enrich the innovation climate (Hiromoto, 1991). For example, management accountants are involved in pre-production and production activities, which enable the company to enjoy profit margin while remaining competitive.

On the other hand, management accountants in the UK began to expand their role; nevertheless, their survey reveal that only twenty percent of total respondents perceived that management accountants had played business partner role (Yazdifar & Tsamenyi, 2005). Further research in the UK (Graham *et al.*, 2012) finds that although the controller already had a broader insight to the business, they had not been able to add value to the company. Tensions created by the controller involvement with other organizations member made the role of a business partner had not been satisfactorily realized.

Furthermore, Australian management accountants spent, on average, only 38.4 percent of their time to support the decision-making process (Beaman & Richardson, 2007). Most of their time was spent on such routine work as recording and reporting. In the Netherlands, the traditional role of the accountant as *scorekeeper* is still dominant (De Loo *et al.*, 2011). Walker *et al.* (2012) argued that management accounting service quality was an important indicator for business partner role. Therefore, management accountants should treat the other units in the organization as their customers. However, the results of a survey of managers conducted (Walker *et al.* 2012) in the United States show that the management

accounting service quality had not been realized as expected. Recent study in German (Wolf *et al.*, 2015) demonstrates that controllers are able to provide relevant information for decision making. In addition, controllers also contribute to the efficiency in resource allocation, cost awareness among organization members, internal process improvement and better decision. Such participation in managerial work enhance their presence as business partners among other organization members, especially the general managers.

In summary, the research findings shows mix results across nations. Furthermore, subsequent research might suggest an alternative model in investigating the role of management accountant. In this research, we propose a model modified from The DeLone and McLean Information System Success Model (2003) from the information system literature. DeLone and McLean developed a model to investigate the success of the implementation of a computer-based information system in an organization (DeLone & McLean, 1992 and 2003).

Little research is known in the adoption of the DeLone and McLean Information System (D&M IS) Success Model in accounting literature. Nabiha & Scapens (2005) mention the chance of using the respected model to measure in a quantitative way the success of an accounting change in an organization; despite their focus on the accounting change process of accounting in a qualitative case study research. The D&M IS Success Model (2003) has also been adapted by Fleischman *et al.* (2010) to investigate the implementation of an accounting information system, arguing that the end product of accounting information system is service. There is an opportunity for subsequent research to embrace the D&M IS Success Model (2003) to examine the role of management accountant. We take on this opportunity to investigate the success of management accountant role in a business organization both as information provider and service provider, as perceived by managers.

The study was conducted in Indonesia, a country with 250 million in population in south east Asia region. With its huge population and growing income per capita, Indonesia is an attractive market in the region, since the implementation of the ASEAN Economic Community (AEC) in 2015, where goods and skilled labors flow freely within ASEAN countries. Concern then arises on the competitiveness of the Indonesian accountants. Unless Indonesian accountants prepare themselves, they will not survive in competing with foreign accountants. This research may also contribute to initial knowledge of performance of Indonesian management accountant. In specific, the study investigates whether Indonesian management accountants perform the consultative role as business partners.

Research Framework

Accounting is an information system long before the computer-based information systems are found (Hurt, 2008). Some previous accounting research has adopted information systems research model; for example, Shields (1995) and McGowan and Klammer (1997) measured the success of the implementation of activity-based cost management (ABCM) system through user satisfaction. User satisfaction is a measure in determining the success of information systems implementation in organization (DeLone & McLean, 1992 and 2003; Doll *et al.*, 1994; Etezadi-Amoli & Farhoomand, 1996).

Information systems research leads to the conclusion that the information system provider essentially has two important roles, the information providers and the service provider of the final product. DeLone and McLean (2003) proposed a model to measure the success of an information system by linking information quality, system quality, and service quality to user satisfaction and benefits. The model, known as The DeLone and McLean Information System Success Model (The D & M IS Success Model), is as seen as in Figure 1.

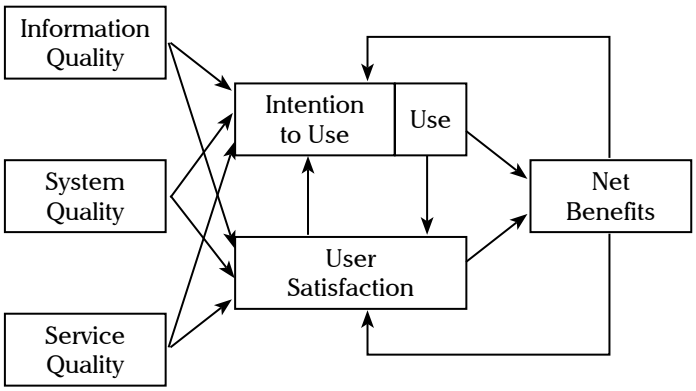

Figure 1. The DeLone & McLean Information System Success Model
Source: DeLone & McLean (2003)

Figure 1 shows that there are three dimensions which affect the use and the satisfaction of system users. The quality of information (Information Quality) measures the output of the information system (DeLone & McLean, 1992), in the sense that system functions as an information provider. The quality of system (System Quality) measures the performance of computer-based information system itself in data processing. Last, quality of service (Service Quality) measures the service quality of the information system. Information system is basically rendering service to its users (service provider). Satisfaction of users (User Satisfaction) is the response of the user on the use of information systems output that reflects success or failure of the interaction between users and information systems. Satisfaction related to attitude of users, in which satisfied users tend to increase the usage of information system. Finally, net benefits are the impacts received by users which lead to change of behavior; for example, users are more effective in decision making (DeLone & McLean, 1992 and 2003). We then adopt the Delone & McLean IS Success Model (2003) to our research and identify the appropriate variables and constructs of each variable, by relying on not only management accounting literature but also information system literature.

Hypothesis

Information Quality

Firstly, we argue that Information Quality is analogous to independent level of management accountant as an information provider (Sathe, 1982; Mouritsen, 1996). Pierce and O'Dea (2003b) mention four important dimensions of quality management accounting information needed by managers, which are relevant, accurate, complete, and format of report. The same dimensions were also noted by van der Veeken and Wouters (2002), Byrne and Pierce (2007), and Hall (2010). Relevance, accuracy, completeness and format are the indicators and also the constructs of Information Quality. Each of the four constructs (latent variables) is measured by its indicator variables developed from Livari (2005) and Wixom and Todd (2005), shown by Appendix 1. Thus the first hypothesis is

H1: Management accounting information quality is related positively to satisfaction of managers.

Service Quality

Secondly, Service Quality is similar to involvement level or as a service provider (Sathe, 1982; Mouritsen, 1996). The involvement of accountants in business units together with other managers, increase appreciation from managers and reduce

the resistance of managers (Pearson *et al.*, 1982). Furthermore, Walker *et al.* (2012) suggested that management accountant serves other units as its customer, or act as an internal service provider to other units in the organization. Hence, quality of service is considered as an important bridge on the way to business partner status. To give support in decision making, management accountant needs to have business knowledge (Sathe, 1982; Merserau, 2006; Walker & Johnson, 2006), and the ability to communicate and establish good relationships with other organization members (Sathe, 1982; Hiromoto, 1991; Harris, 1994; Scapens & Jazayeri, 2003; Hall, 2010). Sathe (1982) proposed attributes of a strong controller, such as analytical skill, business judgment, communication skills, and interpersonal skills. We use each attribute as constructs of service quality dimension in research framework and adopt indicators for each attribute from Sathe (1982), as seen in Appendix 1. Accordingly, the second hypothesis is

H2: Management accounting service quality is positively related to satisfaction of managers.

User Satisfaction

User satisfaction is considered as the perspective or attitude to an object (DeLone & McLean 1992). Satisfied managers will be motivated to use information more frequently (Livari, 2005). The success of the interaction between user and management accountants are measured by the satisfaction of managers on management accountant performance (Walker *et al.*, 2012). Indicators of user satisfaction, as latent variable, are adopted from literature of Pierce and O'Dea (2003a), Livari (2005), and Wixom and Todd (2005), as seen in Appendix 1.

Satisfaction then forms expectations of the users on the future benefits, which then influence changes in user behavior. Changes in behavior reflect the success of implementation or net benefit (DeLone & McLean, 2003). Net benefit indicates that the user benefits from the participation of the management accountant in the decision-making process. Indicators of net benefit are adopted from Pierce and O'Dea (2003a), Livari (2005), and Wixom and Todd (2005), as seen in Appendix 1. Therefore, the third hypothesis is

H3: Managers satisfaction is positively related to net benefits.

On the other hand, System Quality in the D&M IS Success Model (2003) is to evaluate the performance of a data processing system in a computer-based information system. Since evaluation of the data processing system is not the focus of study, System Quality is not included in the research framework. We also exclude Intention to Use/Use dimension for generalization purpose. It may happen that there is a mandatory or voluntarily use of management accounting information and service in an organization. The one-headed arrow is used as we run a cross-sectional study.

As a result, there are three research hypothesis developed from the research framework based on The D&M IS Success Model (2003), as shown by Figure 2. More specifically, our research has three specific purposes of the study in order to investigate the successful role of management accountant: (1) to examine the relationship between management accounting information quality and the satisfaction of the managers (2) the relationship between management accounting service quality and satisfaction of managers, and (3) the relationship between satisfaction of managers with net benefits received from the performance of management accountant.

METHODS

We use survey method to acquire the perceptions of managerst on the role of management accountants. Respondents are managers as users of management accountant. The criteria of respondents are: (1) non-accountant/non-finance managers and (2) having interaction with management accountant in workplace. Sources

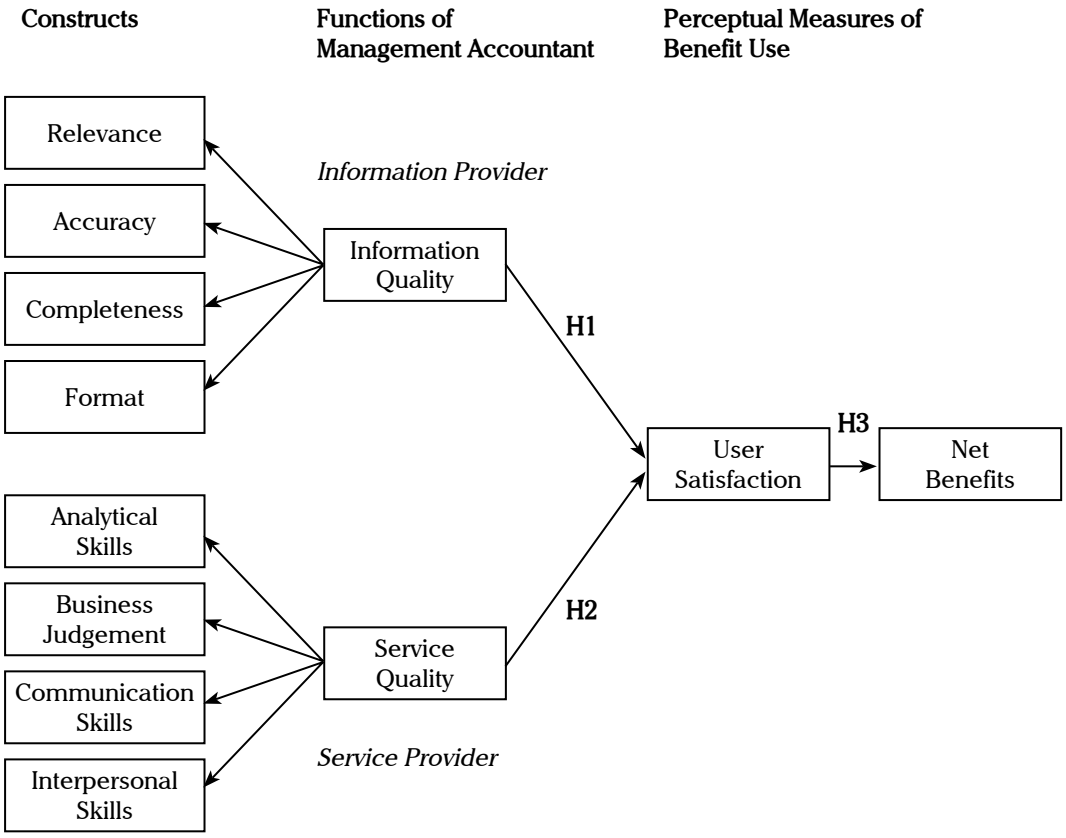

Figure 2. Research Framework

of data are the scores of each question in the questionnaire, which uses Likert scale. The Likert scale represent the degree of opinion from 1 (very disagree) to 5 (very agree). Data processing was conducted by using structural equation modeling (SEM) with AMOS (Analysis of Moment Structure) software version 22.0. We use SEM since it allows factor analysis and analysis of relationship among latent variables (construct), simultaneously. All indicators of the latent variables in the questionnaire are shown in Appendix 1, developed from both literature of management accounting and information system.

Pre-test was carried out through twenty four managers, selected by the established respondent criteria. Those managers found no difficulties in filling out the questionnaire, so that the research can proceed to the data collection stage.

In the data collection stage, from 392 questionnaires collected, there are 301 useable (77%) and 91 unusable questionnaires (23%). Questionnaires are considered being unused because the respected respondents are from accounting/finance division (55%), respondents admit that they lack of interaction with accountants (20%), respondents gave incomplete answers (14%), and some of them are not managers (11%). Hair (2008) argues minimum five respondents for every measured variable or fifteen respondents in ideal for each indicator for running SEM. Useable 301 questionnaires are considered enough for 30 variables in this research.

The demography of respondents is shown in Table 1. From the whole respondent, 151 respondents (50%) hold title as middle manager, 81 (27%) are first line managers, 39 respondents (13%)

Table 1. Demography of Respondents

No.	Description	Number	Percentage
1	**Gender**		
	Male	204	68
	Female	97	32
2	**Managerial Position**		
	First line managers	81	27
	Middle managers	151	50
	General managers	25	8
	Directors	39	13
	Commissioners	5	2
3	**Division**		
	Production/operation	71	24
	Marketing/sales	99	33
	Human Resources	15	5
	Others	116	39
4	**Industry**		
	Service	131	44
	Manufacturing	58	19
	Trading	42	14
	Others	70	23
5	**Type of Firm**		
	Public-listed company	103	34
	Non-public listed	194	65
	Do not answer	4	1

are directors, 25 respondents (8%) are general manager, and the remaining 5 respondent (2%) are commissioners. Based on divisional background, 33% of respondents are from marketing and sales division, whereas other (24%), respondents are from production division and the rest are from other divisions such as human resources, research and development, and information technology. The respondents are from various industries, such as service (44%), manufacturing (19%), trading (14%) and others (23%). Moreover, two-third of the respondents are from private companies, whereas one-third are from public companies.

Demography of respondents shows that research samples represent users from such various backgrounds as genders, managerial position, division, industry, and type of firms; therefore we can rely on the samples to generalize the research findings.

RESULTS AND DISCUSSION

In examining measurement model as first step of CFA, we are using confirmatory factor analysis (CFA) to examine relationship between latent constructs and measured variables (indicator). Validity and reliability for each construct and its measured variables are shown in Appendix 2 to Appendix 5. Construct validity above 0.50 shows minimum threshold. Average variance extracted (AVE) and construct reliability above 0.70 suggest an adequate reliability. It is concluded that

Table 2. Goodness-of-Fit Statistics

No.	Indices	Result
1.	Chi-square (χ^2), p = 0.000 Degree of freedom	1048.567 435
2.	Normed chi-square	2.661
3.	Goodnes- of-fit Index (GFI)	0.809
4.	Root mean square error of approximation (RMSEA)	0.074
5.	Comparative Fit Index (CFI)	0.882
6.	Parsimony normed fit index (PNFI)	0.747

indicators (measured variables) represent the latent constructs well. The structural model, which shows relationship between latent variables, is shown in Figure 5. Fit indices in Table 2 show the overall fit statistics from testing the model. The indices suggest that the model can be considered moderately fit.

The paths in Figure 3 show that all hypotheses are supported. Hypothesis 1 is supported since there is a significant and positive relationship between information quality and user satisfaction. Hypothesis 2, which states there is a positive and significant relationship between service quality and user satisfaction, is also supported. Finally, there is a significant and positive relationship between user satisfaction and net benefits. The summary of hypothesis testing is shown in Table 3.

The result above reveals that there has been a significant relationship between information quality and user satisfaction. The information quality is mostly reflected by completeness of the report (mean of 4.010 in Appendix 1), then followed by relevancy (3.941), accuracy (3.800), and format of the report (3.723). Completeness indicates that users find management accountants have been producing necessary, detail, and comprehensive information.

A significant and positive relationship was also found between management accounting service quality and user satisfaction. Service quality is represented mainly from analytical skill (mean of 3.662 in Appendix 1). It suggests that management accountants are able to explain meanings behind numbers in solving the problem faced by and the future of the corporation. Moreover,

Table 3. Summary of Hypothesis Testing

	Hypothesis	Standardized Estimate	Conclusion
H1	Management accounting information quality is related positively to satisfaction of managers.	0.107**	Supported
H2	Management accounting service quality is positively related to satisfaction of managers.	0.952*	Supported
H3	Satisfaction of managers is positively related to net benefits.	0.536*	Supported

* Significant at 0.001 level
** Significant at 0.05 level.

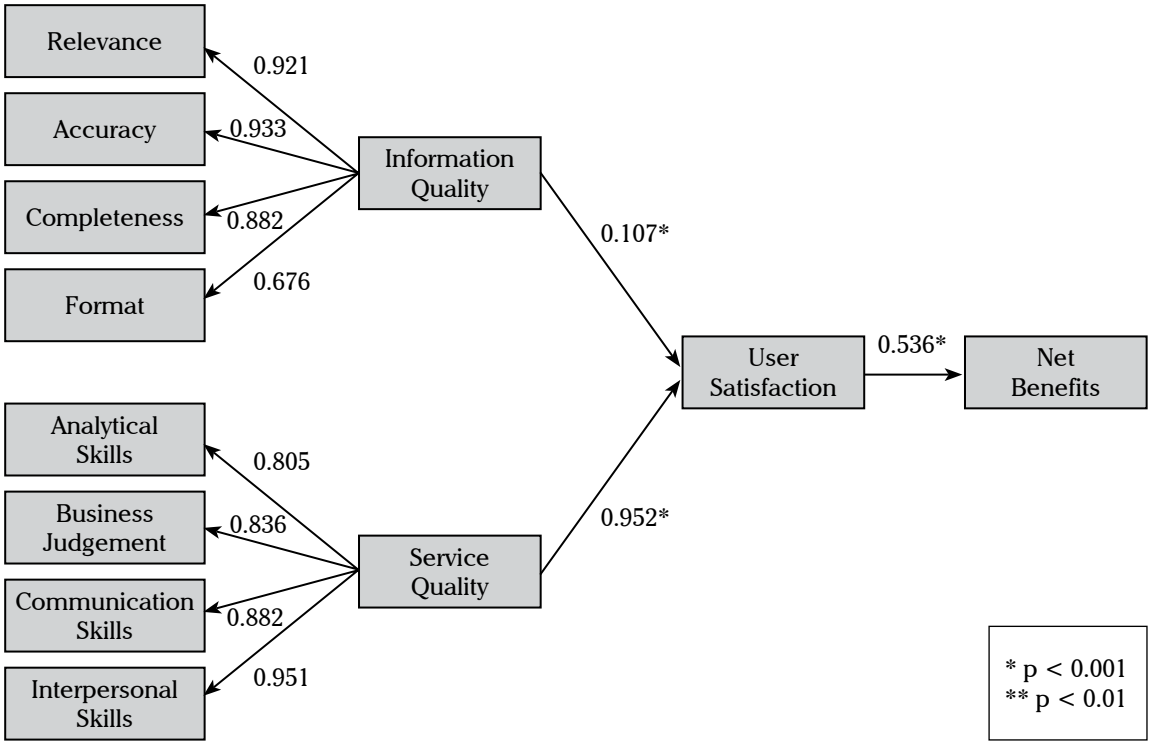

Figure 3. Research Output

managers recognize management accountants' business knowledge (mean of 3.610 in Appendix 1) that management accountants show their understanding in the nature of business, ability to make a recommendation, and know other functions in an organization. Managers also appreciate the interpersonal skill (mean of 3.546 in Appendix 1), in the sense that they can put their trust the management accountant, they perceive that management accountants as also organization members who available for discussion and are able to work with others. Additionally, managers appreciate the communication skills shown by management accountants (mean of 3.381 in Appendix 1), mainly derived from critical thinking in problem solving as well making convenient interaction and showing respect for different perspective of other organization members.

It may conclude that both management accounting information quality and management accounting service quality have significant effect on satisfaction of managers. Furthermore, there is a significant and positive relationship between user satisfaction and net benefits. The satisfaction on accountant performance is indicated (mean of 3.525 in Appendix 1) and so is the willingness to interact more with accountant (3.385). Net benefits received are mainly showed by the effectiveness of daily work (mean of 3.7887 in Appendix 1) besides better decision (3.781) and efficiency in decision making (3.771).

Refer to standardized estimates of research finding, the parameters show positive and significant relation of the model. Both management accounting service quality (parameter of 0.952) and management accounting information quality (coefficient of 0.107) have a positive significant effect on user satisfaction. Satisfaction of managers has positive and significant effect to benefits acquired by managers from interaction with management accountants. Managers acknowledge both the "traditional role" in maintaining the integrity

of financial information and the emerging role in management involvement.

As discussed above, management accountants show their analytical skill, business understanding, interpersonal skills, and communication skills. In specific, we argue that Indonesian management accountant should enhance their soft skills such as communication and interpersonal skills. An accounting department establishes its function by the interactions of management accountant with managers and other functions in business organization (Mouritsen, 1996). Accounting talk should be emphasized in everyday accounting practice because managers tend to use verbal language more than written language (Ahrens, 1997; Hall, 2010; Sathe, 1982). Accounting talk is the use of verbal language in communicating financial information. Since management accounting functions depend on talk, verbal and contextual discussion creates a more dynamic and interactive discussion with manager; as there is an exchange between financial information and expertise of managers. Management accountants may suit the financial information produced to specific needs of managers in particular situations faced by managers. It enables management accountant in spreading accounting perspectives in the organization and thus integrates accounting information into management process. Good interpersonal skills are management accountant's keys of success (Siegel and Sorensen, 1999). This research confirms that the involvement of management accountants with the users made their presence more acceptable by managers (Pearson *et al*, 1982; Byrne and Pierce, 2007).

Pierce and O'Dea (2003) noted that as being involved with management, management accountants may feel that they will lose their status in company and managers may see role ambiguity of management accountants. However, our findings show that involvement create a "new legitimacy" to management accountants since they use their knowledge to help managers together in the field. Their internal consultant role can lessen environmental uncertainty perceived by managers. This happens because managers confidence in the competence and support of management accountants (Mouritsen, 1996). In addition, our research support argument of Lambert and Pezet (2010) that a management accountant is still regarded as producer of truthful knowledge as long as he keeps on preparing himself for face-to-face meeting with management and client. By the meeting (in other words a trial, as mentioned by Lambert and Pezet, 2010), management accountant retain his legitimate as independent.

Overall, the research concludes that both roles of management accountants in Indonesia are able to contribute value to organization from either by their independence role or their involvement role as business partners.

MANAGERIAL IMPLICATIONS

The managerial implications of this research are as follows. Firstly, business leaders may provide a learning environment in business organizations. The expectation of managers may stimulate the behavior of management accountants to be more business-oriented (Wolf *et al*., 2015) and to be more toward learning goal orientation (Coad, 1999). This will facilitate collaborations between management accountants and managers. Secondly, managers should equip accountants not only with hardskill but also with sofskill, for example communication skill. This skill will reduce tensions among organization members and and may become a bridge for management accountants to play their consultative role. Enhanced interactions between members of organization add value to the organization.

CONCLUSION

This study is an exploratory study which aims to investigate the role of management accountants in Indonesia perceived by managers. We propose the use of the DeLone and McLean Information

Success Model (2003) to measure the success of management accountant. The results provide support that management accounting information quality and management accounting service quality create satisfaction and benefits for managers in managerial decision making. Furthermore, managers show high appreciation toward management accountants' ability to establish relationships between people (interpersonal skills) and the way to communicate with managers (communication skills). The research concludes that management accountants in Indonesia have increased their presence toward a more strategic level in organizations. It may imply that the management accountants may have fulfilled the emerging role as business partners and increase their competitiveness in the global market such as the ASEAN Economic Community.

The study attempts to figure out the role of management accountants perceived by managers, in general, without distinguishing hierarchy of managers. This might be the limitation of the study. Management accountants' work is set up by the interactions with top management and line functions. Different level of manager may have different need of information and service. However, the questionnaire of this study was designed for all levels of management. Subsequent research can be supported by customization of questionnaire. In addition, subsequent research may be supported by interview and focus group discussion with not only managers but also management accountants themselves, to get deeper understanding about daily practice on how management accountants influence and deal with different level of managers in business decision making process. ■

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Appendix

Appendix 1. Latent Variables and Indicators

Construct	Indicator	Likert Scale	Mean
Relevance	Up-to-date		4.043
	Relevant		4.040
	Timeliness		3.741
Accuracy	Consistency		3.887
	Accuracy		3.860
	Free from mistakes		3.651
Completeness	Necessary		4.279
	Comprehensive		3.884
	Detail		3.867
Format	Clarity		3.857
	Understandability	1 = very disagree	3.691
	Simplicity	2 = disagree	3.621
Analytical Skills	Explain meaning of numbers	3 = neutral	3.867
	Focus on future	4 = agree	3.581
	Understand roots of problem	5 = very agree	3.538
Business	Understand business		3.724
Judgment	Able to give recommendation		3.684
	Understand other functions		3.422
Interpersonal	Trustable		3.774
Skills	Considered as being a team member		3.492
	Availability for a discussion		3.492
	Able to work with others		3.425
Communication	Being critical in handling problem		3.439
Skills	Give feeling of convenience		3.379
	Appreciate perspective of others		3.326
User Satisfaction	Satisfied on accountant's performance		3.525
	Willing to interact more with accountant		3.385
Net Benefit	More effective in daily work		3.787
	Better decision		3.774
	More efficient in decision making		3.771

Appendix

Appendix 2. Second Order CFA-Information Quality

Variables	Validity	Reliability	
		AVE	CR
1st CFA			
Relevance		0.588	0.847
Up-to-date	0.805		
Relevant	0.783		
Timeliness	0.709		
Accuracy		0.585	0.847
Consistency	0.733		
Free from mistakes	0.735		
Accuracy	0.824		
Completeness		0.545	0.842
Detail	0.808		
Comprehensive	0.794		
Necessary information	0.593		
Format		0.729	0.903
Clarity	0.803		
Simplicity	0.879		
Understandability	0.877		
2nd CFA			
Information Quality		0.738	0.956
Relevance	0.921		
Accuracy	0.933		
Completeness	0.882		
Format	0.676		

Appendix

Appendix 3. Second Order CFA-Service Quality

Variables	Validity	Reliability	
		AVE	CR
1st CFA			
Analytical Skills		0.548	0.823
Ability to explain meaning of numbers	0.751		
Understand root of problems	0.819		
Focus on future	0.639		
Business Judgment		0.533	0.816
Understand business	0.744		
Understand other functions	0.787		
Able to give recommendation	0.652		
Communication Skills		0.611	0.848
Appreciate perspective of others	0.758		
Give feeling of convenience	0.791		
Being critical in handling problem	0.796		
Interpersonal Skills		0.568	0.859
Ability to work with others	0.740		
Considered as being a team member	0.732		
Availability for a discussion	0.789		
Trustable	0.753		
2nd CFA			
Service Quality		0.757	0.971
Analytical Skills	0.805		
Business Judgment	0.836		
Communication Skills	0.882		
Interpersonal Skills	0.951		

Appendix

Appendix 4. First Order CFA-User Satisfaction

Variables	Validity	Reliability	
		AVE	CR
User Satisfaction		0.590	0.784
Satisfied on performance	0.821		
Willingness to interact more	0.711		

Appendix 5. First Order CFA-Net Benefits

Variables	Validity	Reliability	
		AVE	CR
Net Benefits		0.769	0.947
Better decision	0.774		
Efficiency in decision making	0.930		
Being effective in daily work	0.918		