

THE QUALITY OF MANAGEMENT ACCOUNTING INFORMATION SYSTEMS FROM USERS' ETHICS, ENVIRONMENTAL UNCERTAINTY, AND TOP MANAGEMENT SUPPORT PERSPECTIVES (AN EMPIRICAL CASE OF LOCAL GOVERNMENT IN INDONESIA)

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ABSTRACT

This research was intended to predict how much users' ethics, environmental uncertainty, and top management support influences management accounting information systems. Data in this research is collected through a questionnaire distributed to 28 municipalities and districts all over West Java, Indonesia. The data analysis used for hypothesis testing in this research was a Structural Equation Model with a Partial Least Square (PLS) approach. The research shows that users' ethics, environmental uncertainty, and top management support have a positive influence upon management accounting information systems.

Key words: Users' Ethics, Environmental Uncertainty, Top Management Support, Management Accounting Information System

1. INTRODUCTION

Globalisation, which triggers increased competition, will help to organize information systems that can help managers in decision making, whether in planning or controlling (Raymond & Bergeron, 2008). The need for information systems that can generate high quality information is essential, because such information systems will help their users in decision making, and in the end can improve a manager's performance. The application of good accounting system will also improve the decision making processes undertaken by managers, improve a company's internal control, increase the quality of financial statements, and help various transactions processes in the company (Sajady, Datsgir & Nejad, 2008). The reason for this is that the success of an accounting information system is closely related to the quality of the information produced (Fitria & Mulyani, 2015). Similarly, in government, good quality information will contribute to the optimisation government decisions (Mulyani, 2008).

Laudon and Laudon (2014: 520) said that designing a new information system not only involve the application of new hardware and software, but also a change in jobs, skills, management, and organization. In other words, when a new system is designed, an organization is not only applying new technology, but also changing the company's culture, business process, and the organization's function (Laudon & Laudon, 2014: 519).

Many factors must be considered when designing, developing, implementing, and using an accounting information system. Such factors are related to the consideration of information systems users' ethics, environmental uncertainty, and the support of top management (Guragai, Hunt, Neri & Taylor, 2004; Gordon & Narayanan, 1984; Doll, 1985). The not currently the qualified accounting information system in local government concerning system users' ethics that can be seen in evaluation report of the accountability of government agencies' performance. In 2015, the implementation of integrity systems was still low, enabling many heads of local government to involve themselves in corrupt cases. Other than that, other ethics issues have been caused by disobedient cue towards the legislation. According to the result of Audit Board of The Republic of Indonesia – Overview of Examination Results Semester I, 2016, in 510 local government, there were 6.016 issues of financial impact that caused regional losses of up to Rp1,17 billion, and disobedient issues that caused up to 2.369 administration deviation. Meanwhile, environmental uncertainty in Local Government is mostly related to changes in government rule, especially with regard to regional autonomy, that impact local financial and asset management systems.

In Local Government, the head of the local government contribute greatly to the success of the government's activities. It can be said that the upturn of a region depends on the political will of the head of the local government. According to the evaluation report of the accountability of government agencies' performance from 2010 until 2015, the result is far from satisfying. As much as 91,8% of district governments were in the C, CC and D categories, which means that the government doesn't have a good performance management system. The main reason for this is the lack of support from the local governments.

According to the above stated problems, academic literature and the results of previous research, the big question for the researcher is whether the quality of management accounting information systems can be determined by users' ethics, environment uncertainty, and top management support. To answer this question, this research is conducted to measure or to predict the size of ethics, environment uncertainty, and top management support's influence upon management accounting information systems quality in local government.

2. LITERATURE REVIEW

2.1 Ethics

What it meant by users' ethics in this research is the ethics of the users of management accounting information systems. The definition of ethics, according to Griffin and Moorhead (2014: 46), is the beliefs of a person regarding right and wrong behavior in a certain condition. The same definition is also provided by Duska and Duska (2011: 34), who said that ethics, in any form, focus on right or wrong, good or bad. Furthermore, Laudon and Laudon (2014: 155) define ethics as right or wrong principles that can be used by individuals to act as moral agents that are free in terms of making the choices that can guide their behavior.

Hansen, Mowen, and Guan (2009: 13) said that ethics is a system of moral principles, group behaviour standards and behaviour rules. Atkinson et al. (2012: 345), that said that ethics is a discipline that focuses on investigating behaviour standards and moral considerations. Furthermore, the *Institute of Management Accountant (IMA)* defines ethics as a moral principle system, behaviour standard for a certain group, and an ethical code.

According to some of the definitions above, it can be said that ethics is a science that discuss morality, questions of the good and bad, and concepts of right and wrong. It can also be said that ethics is a science that investigates moral behavior. Some ethical dimension or characteristic that will be used to measure users' ethics in this research are *competence, confidentiality, integrity, credibility* (Garrison et al., 2012:16)

2.2 Environmental Uncertainty

Environmental uncertainty is defined as top managers' perceptions towards their inability to predict their organization's external environment with an accuracy level that is acceptable (Miliken, 1990: 42). Furthermore, according to Hoque (2002: 39) "Environmental uncertainty refers to the firm's inability to predict accurately the effects of various aspects of the firm's external environment, such as customers, government, deregulation and globalization, technology processes, competitors, government deregulation/politics, the economics environment and industrial relations."

Robbins and Coulter (2014: 74) define environmental uncertainty as a level of change and complexity in an organization's environment. Furthermore, Sawyer (2003) said that environmental uncertainty is an environment's variability and complexity levels, and the level of importance attached to the attainment of organizational goals.

Based on the above definition, it can be said that environmental uncertainty is a condition where someone or an organization does not have the ability to predict future cause of change within their working environment, such as the change caused by the changes in government regulation, etc.

2.3 Top Management Support

Top management support in information systems is a level where top management understand the important of information systems and, furthermore, want to get involved in activities related to information systems (Ragu-Nathan et al., 2004). Belout and Gauvreau (2004) said that top management support is the willingness of top management to provide the resources and authority needed for the success of an information system. Furthermore, Khrosrowpour and Travers (1991: 23) said that top management support is the willingness of top management to provide the necessary resources and authority or the power for a project's success.

Based on the above definitions, it can be concluded that top management support in information systems is a type of motivation, attention, participation/involvement of top management directed at the successful implementation of an information system through the authority he/she possesses.

According to dimensions or characteristics of top management support that have been explained above, as referred to in Boonstra's statement (2013), the dimensions that will be used to measure top management support in this research are: resources, structural arrangements, communication, expertise and power.

2.4 The Quality of Management Accounting Information Systems

A management accounting information system, according Hansen and Mowen (2009: 4), is defined as a process that explains activities such as the gathering, measuring, keeping, analysing, reporting and managing of information. Next, Heidmann (2008: 42) explained that a management accounting information system is a formal system that gives information about both the internal and external environment to the manager. Horngren et al. (2014: 5) defined a management accounting information system as a formal mechanism to gather, arrange, and communicate information about an organization's activities.

Based on the definitions above, it can be said that a management accounting information system is a process of the identification, measurement, gathering, and managing of information to help managers to run an organization and its function.

Chitmun and Ussahawanitchakit (2011) use four dimensions as the measurement of the quality of management accounting information systems, which are: scope, timeliness, aggregation, and integration

3 THEORETICAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

3.1 Influence of Ethics upon the Quality of Management Accounting Information Systems

Accounting cannot be separated from various standards and regulations. Because of this fact, the quality of financial reporting is closely related to the accounting information system, and cannot be separated from workers obedience towards various regulations. Obedience should not only be written in law/regulation, there should also be obedience regarding the unwritten regulations which are connected with ethical behavior. Ethical behavior is built from knowledge, commitment, work ethics, and other things that are not always related to the law. Ethical behavior will influence financial reporting quality, for example, through profit management prevention (Labelle, Gargouri & Francoeur : 2010). Considering ethics will help to increase the relevance and optimisation of the information system used (Stahl, Eden, Jirotko & Coeckelbergh, 2014). It is important to build ethical conscience when designing, developing, implementing, and using accounting information systems (Guragai et al, 2014: 3; Laudon & Laudon, 2012: 124).

Taicu (2013) explained that management of accounting for professional organizations has developed a system of ethics and professional standards. Furthermore, the research of Roferson, Weckert and Simpson (2000) explained that ethical problems are related to the implementation of information systems. This means that the ethical improvement of behavior must be conducted carefully and validated through work results. In this way, the use of information systems will improve ethical behavior.

Furthermore, in this research, Olumoye (2013) found out that ethics in this sense are related with personal responsibility and accountability, and are really needed in workers' activities during the development of an information system. This is in accordance with the research result of Mulyaniet al., (2016), who explained that the success of an information system is influenced by individual behavior. An ethical framework must be integrated in a system's design because it will impact its users' behavior and will impact the quality of the financial reporting (Atkinson et al., 2012; Labelle, 2010). That statement was also supported by Dillard and Yuthas (2001), who said that an information system is influenced by various conditions that relate to ethics.

From the above description, it can be said that users' ethics influence upon management accounting information systems.

3.2 Influence of Environmental Uncertainty upon the Quality of the Management of Accounting Information Systems

Changes in environment and conditions require management to ensure there is a change in their management accounting system (Hoque, 2003:2). Furthermore, Hoque disclosed that such changes are influenced by sociological, technological, economic and political factors. External environmental uncertainty is always followed by a change in management accounting information systems. By responding to changes in their environment, managers can adjust themselves to the new environment (Weetman, 2010: 5; Laudon & Laudon, 2012: 86). Ajibolade (2010) said that environmental uncertainty has a great impact upon information systems. For that reason, environmental uncertainty must be handled by an adequately designed management accounting information system (Coombs *et al.*, 2005: 15). The results of Gordon and Narayanan's research (1984) have shown that external environmental uncertainty will impact the design of management accounting information systems. Chenhall and Morris (1986) proved that external environmental uncertainty has an impact upon management accounting systems according to the management's perception of the uncertainty. Gul and Cia (1994) also state that external environmental uncertainty has an impact upon management accounting information systems.

3.3 Influence of Top Management Support upon the Quality of Management Accounting Information Systems

One of the key successes of an information system in an organization is the presence of support from top management (Raghunathan, 1995; Young, 2013; Griffin & Morehead, 2014; Mulyani, Jufri & Citra, 2016; Dauth, 2017). Top management's support plays an important role in an organization, enabling an organization to respond dynamically to various environmental changes. Top management also has an important role in successfully directing their organization through changes, including deciding the various systems the organization needs (Ragu-Nathan et al., 2004; Griffin & Morehead, 2014).

The statement above was backed up by the research result of Doll (1985), who showed that the integration of the development and implementation of information systems is influenced heavily by top management's support. Furthermore, the result of Raghunathan's research (1995) also shows that the participation of top management can increase the conformity and effectiveness of an information system.

Next, Law & Ngai (2007) have shown that the success of the application of ERP in an organization is influenced by the support of the senior manager. Meanwhile, Sohal et al. (2001) analysed 500 top companies in Australia and concluded that one of the failures in the application of systems companies is the lack of support from the top management.

The research results of Ragu-Nathan et al., (2004) show that top management's support had a significant impact upon the integration of information systems. This research has demonstrated that the integration of information system needs the cooperation and communication of various organizational units. Lee et al. (2013) have shown the same thing, that the support of top management influenced the integration of accounting information systems.

Lie et al. (2016) analysed 118 organizations in Taiwan, and concluded that the support of top management via knowledge sharing is a way to attain a successful information system. The research result of Mulyaniet al. (2016) disclosed that top management support is a factor that influences business intelligence systems. Based on these theories, and the previous research described above, it can be concluded that top management support has an impact upon the quality of management accounting information systems.

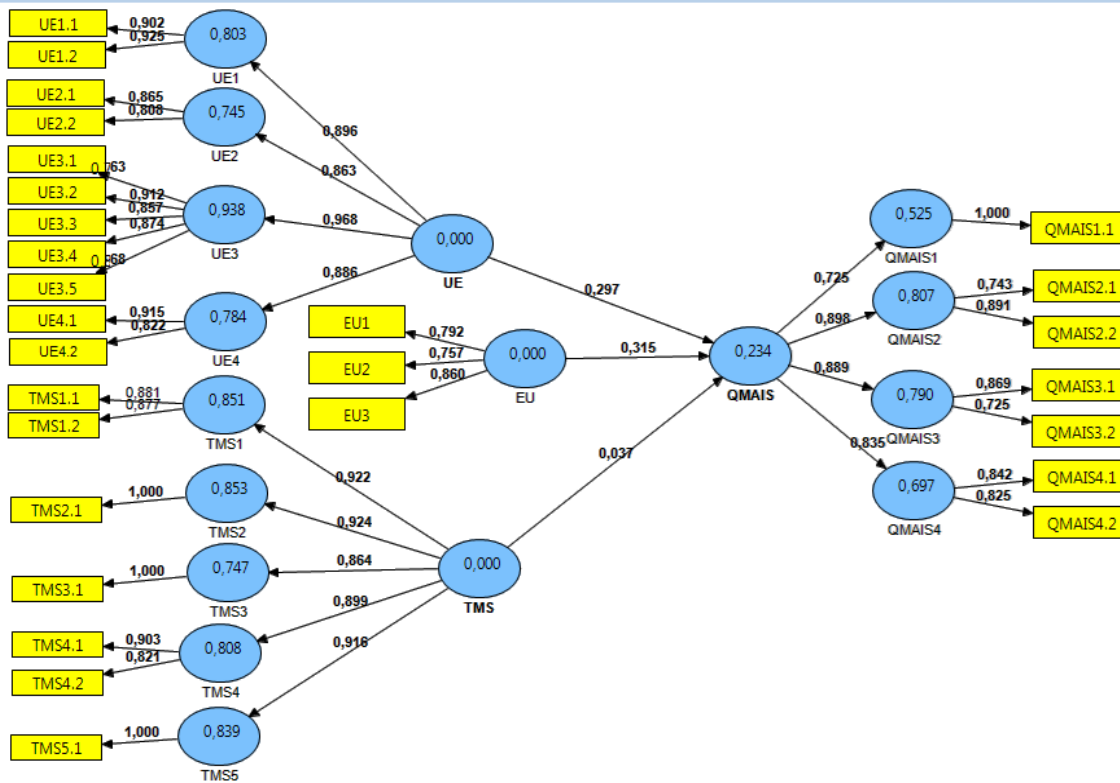
4 METHODOLOGICAL FRAMEWORK

This research is quantitative, and the method used in this research is the survey method (questionnaire). The populations in this research are the Province Government, the District Government and the Municipality Government in the West Java Province, with total 28 Local Government departments. Respondents in this research are the heads of the budgeting, accounting and financial departments in financial management and regional assets bodies for every Local Government. A Structural Equation Model (SEM) with a Partial Least Square (PLS) approach is used for the data analysis and for the hypothetical testing in this research. In this research, data was gathered by the census method, so the hypothetical testing was not conducted using statistical tests, but only by testing based on whether the value of influence zero or not.

5 RESULTS AND DISCUSSION

5.1 Measurement Model Testing (*Outer Model*)

In this step, a convergent validity test and a discriminator validity test were conducted. Using estimated methods from Partial Least Square, a full model path diagram of the influence of Users' Ethics, Environmental Uncertainty and Top Management Support upon the achievement of the Quality of Management Accounting Information Systems was constructed, which can be seen in this diagram:



Picture2: Full Model Path Diagram

According to factor weight in the above diagram, the validity of each indicator tested and the reliability of the latent variable was checked. From the above pictures, we can see that all indicators have a loading factor above 0,50, showing that the indicator used is valid. Next is the measurement model for each variable used in this research.

a. Measurement Model for Users’ Ethics Variable

Next are the results of the validity and reliability tests for each indicator, based on the results of data processing using SmartPLS 2.0 software. The result for each indicator are presented in the table below:

Table2: Summary of Measurement Model Testing of Users’ Ethics Variable

Latent Variable	Indicator	Factor Weight	T statistic	Conclusion	AVE	CR	Conclusion
<i>First Order</i>							
<i>Competence (UE1)</i>	UE1.1	0,902	20,749	Valid	0,835	0,910	Reliable
	UE1.2	0,925	45,230	Valid			
<i>Confidentiality (UE2)</i>	UE2.1	0,865	13,428	Valid	0,700	0,824	Reliable
	UE2.2	0,808	3,053	Valid			
<i>Integrity (UE3)</i>	UE3.1	0,763	4,633	Valid	0,733	0,932	Reliable
	UE3.2	0,912	25,917	Valid			
	UE3.3	0,857	15,864	Valid			
	UE3.4	0,874	13,776	Valid			
	UE3.5	0,868	11,224	Valid			
<i>Credibility (UE4)</i>	UE4.1	0,915	38,112	Valid	0,757	0,861	Reliable
	UE4.2	0,822	7,049	Valid			
<i>Second Order</i>							
<i>Users’ Ethics</i>	UE1	0,896	28,419	Valid	0,635	0,950	Reliable

	UE2	0,863	9,374	Valid			
	UE3	0,968	55,156	Valid			
	UE4	0,886	20,688	Valid			

Based on the results in Table 2, we know that (in both first order and second order) the testing results show that all the indicators have a factor loading value bigger than 0.50. This means that the indicators are valid as a measuring tool. Each latent variable had a composite reliability (CR) value bigger than 0.70 and AVE above 0.5. This demonstrated that the indicators had a consistency in measuring each latent variable.

b. Measurement Model for Environment Uncertainty Variable

Based on the result of the data processing using SmartPLS 2.0 software, we obtained the result for each indicator used when testing the Environmental Uncertainty variable, as presented in the following table:

Table 3: Summary of the Measurement Model Testing of the Environmental Uncertainty Variable

Latent Variable	Indicator	Factor Weight	T statistic	Conclusion	AVE	CR	Conclusion
<i>Environmental Uncertainty</i>	EU1	0,792	2,196	Valid	0,647	0,846	Reliable
	EU2	0,757	3,516	Valid			
	EU3	0,860	2,707	Valid			

Based on the results in Table 3, the results for Environmental Uncertainty demonstrated that all indicators had a loading factor value bigger than 0.50, which meant that those indicators were valid as measuring tool. Then, the latent variable had composite reliability (CR) of 0.846, bigger than 0.70, and AVE above 0.5, and could be considered reliable. This showed that the indicators had a consistency in measuring the Environmental Uncertainty variable.

c. Measurement Model for the Top Management Support Variable

Based on the results of data processing using SmartPLS 2.0 software, the testing result of each indicator for the Top Management Support variable are shown in the table below:

Table 4: Summary of the Measurement Model Testing of the Top Management Support Variable

Latent Variable	Indicator	Factor Weight	T statistic	Conclusion	AVE	CR	Conclusion
<i>First Order</i>							
<i>Resources (TMS1)</i>	TMS1.1	0,881	12,171	Valid	0,773	0,872	Reliabel
	TMS1.2	0,877	16,225	Valid			
<i>Structural arrangements (TMS2)</i>	TMS2.1	1,000	-	Valid	1,000	1,000	Reliabel
<i>Communication (TMS3)</i>	TMS3.1	1,000	-	Valid	1,000	1,000	Reliabel
<i>Expertise (TMS4)</i>	TMS4.1	0,903	38,581	Valid	0,745	0,853	Reliabel
	TMS4.2	0,821	8,720	Valid			
<i>Power (TMS5)</i>	TMS5.1	1,000	-	Valid	1,000	1,000	Reliabel
<i>Second Order</i>							
<i>Top Management Support</i>	TMS1	0,922	16,797	Valid	0,707	0,943	Reliabel
	TMS2	0,924	19,967	Valid			
	TMS3	0,864	13,313	Valid			
	TMS4	0,899	23,959	Valid			
	TMS5	0,916	43,592	Valid			

Based on the result in Table 4, it is concluded that, in both first and second order model, all the indicators have a factor loading value bigger than 0.50. This meant that those indicators were valid as a measuring tool. Then, each latent variable had composite reliability (CR) bigger than 0.70 and AVE above 0.5, and could considered reliable. This showed that indicators had consistency in measuring each latent variable.

d. Measurement Model for the Quality of Management Accounting Information System Variable

Based on the result of data processing using SmartPLS 2.0 software, the testing results for each indicator in the quality of management accounting information system variable represented in the following table:

Table 5: Summary of the Measurement Model Testing for the Quality of Management Accounting Information System Variable

Latent Variable	Indicator	Factor Weight	T statistic	Conclusion	AVE	CR	Conclusion
<i>First Order</i>							
<i>Ease of use (QMAIS1)</i>	QMAIS1.1	1,000	-	Valid	1,000	1,000	Reliable
<i>Flexible (QMAIS2)</i>	QMAIS2.1	0,743	2,437	Valid	0,673	0,803	Reliable
	QMAIS2.2	0,891	17,073	Valid			
<i>Integration (QMAIS3)</i>	QMAIS3.1	0,869	15,970	Valid	0,641	0,780	Reliable
	QMAIS3.2	0,725	2,122	Valid			
<i>Accessibility (QMAIS4)</i>	QMAIS4.1	0,842	4,211	Valid	0,694	0,820	Reliable
	QMAIS4.2	0,825	6,585	Valid			
<i>Second Order</i>							
<i>The Quality of Management Accounting Information System</i>	QMAIS1	0,725	7,638	Valid	0,511	0,878	Reliable
	QMAIS2	0,898	15,835	Valid			
	QMAIS3	0,889	19,858	Valid			
	QMAIS4	0,835	9,454	Valid			

Based on Table 5, we can state that, for both the first and second order, the testing results show that all the indicators have a factor loading value bigger than 0.5. This means that the indicators are valid as a measuring tool. Then, each latent variable has a composite reliability (CR) bigger than 0.70 and AVE above 0.5, and can be deemed reliable. This shows that the indicators have a consistency in measuring each latent variable.

e. Discriminator Validity Testing

Discriminator validity testing is conducted to test the correlation of each indicator with the whole latent variable tested. The following table contains the discriminator validity result via a Cross Loading test.

Table 6: Discriminator Validity Testing (Cross Loading)

	EU	QMAIS1	QMAIS2	QMAIS3	QMAIS4	TMS1	TMS2	TMS3	TMS4	TMS5	UE1	UE2	UE3	UE4
EU1	0,792	0,142	0,477	0,200	0,173	0,093	0,117	-0,083	0,066	-0,011	0,279	0,246	0,125	0,098
EU2	0,757	0,244	0,435	0,187	0,274	0,031	-0,069	0,115	0,169	0,186	0,063	0,071	0,185	0,008
EU3	0,860	0,116	0,416	0,110	0,106	-0,017	-0,063	-0,115	0,009	-0,019	0,279	0,398	0,258	0,087
QMAIS1.1	0,219	1,000	0,530	0,588	0,483	0,109	-0,134	0,021	-0,097	0,119	0,072	0,181	0,189	0,156
QMAIS2.1	0,686	0,296	0,743	0,486	0,336	0,078	-0,057	-0,115	0,079	-0,015	0,392	0,251	0,279	0,297
QMAIS2.2	0,313	0,539	0,891	0,726	0,691	0,187	0,060	0,038	-0,050	0,167	0,342	0,165	0,227	0,403
QMAIS3.1	0,134	0,643	0,662	0,869	0,590	0,163	-0,011	0,025	-0,109	0,117	0,213	0,090	0,202	0,340
QMAIS3.2	0,229	0,243	0,542	0,725	0,371	0,053	-0,111	-0,275	-0,074	-0,097	0,400	0,185	0,232	0,376
QMAIS4.1	0,116	0,364	0,588	0,551	0,842	0,141	-0,009	-0,219	-0,141	-0,074	0,310	0,061	0,083	0,310
QMAIS4.2	0,295	0,443	0,508	0,475	0,825	0,360	0,080	0,230	0,135	0,260	0,253	0,176	0,344	0,455
TMS1.1	0,104	0,217	0,217	0,150	0,272	0,881	0,740	0,645	0,663	0,728	0,142	0,143	0,026	0,050

TMS1.2	-0,016	-0,026	0,084	0,104	0,250	0,877	0,784	0,565	0,676	0,681	0,100	-0,016	-0,092	0,026
TMS2.1	-0,003	-0,134	0,015	-0,065	0,041	0,867	1,000	0,761	0,764	0,804	0,004	0,015	-0,153	-0,146
TMS3.1	-0,019	0,021	-0,029	-0,124	0,000	0,689	0,761	1,000	0,730	0,817	-0,014	0,134	0,125	-0,027
TMS4.1	0,007	-0,104	-0,108	-0,154	-0,108	0,689	0,767	0,818	0,903	0,783	-0,045	-0,003	0,026	-0,087
TMS4.2	0,221	-0,059	0,148	-0,030	0,129	0,624	0,526	0,388	0,821	0,512	0,182	0,133	-0,008	0,060
TMS5.1	0,079	0,119	0,112	0,034	0,107	0,802	0,804	0,817	0,768	1,000	-0,043	0,042	-0,040	-0,105
UE1.1	0,069	0,006	0,322	0,281	0,304	0,243	0,185	0,178	0,175	0,094	0,902	0,634	0,667	0,643
UE1.2	0,360	0,119	0,465	0,372	0,315	0,023	-0,157	-0,181	-0,051	-0,157	0,925	0,666	0,783	0,809
UE2.1	0,300	0,293	0,344	0,370	0,362	0,183	-0,003	-0,035	0,053	0,020	0,690	0,865	0,702	0,627
UE2.2	0,148	-0,014	0,035	-0,141	-0,168	-0,081	0,031	0,285	0,054	0,053	0,488	0,808	0,665	0,462
UE3.1	0,109	0,179	0,064	-0,037	0,038	-0,030	0,057	0,375	0,114	0,068	0,455	0,723	0,763	0,452
UE3.2	0,083	0,116	0,248	0,265	0,115	-0,120	-0,245	0,054	-0,152	-0,100	0,745	0,704	0,912	0,704
UE3.3	0,428	0,249	0,403	0,362	0,235	-0,045	-0,228	0,026	0,022	-0,061	0,776	0,647	0,857	0,728
UE3.4	0,229	0,308	0,395	0,441	0,466	0,145	-0,019	0,039	0,093	0,026	0,766	0,786	0,874	0,816
UE3.5	0,121	-0,055	0,121	0,034	0,182	-0,121	-0,194	0,101	-0,001	-0,090	0,627	0,645	0,868	0,697
UE4.1	0,141	0,108	0,400	0,359	0,365	-0,074	-0,229	-0,108	-0,090	-0,146	0,819	0,663	0,826	0,915
UE4.2	-0,040	0,177	0,351	0,421	0,452	0,196	0,015	0,094	0,070	-0,016	0,536	0,455	0,533	0,822

From table 6, we can see that each indicator correlates higher with each construct, compared to the constructs in the other block. Thus, it can be concluded that the research model has a good discriminator validity.

5.2 Structural Testing (Inner Model)

In this research, a structural model was related to three research hypotheses that imply causal relationship between the latent variable. The structural model in this research involved three exogenous latent variable (Users' Ethics (UE), Environmental Uncertainty (EU) and Top Management Support, and one endogenic latent variable (the Quality of the Management Accounting Information System (QMAIS)). The calculation of path coefficients standardized for the impact of Users' Ethics, Environmental Uncertainty and Top Management Support upon the Quality of Management Accounting Information Systems (QMAIS) are shown in the following table:

Table 7: The Result of the Calculation of Standardised Path Coefficients for the Structural Model

Relation	Path	T Statistics	R-Square Partial	R-Square Simultan
UE ->QMAIS	0,297	2,004	11,01%	23,39%
EU ->QMAIS	0,315	2,125	12,17%	
TMS ->QMAIS	0,037	0,228	0,20%	

According to Table 6, we knew that the Quality of Management Accounting Information System (QMAIS) variable had a R square value (simultaneously) of 23.39%. This showed that 23.39% of the Quality of Management Accounting Information System (QMAIS) variable can be explained by the Users' Ethics (UE), Environmental Uncertainty (EU) and Top Management Support (TMS) variables.

Based on its path coefficient value, the Environmental Uncertainty variable (EU) has the most dominant influence upon the Quality of the Management Accounting Information System (QMAIS), with a path value of 0.315 (12.17%). This is followed by the Users' Ethics (UE) variable, with a path value of 0.297 (11.01%), and the Top Management Support (TMS) variable, with a path value of 0.037 (0.2%).

In Table 6 above, we can see that the path coefficient between Users' Ethics (UE) and the Quality of Management Accounting Information System (QMAIS) is 0.297, with a positive direction; that the path coefficient between Environmental Uncertainty (EU) and the Quality of Management Accounting Information System is 0.315, with a positive direction and that the path coefficient between Top Management Support (TMS) and the Quality of Management Accounting Information System (QMAIS) is 0.037, with a positive direction.

It can be said that users' ethics, environmental uncertainty, and top management support have a positive influence upon the quality of management accounting systems. This research provided empirical evidence that better users' ethics could enhance the quality of management accounting information systems. In other words, it can be interpreted that the quality of

amanagement accounting information system can be enhanced if an organization considers and applies good users' ethics by improving the users' competence, guarding information secrecy, and by both maintaining and increasing integrity and credibility. This research has also provided empirical evidence that top management support impacts upon the quality of management accounting information systems in various ways, such as resources support, the arrangement of organizational structures that have been adjusted to a new system, good communication between the staff, the possession of knowledge and skills, and through their ability to succeed in and resolve conflicts that emerge due to the application of a new system.

6 CONCLUSIONS AND RECOMMENDATIONS

The research gives empirical evidence that users' ethics, environmental uncertainty, and top management support have a positive impact upon the quality of management accounting information systems. This research backed up by the research of Labelle et al. (2010), which said that manager's ethics impact the quality of accounting information systems, and, thus, impact financial reporting. This research is backed up by the research by Gul (1991), who said that the interaction between management accounting information and environmental uncertainty has a positive and significant impact. Furthermore, this research also backed up by the research of Lee et al. (2013), who said that support from a top management team has a positive impact upon the quality of accounting information systems.

The result of this research showed that 23.39% of the quality of management accounting information systems is influenced by users' ethics, environmental uncertainty, and top management support. The consideration of ethics is really important in accounting information system design, because it will influence the behavior of all users in the company, especially employees who are constantly in contact with the system. All employees in an organization must understand and obey the ethical code of conduct of their organization, because disobedience towards ethics will influence the quality of the resulting information. The quality of management accounting information systems can also be enhanced if an organization is able to understand, respond to/accommodate for, and anticipate environmental changes. Changes in environmental conditions, can be responded to by effecting changes in management accounting information systems. This is attained via the ability of managers to predicting such environmental changes, which will enhance the quality of management accounting information systems and provide the opportunity to integrate such changes so that the application can be understood. The involvement and support of top management are also very important factors in responding to dynamic environmental change. Support from top management also has an important role in deciding the success of an organization, including improving the quality of the accounting information system that is used.

This research only focuses on Local Government in the province of West Java Indonesia which consists of 28 Local Government offices. Thus, to achieve more representative research results from this population, it is advised to conduct research that employs a wider analytical unit, to use a different sample, or to use a different data analytical method.

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