

# Antecedents and Consequences of Management Accounting Systems: Empirical Evidence from SOE's in Indonesia

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**Abstract:** - Decision making is crucial for every company. Errors in decision making are usually caused by the lack of quality accounting information held by information users. Users will expect the information can meet all their needs. Quality accounting information is produced from quality Management Accounting Systems (MAS). One of the CSF's of a MAS implementation is Top Management Support (TMS). Ineffective support from top management will make MAS not function as expected. This research aimed to empirically verify the effect of TMS on the MAS effectiveness and its implications for information user satisfaction. The study was conducted on 8 SOE's located in Indonesia and using a questionnaire as an instrument for data collection. The number of questionnaires collected was 44 from the accounting and finance staff. Data processing results showed that TMS affects the effectiveness of MAS and has implications for user satisfaction. Much research has been done on MAS, but MAS research that links with system user satisfaction is still rare but needed especially related to information satisfaction. Users who are satisfied with the use of information can indicate the effectiveness of the information system. Overall, this research contributed to the growing literature on the function of MAS in the organization.

**Key words:** User satisfaction, Management Accounting Systems, Top Management Support.

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## 1. INTRODUCTION

In the era of the industrial revolution 4.0 which combines IoT with machines and workflows, bringing changes to various aspects of life. This change forces companies to have a competitive advantage to compete. To win the competition, companies must have information, the information in question including accounting information, especially managerial accounting information. Managerial accounting information is information that supports internal management processes and is used as a basis for consideration in making business decisions. As a decision-maker, management is required to have quality information.

SOE as a state-owned company has an obligation to provide accounting information openly. This has been regulated in a regulation issued by the Ministry of SOE. This rule was actually issued to protect the rights of stakeholders in obtaining information (accounting information). Quality information is characterized by many characteristics. Anjarwati & Apollo's research [3] highlights aspects of accuracy, relevance, security, and economics, while many other studies conducted focus on other things such as understandability reliability, completeness relevance, timeless, and consistency. The information is daily information from the company's operational activities resulting from the implementation of an integrated management accounting system (MAS). MAS which can produce timely information when managers need that

information will cause satisfaction for these managers [6].

MAS is a critical tool that helps management in performing its function as a decision-maker. Many previous studies have highlighted the important role of information systems in improving company efficiency and decision making [8]. In principle, MAS is not only used to project profitability but is used to maximize the company's value in achieving its goals [10]. Hussain [11] argues that a company must be able to respond to every change in customer demand, increase its competitive advantage, and respond to technological growth to be able to gain success in the long run. The success of MAS depends on the use of the technology used, the ease of the system for its users, and how the system is run. Quality of service, information systems quality, and quality of accounting information can be used as an indicator to measure the success of an information system. (DeLone and McLean)[25].

Implementation of the system, especially in situations of innovation requires support from the top of management. Top management has the power over the resources needed, objectives and strategic initiatives planned. The main task of the information system developer is communicating with top management regarding the company's plans, critical success factors, and overall goals. System development is a part of integrated with corporate planning. Top management should understand the company plans so the system developed according to the company's plan and thus the new system will

encourage the achievement of company goals.

One of the factors influencing the implementation of MAS is TMS [12]. Researchers have previously recognized that TMS is one of the key factors in the use of IS and have a very significant role in the application of MAS [14]. Furthermore, their research revealed that the TMS is related to the allocation of available resources, policy design, and monitoring of accounting information systems. TMS provided can be in the form of commitment and support.

An effective MAS can be characterized by user satisfaction. User satisfaction is a behavior where someone will use the application repeatedly because they have felt the benefits and obtain satisfaction from using the application. User satisfaction will be influences the intention to use information systems and actual uses.

This study was conducted to obtain empirical evidence of the extent to which TMS affects the effectiveness of MAS and its implications for the satisfaction of users of accounting information. This is done with an accurate methodology and empirical investigation to build confidence in MAS research.

## 2. LITERATURE REVIEW

### Top Management Support and MAS Effectiveness

Iivari [15] put forward a measure of quality including measurement of 6 aspects, namely the integration of the system, response or turnaround time, system flexibility, ease of access, error recovery and language. While Quaddus & Woodside [16] states the quality of the system can be measured by reliability accessibility, response time, integration, and flexibility. According to Carolina and Susanto [17], TMS refers to: Top management acts as the system owner in supporting IS because the direction of information system development can be determined or influenced by them, in addition they also act as users of the system, where they pay attention to company conditions overall, in carrying out their activities, top management needs a summary of information that supports them in planning, analyzing and making strategic decisions.

Meanwhile, the research of Darma, et al [18], problems related to TMS are more on funding, hardware and software replacement, training for data input, so the support from top management can be provided in the form of hardware, software, resources and funding needed. TMS can be interpreted as the readiness of top management to serve the resources needed for the use of information systems [19]. This research also used indicators developed by Carolina & Susanto [20] namely participation, understanding, and encouragement.

Hypothesis 1. TMS has a positive effect on MAS

effectiveness

### MAS Effectiveness and User Satisfaction

The context of user satisfaction in this study refers to the DeLone and McLean's Model [21]. An information system is said to be successful, it can be measured from the quality of the system, service quality, the quality of information. Qualified information can be felt by users when they use information systems. An information system is said to be qualified if the users feel satisfied because the information produced by the information system can meet their needs. User satisfaction and ultimately can improve the performance of each information system user. Guimaraes, et al (2007)[26], stated user satisfaction of information system is how the user views the information system in real, but not on the quality of the system technically.

The context of user satisfaction in this research refers to the satisfaction of users after they using accounting information. Users will feel satisfied when the person feels a sense of usefulness (perceived usefulness) which can ultimately improve performance [22]. Rouibah et al [23], explained that when an organization or company believes in the users of the system, the use of the system itself will increase.

In order to measured user satisfaction, in this study we used indicators from Ong et al [24], namely satisfaction with information generated from the system, user relations with information system staff, satisfaction from the accounting information systems used.

Hypothesis 2. The effectiveness of MAS has a positive effect on User Satisfaction

## 3. RESEARCH METHOD

The specific objective of this study was to test the effect of TMS on the effectiveness of the MAS and its impact on user satisfaction. This study uses data analysis methods with an associative quantitative approach. The sample in this study was 44 employees in accounting and finance from 8 SOE's in Indonesia. In this study, researchers used survey data collection techniques using a questionnaire that contained a total of 25 question items, in which to measure TMS used 7 statements, the effectiveness of MAS used 12 statements, and user satisfaction accounting information 6 statements. This survey technique is used by researchers to obtain quantitative primary data in the form of respondents' assessment of each statement in the questionnaire. This study uses inferential statistics to answer the problem formulation and test the hypotheses that have been formulated previously. The analytical tool used is the Regression Method.

#### 4. RESULT

All indicators used in this study have passed the validity and reliability tests. The following are the results of data processing, as follows:

##### 1. Effect of TMS (X) on MAS (Y) Effectiveness

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	20,312	4,191		4,847	,000
	TMS (X)	1,045	,145	,744	7,227	,000

a. Dependent Variable: Manajemen akunting sistem (Z)

The table above shows the value of  $t_{count} 7,227 > t_{table} 2,018$  which means that  $H_0$  is rejected.

This signifies that TMS has a positive effect on MAS effectiveness. Referring to the Model I Regression output it can be seen that the significance value of the top management support variable (X) is 0,000 less than 0.05. These results provide the conclusion that TMS (X) has a significant effect on the effectiveness of MAS (Y).

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,744 <sup>a</sup>	,554	,544	4,94322

a. Predictors: (Constant), TMS  
 b. Dependent Variable: MAS

The data analysis also showed that the value of Beta standardized coefficients or path coefficient values of the TMS to the effectiveness of MAS is 0.554, moderately correlated. The correlation coefficient is positive which indicates the relationship that occurs between the two is unidirectional and significant. Then, the coefficient of determination (R Square) which is interpreted as the magnitude of the influence/contribution of TMS to the effectiveness of MAS is 0.554 or 55.4% while the remaining 44.6% is the influence of other factors.

##### Effect of MAS Effectiveness (Y) on User Satisfaction (Z)

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1,529	4,774		-,320	,750
	MAS (Y)	,487	,094	,623	5,162	,000

a. Dependent Variable: User Satisfaction (Z)

The table above shows the value of  $t_{count} 5.162 > t_{table} 2.018$  which means that  $H_0$  is rejected. This means that the MAS effectiveness affects user satisfaction. Referring to the Model output it can be seen that the significance value of the Y variable is 0,000 less than 0.05. These results provide the conclusion that the regression model II, the MAS effectiveness variable (Y) significantly influences the user satisfaction.

Analysis of the data in the second path shows that the standardized beta coefficient or the value of the MAS effectiveness pathway to the user satisfaction is 0.388, moderately correlated. The correlation coefficient shows a positive direction. Then, the coefficient of determination (R Square) which is interpreted as the magnitude of the influence of the MAS effectiveness to the user satisfaction is 0.388 or 38.8% while the remaining 61.2% is the influence of other factors.

#### 5. CONCLUSION

The results of this study successfully answered the formulation of the problems raised in the previous section. The effectiveness of MAS is significantly influenced by TMS with a positive correlation. The results of this study are in line with previous studies conducted by Carolina & Susanto (2017), Darma, et al (2018). The greater the support is given by top management, the more effective the MAS will be applied. Top management is tasked with directing, organizing, guiding to influence subordinates so that support should be given in full to get the maximum benefit from the use of MAS. Based on the data collected, the form of support that most influences the effectiveness of MAS is in the form of funding. Sometimes an organization will be "hard to move" or even changing times, when top management is too stingy to spend money.

User satisfaction is significantly influenced by the effectiveness of MAS with a positive correlation. The more effective MAS that are used, the accounting information users will be more satisfied. The results obtained in this study are in line with previous studies conducted by Napitupulu (2015)[1]; Rouibah et al (2009)[2]. MAS's performance is considered good if the information received meets expectations and satisfaction for users of that information. User satisfaction reflects how the level of achievement of the implementation of MAS to produce a picture of whether MAS objectives are achieved and user needs for information can be met. User satisfaction will increase productivity, efficiency, and effectiveness of making organizational reports in using information systems which will ultimately have a positive effect on individual and organizational impacts.

Suggestions that can be given to advanced researchers are to consider testing individual performance as a factor that is ultimately influenced by user satisfaction. According to previous research, the more satisfied users of information systems will have an impact on improving individual performance. Individual performance also will affect the performance of the organization. So it can be concluded that with the effective application of MAS, the company's goals can be achieved, but this still requires empirical research to prove it. This study also has a limited number of samples that

represent the population. It is better for further research to consider the number of samples, so that the results of the study can generalize the population.

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