

Analysis of Management Control, Business Strategy, and Organizational Culture, and Their Impact on Managment Accounting Information System

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ABSTRACT

Management accounting information systems are important for many organizations. One of its functions is to provide information to the right people in the right way and at the right time. Currently, many organizations realize that the quality of accounting information is a factor that affects the survival of the company. Thus, this study will examine management control, business strategy, and organizational culture on management accounting information systems. The population of this study are managers in companies in Indonesia registered with the Indonesian Management Association (AMA-Indonesia). The sample size is based on the Slovin formula of 60 respondents from 150 populations (managers who attended the AMA-Indonesia meeting in February in Bandung). Hypothesis testing using multiple linear regression to test the first to fourth hypotheses

The results of this study are (1) the formal authority structure affects the management accounting information system in the organization, (2) the informal authority structure also affects the management accounting information system in the organization, (3) the business strategy affects the management accounting information system in the organization, (4) Organizational culture affects management accounting information systems in organizations.

Keywords: Management Control, Business Strategy, Organizational Control, System Management accounting information

1. Introduction

The company uses the information system to continuously update and analyze information about the operation. This information can be used by managers to make business decisions. Those decisions are generally based on the data and information which is provided by the information and accounting (Madura, 2007: 32). Organizations need the information for their operations and decision making process. The lack of its quality will lead to the lose of organization competitive advantage. Accounting information quality only generates through the implementation of quality accounting information systems (Carolina, 2015).

In Indonesia, the problem of information on the company is still an issue that is important for managers to make decisions especially information about management accounting. Information generated from accounting is not enough to take the decisions, constrained by weaknesses in existing resources aspect. Problems related to the management accounting information systems are also revealed by Nasution (2011). He states that the financial statements cannot be used as a guidance to identify and anticipate the situation and become



the basis for decision-making. The companies should design an integrated information system so that the output produced will meet their information needed.

One of another factors that becomes a barrier to the establishment of the accounting information systems is the environmental factors (Salehi and Abdipour, 2011) like economic environment. The rapid changes in the current economic environment make the consumer and investors demand change and also increase the level of market competition. It has become a problem for most companies. The companies still should be able to survive with the changes.

The phenomenon of the use value of information is still going on until today. As stated by Deputy Head of Division Polsoskam BPKP PMK, Dr. Binsar H. Simanjuntak in public lectures in North Sumatera on June 9, 2015. Dr. Binsar Simanjuntak in the material elaborated on Image State Financial Management. Pointed out that the problems of state financial management accountability still has not improved in Indonesia. Based on empirical data, there are five main causes of the poor management of state finances, namely, the lack of management control, human resources incompetent, weak implementation of internal control, the procedures were inadequate and improper planning (www.bpkp.go.id).

Related on the problems and phenomenon that has been described, that is why managers need some information related to the tasks that will be performed. The effective utilization of management accounting information system can create some values that can be considered by the organization. There are certain factors which will affect the level of management accounting information needs. Those factors are management control, business strategy, and organizational culture has been identified as some affect on the management accounting system.

Management control has become one of the most important area of study organizational behavior, in line with the growth of economic pressures, industry climate of uncertainty, the economic crisis, and the state of the external environment such as customers, competition, markets, suppliers, distributors, the attitude of society and government. Two constructs authority included in the proxy management control affect the use of accounting information systems (AIS) by a manager in managing the company, namely the formal and informal authority (Cyert and March, 1963 in Ramli and Denny, 2014). Jensen and Meckling (1992) in Abernethy and Emidia (2004), prove that the accounting information systems associated with



the structure of formal authority and control role. Formal authority structure associated with two things, namely, the use of the AIS for the purpose of controlling the behavior of subordinates (control role) and the use of AIS to facilitate decision (decision management role) at sub unit level. According Cyert and March (1963) in Ramli and Denny (2014), the informal structure of authority that comes from the power and influence of coalition dominance can also affect the behavior of managers in the process of planning, control and decision making.

The other factors that affect the relation between the characteristics of management accounting information system with the performance beside the management control is business strategy which is applied in every company (Abernethy and Guthire, 1994 in Maharani, 2011). Different strategy impact the needs of information within the company, so that the business strategy is predicted will affect the relation between the characteristics of the information system of management accounting and managerial performance.

Beside the management control and business strategy, there are other factors that might give influence on the level of management accounting information needs, like the company's internal environmental factors and organizational culture. An organization needs to design the organization to achieve its objectives. Organizational design is a process of selecting and managing the structural and cultural aspects, including the characteristics of the information carried by managers so that the organization is able to control the activities to achieve goal (Chairina, 2006). In the uncertain perspective information, it is possible that cultural organization level will affect or increase the difficulties in the decision making (Miliken, 1990; Mintzber, 1990; in Chairina, 2006). The suitability between information with the needs of decision-making will support the quality of the decision which can ultimately improve the performance of the company (Nedler and Tushman, 1988 in Chairina, 2006). One of the managerial implications which more important than the organizational culture is related to the selection, decision making and socialization process. Each individual prefer to find and select cultural systems in accordance with their personnel values. So that this research tries to examine the dimensions of the organizational culture which may lead the accounting information to increase the managerial performance. Based on this background, this study will examine the management control, business strategy, and organizational culture against managemet accounting information systems.



Based on the above, the formulation of the problems that will be proved are: (1) Does the formal control authority influence the management accounting information system?, (2) Does the informal control authority influence the management accounting information system?, (3)Does the business strategy influence the management accounting information system?, (4) Does the organizational culture influence the management accounting information system?

2. Theorytical Framework And Hypothesis

2.1 Theorytical Framework

Changes in individual behavior towards information technology systems related to individual performance is caused by several factors such as individual attitudes, norms of subjective, intents, behaviorals control, acceptance of information systems technology, suitability of tasks with technology, chain of technology performances, trust to the technology, sticking psychology for the existence of technological and qualitative characteristics of information technology systems (Hamzah, 2009). With the existence of those various factors, there are some behavioral models in order to use information technology systems, such as the Model of DeLone and McLean. The models are exist because the users request it, the organization's needs, and the information systems technology capabilities itself. This model found that information system can be successfully represented by qualitative characteristics (system quality), quality of the outputs (information quality), consumption of the outputs (use), user responses (user satisfaction), effect of information systems toward user habits (individual impact), and its influence on the organization performance of the information system (organizational impact) (DeLone and McLean, 1992 in DeLone and McLean, 2003).

Characteristics of management accounting information needed by the organization to be used as a basis for policy making and evaluation. The more adequate accounting information produced by the system, the better the decisions taken by members of the organization. Chenhall and Morris (1986) in Maharani (2011) provide empirical evidence about the characteristics of useful and reliable information according to the perception of managers that broad scope, timeliness, aggregation, and integration. Broad scope is information that includes the company's problems to be able to help managers produce more effective policies so that the results are expected to improve managerial performance better. In information systems, broad scope refers to the dimensions of the focus, quantification and time horizon (Gordon and Narayanan, 1984 in Pamungkas, 2008: 14). Timeliness is the speed or the time span



between the request for information by the presentation of information desired by the company to support managers face the uncertainty that occurs. Timeliness of information refers to the frequency and speed of reporting. Aggregation is information that provide clarity on the areas which are the responsibility of each manager of the company in accordance with their respective functions. Information aggregation is information that takes into account application form formal policies (such as discounted cash flow) or model of analytical information about the final result that is based on the time (such as monthly and quarterly). Integration is information that includes aspects such as the provision of a target company which is calculated from the proportion of the interaction between sub units within the company. Integration of information indicating that there is coordination between sub-unit segments with each other sub-units.

A decision is defined "as a specific commitment to action" while a decision process is "a set of actions and dynamic factors that begin with identification of a stimulus for action and ends with the specific commitment to action" (Mintzberg et al., 1976 in Sykianakis, 2012). Decision-making, being part of organizational life, is viewed through the various theoretical perspectives that are applied to studying organizations (Burrell and Morgan, 1979 in Sykianakis, 2012).

According to Simon (1959) in Sykianakis (2012), the decision-maker does not take the environment for granted but on the contrary he/she is a learning individual who searches for solutions and processes information. Decision-making that from an individual point of view are projected without reservation into the organizational domain, failing to take into consideration structural issues surrounding the decision process. Pettigrew (1990) in Sykianakis (2012) also points out that decisions are shaped by actors' own interests, bureaucratic dysfunction and the organizational structure and environmental forces. Decision-making is viewed as a power game between competing interest groups over the control of organizational resources (Pfeffer & Salancik 1974 in Sykianakis, 2012). Power relations are generated and power is accumulated to the divisions that have control of the most scarce and needed organizational resources (Pfeffer & Salancik 1974 in Sykianakis, 2012) or to those who cope most successfully with uncertainty (Hinings et al., 1974 in Sykianakis, 2012).

Management control is the process by which managers ensure that resources obtained and used effectively and efficiently in the implementation of organizational goals. Anthony and



Govindarajan (2007) states, management control is the process by the which managers influence other members of the organization to implement the organization's strategies. Management control systems provide information for managers to mark areas of authority where they have to look for opportunities, communicating the plans and objectives, monitor and communicate the achievement of plans and the goals, and maintain plans and objectives those arising from the development.

In this study, there are two constructs that are included in the process of management control, there are formal authority and informal authority. Formal authority structure is defined as a deliberate choice of top management to delegate the type of decisions to lower levels of management (Barnard, 1968 in Atarwaman, 2008). Informal authority is defined as the ability of individuals or groups of influence on organizational decisions and activities in a way so there is no sanction in the system of formal authority (Alexander and Morlock, 2000). Informal authority derived from individual power or coalition. The first time people try to increase their power in person, but this approach proved to be ineffective, then the other option is to form a coalition (Robbins, 2003). Generally, the coalition was formed because of the large dependency between tasks and resources. They tend to be big enough to acquire the necessary powers to achieve their goals.

There are four types of business strategies identified by Miles and Snow (1978) in Ramli and Denny (2014), the prospector, defender, analyzer, and reactor. Typology proposed by Miles and Snow (1978) in Ramli and Denny (2014) is based on the level of product and market changes experienced by the company as a result of the implementation of the strategy. In this study, the authors will use two types of strategies prospector and defender. Typology prospector and the defender is two typology of strategies that are at the two extremes. Companies that implement strategies defender is usually more emphasis on efficiency and cost low, lower than its competitors. Then the company has a prospector strategy are usually facing the unpredictability and uncertainty of the environment is greater than the company that has a defender strategy (Miles and Snow, 1978 in Ramli and Denny, 2014), so the need for greater information on the company prospector in order to improve organizational performance. Discovery research conducted by Abernethy and Guthrie (1994) in Maharani (2011) support the notion that design in enterprise information management system of the type defender and prospector will likely be different

According to Hofstede (1994) in Sulaksono (2005) culture is an overall pattern of thoughts, feelings and actions of a social group that distinguishes it from other social groups. Hofstede (1994) in Sulaksono (2005) further classified into various levels of culture, among others: national, regional, gender, generation, social class, organizational enterprise. At the level of organizational culture is a set of assumptions, beliefs, values and perceptions owned by the members of the group and an organization that shape and influence the attitudes and behavior of the group concerned.

Hofstede et al. (1991) in Sawitri (2011) classifies the organizational culture into six dimensions of practice, namely: (1) Process-oriented vs. Result oriented, (2) Employee-oriented vs. Job-oriented, (3) Parochial vs. Professional, (4) Open-system vs. Close-system, (5) Loose-control vs. Tight-control, (6) Normative vs. Pragmatic. Dimensions related to decision making in this study is the dimension of the Open System vs. Close-control system and Loose vs. Tight control.

An organization's control mechanism and an effective tool in providing information useful for predicting a consequence that may occur in the activities undertaken by the so-called management accounting information system (MAIS). Chia (1995) in Chairina (2004) describes the management accounting information system (MAIS) is an organization monitoring mechanism that can facilitate supervision by making reports and creating actions that significantly affect performance assessment within the organization. Hansen and Mowen (2007) also describes the management accounting information system as an information system that generates input and output using a variety of processes needed to meet management objectives.

Characteristics of management accounting information needed by the organization to be used as a basis for policy making and evaluation. The more adequate accounting information produced by the system, the better the decisions taken by members of the organization. Chenhall and Morris (1986) in Maharani (2011) provide empirical evidence about the characteristics of useful and reliable information according to the perception of managers that broad scope, timeliness, aggregation, and integration. Broad scope is information that includes the company's problems to be able to help managers produce more effective policies so that the results are expected to improve managerial performance better. In information systems, broad scope refers to the dimensions of the focus, quantification and time horizon (Gordon



and Narayanan, 1984 in Pamungkas, 2008: 14). Timeliness is the speed or the time span between the request for information by the presentation of information desired by the company to support managers face the uncertainty that occurs. Timeliness of information refers to the frequency and speed of reporting. Aggregation is information that provide clarity on the areas which are the responsibility of each manager of the company in accordance with their respective functions. Information aggregation is information that takes into account application form formal policies (such as discounted cash flow) or model of analytical information about the final result that is based on the time (such as monthly and quarterly). Integration is information that includes aspects such as the provision of a target company which is calculated from the proportion of the interaction between sub units within the company. Integration of information indicating that there is coordination between sub-unit segments with each other sub-units.

2.2. Research Model Formulation and Hypotheses

2.2.1 The structure of formal authority and management accounting information system (MAIS)

Jensen and Meckling (1992) in Abernethy and Emidia (2004) suggest that the beneficial of MAIS liaise structure of formal authority and the control role. The formal control authority affects the MAIS positively. In studies Luft and Shields (2003), formal authority structure effect on the use of AIS to facilitate management decision-making and control. In studies Luft and Shields (2003), formal authority structure effect on the use of AIS to facilitate management decision-making and control. This is because the formal system of decentralized authority more effectively transform information between the organization and the external environment so more quickly respond to changes as needed. This structure also provides the potential conditions for the distribution of resources and improvement of effective results, and in turn can affect the ability of managers to control and coordinate the activities of the operating performance at lower levels in the organization (Abernethy and Lillis, 2001). In the uncertainty environment, it was empirically proven that management tends to implement a decentralized structure that gives full authority to the lower level (Otley, 1980; Chia, 1995 in Atarwaman, 2008). The formal could directly demand formally the systems and the subordinates to fully provide the broad scope, aggregated, on-time and integrated information. The following hypothesis is thus formulated:



H₁: The formal structures control authority influence the management accounting information systems positively.

2.2.2 The structure of informal authority and management accounting information system (MAIS)

The structure of informal control authority derived from power and influence of the dominance of the coalition (Cyert and March, 1963 in Ramli and Denny, 2014). Power manager shown in them significantly control over resources without formal responsibility for the use of all these resources (Abernethy and Lillis, 2001). Managers gain power to influence decision-making at all levels in the organization. The informal authority applied by senior management.

Power effect on the use of AIS by top management in controlling behavior. Informal authority to make decisions to avoid a business strategy that allows top managers to use AIS in controlling their behavior (Young and Saltman, 1985 in Abernethy and Emida, 2004). According to Abernethy and Stoelwinder (1995) in Ramli and Denny (2014) that a manager with the authority's top management would oppose efforts to implement administrative systems. Abernethy and Stoelwinder (1995) in Ramli and Denny (2014), stated that the power of manager is not based on the information presented by the accounting system, but is based on the relevant for decision making. This is due to their reluctance to perform managerial roles such as that the issue of leadership in the organization is more important than the issue of resource management. The absence of managerial orientation will be negatively affected by the use of MAIS to control decision making and management. The informal through the leadership and the power manager could make the individual provide information that needed for the decision making right on time, broad scope, aggregated, and integrated. The following hypothesis is thus formulated:

H₂: The informal structures control authority influence the management accounting information systems positively.

2.2.3 Business strategy and management accounting information system (MAIS)

According to Romney and Steinbart (2012: 33), one of the factors that influence the design of accounting information systems is a business strategy. Furthermore, according to Laudon and Laudon (2006: 6) changes in the organization's business strategy requires a change in



accounting information systems (hardware, software, databases, and telecommunications). As the above statement, Jones and Rama (2006: 574) confirms that the accounting information system development, one of the factors that must be considered is to ensure that the implementation of the organization's business strategy is consistent with the objectives. Then, a study conducted by Chong and Chong (1997) in Ramli and Denny (2014) results showed that the business strategy is one important factor in the design antesendens accounting information systems. Next evidenced by Meiryani (2015) found that the business strategy affect the quality of accounting information system, it is also said that the quality of accounting information systems can be improved through good business strategy.

Prospector business strategy is supported by the characteristics of the relevant management accounting information will generate more positive performance compared with companies using defender strategies. This happens because the prospector strategy usually face environmental uncertainty is greater than companies that have strategies defender. Based on the arguments above, it can be built a hypothesis as follows:

H₃: The business strategy influences the management accounting information system positively.

2.2.4 Organizational culture and management accounting information system (MAIS)

Culture affects the performance of individuals in an organization like the previous studies involving organizational culture variables, namely on research Tripambudi (2014) and Asfar Dalimunthe (2009), which showed similar results that organizational culture has a significant effect on performance. According to Tripambudi (2014), there must be high-quality data in the accounting information system to obtain good quality information. Good data has a significant impact on the company's data quality results. In the data is good, the quality can be seen in the organizational culture.

Tripambudi (2014) examined the Influence of Organizational Culture and Organizational Structure on Accounting Information Systems and Their Impact on Quality Information. The results showed that with the organizational culture and organizational structure to support the implementation of accounting information systems in use by the company. Tripambudi (2014) and Asfar Dalimunthe (2009) showed the same results that organizational culture has a significant influence on the performance of the accounting information system.Similar



research were expressed by Setya Nusa (2015) states that there is significant effect of organizational culture on the quality of accounting information system. Further Kieso (2002: 22) in Setya Nusa (2015) states that the implementation of accounting systems is highly dependent on the organizational culture.





Figure 1 The effect of management control, business strategy, and organizational culture on management accounting information system

3. Research Method and Data Analysis Technique

- 3.1 Research Method
- 3.1.1 Type of Research

This type of research is an empirical study with a quantitative approach. Quantitative research emphasis on testing theories through measurements of the number of research variables and perform data analysis with statistical procedures (Indriantoro and Supomo, 2002).

3.1.2. Population and Sample

The population of this research is the manager in companies in Indonesia that registered in Association Management of Indonesia (AMA-Indonesia). Number of sample is based on Slovin formula as musch as 60 respondents on about 150 population (the managers who can



attend in meeting on February in AMA-Indonesia located in Bandung) with critical coefficient/carefulness limit 10%.

3.1.3. Data Collection Techniques

The data used in this study are primary data in the form of a questionnaire. Number of questionnaires sent is as much as 80 questionnaires to 60 respondents. Number of sample in this research as much as 60 respondents, for response rate that expected is 75% so questionnaires that can distributed is 80 questionnaires ($60 \times 100 : 75 = 80$).

3.1.4. Operational Definition of Variables

3.1.4.1. Formal authority structure (Management Control)

Formal authority structure is defined as a deliberate choice in top management took a decision to delegate the type of management to lower levels and are usually associated with a system of accountability. The formal authority to explain the relationship between inputs and outputs for controlling the activity in the part of their unit. Formal authority includes three indicators, namely the responsibility for the costs incurred, the responsibility to regulate all matters within its authority and responsibility in the achievement of budget targets and the achievement of results. Likert scale of 1 to 7 is used to indicate the response of formal authority (1 - strongly disagree to 7 - strongly agree). The higher value indicates the higher scale formal authority.

3.1.4.2. Informal authority structure

Informal authority is defined as the ability of individuals or groups that influence organizational decisions and other activities, which do not get penalized in the formal system (Alexander and Morlock, 2000). Informal authority includes seven indicators, the addition and expansion of services, priority issues on corporate strategy, determination of treatment privileges sub companies, decisions relating to the allocation of the purchase of equipment in the company, purchases the majority of equipment companies, agreement on the staff of new employees in the company and policies and procedures in the company. Measurements of power managers and their influence in the company is measured by six questions. Likert scale of 1 to 7 is used to indicate the response of informal authority (1 - very small to 7 - very big). The higher value indicates the higher scale informal authority.



3.1.4.3. Business Strategy

The business strategy is an integrated plan on product description, activities, functions and markets that currently run the company to achieve the main goal of the company (Maharani, 2011), is a business strategy that is integrated planning taking into account the strategic aspects of the company. In Ramli and Denny (2014), strategic aspects used in this study is the typology of the strategies developed by Miles and Snow (1978). And will be measured with an instrument developed by Miles and Snow (1978) in Ramli and Denny (2014).

In this study, the authors only use the type prospector and defender. To assess the company's business strategy, the approach used in this study self-typing, that the respondents were asked to commit themselves to the business strategy. Respondents chose a high scale towards 7 tend to choose strategies prospector, while respondents who chose a low scale toward one tends to choose strategies defender. Respondents chose a high scale towards 7 tend to choose strategies defender. Respondents chose a low scale towards 7 tend to choose strategies defender. Respondents chose a low scale towards 7 tend to choose strategies defender. The business strategy in this study was measured using three questions.

3.1.4.4. Organizational Culture

In this study, the two-dimensional cultures used is an organizational culture that is oriented in a closed system vs. open system and organizational culture oriented control weak (loose control) vs. control powerful (tight control) using a dimensional approach practices, namely the values and beliefs that are owned by members of the organization, which is manifested in the form of norms of behavior of the individual or group of organizations concerned (Hofstede et al., 1990 in Sawitri, 2011). Ten instrument of Hofstede's organizational culture; Harris and Chung (1993) in Chairina (2006) is intended to explain the cultural orientation of the organization at the level of top managers specifically. Five instrument used to measure organizational culture that opposes the orientation of a close system vs. open system. Scale of 1 to a culture oriented in a closed system to scale 7 - for culture-oriented open system. The higher value indicates the higher scale oriented culture these dimensions.



3.1.4.5. Management Accounting Information Systems (MAIS)

Characteristics of accounting information related to how managers estimate the accuracy, relevance, timeliness and format of the information presented in the budget of the operational activities that are routine. Nine instruments of Doll and Torkzadeh (1988) in Chairina (2006) is used to indicate their satisfaction with the information presented by the system budget. Likert scale of 1 to 7 is used to indicate the response of the accounting information system design criteria used by the company (1 - it never made it 7 - very often). The higher the value the higher scale indicates the use of management accounting information systems.

3.2. Data Analysis Technique

3.2.1 Data Quality Testing

There are two concepts to test the quality of the data, the validity and reliability. Validity test used to determine how well an instrument measures the concept should be measured. In this study the validity test used is to calculate the correlation between the scores of each of the questions with a score variables studied. If $\alpha = 0.05$ then the indicator is said to be invalid and therefore can not be used to measure a validity. Reliability test is a test tool for measuring the questionnaire which is independent of variables or constructs (Ghozali 2007: 41). How to calculate the level of reliability of the data by using Cronbach Alpha formula. Questionnaires said variable if the value of Cronbach Alpha r > 0.60 (Nunnally, 1967 in Ghozali, 2007: 42).

3.2.2. Classic Assumption Test

There are several requirements before doing the regression that must be passed that test the classic assumption. The regression model should be free of classical assumption of free normality, multicolinearity, and heteroscedasticity. Normality test is used to test whether a regression model of the dependent variable, independent variable or both have a normal distribution or not. Normality test in addition to using chart also biased using Kolmogrof-Smirnov test (KS). If the result (KS) showed significant results above 0.05 then the data is normally distributed residuals. material multicolinearity test aims to test whether the regression model found a correlation between the independent variables, the criteria of multicolinearity can be seen from the value of tolerance and the opponent a value Variance



Inflation Factor (VIF). If the value of tolerance above 0.10 and VIF values below 10 then do not share the problems of multicolinearity. A good regression model is homoscedastisity, the residual have the same variant from one observation to another observation. One way to detect the presence of heteroscedasticity is using Glacier Test. If the significant value is higher than 0.05 (α), it means that heteroscedasticity does not happen.

3.3. Hipotheses Test

The statistical analysis used was multiple linear regression Researchers using multiple linear regression to examine the relationship between management control, business strategy, and organizational cuture with management accounting information.

Statistical equations used are:

$$Y = a + b_1 X_1 + a + b_2 X_2 + a + b_3 X_3 + a + b_4 X_4 + e$$

Explanation :

Y	= Management Accounting Information System
b ₁ ,b ₂ ,b ₃ ,b ₄	= Regression Coefficient
a	= Intercept
e	= Error
\mathbf{X}_1	= Formal Authority Structure
\mathbf{X}_2	= Informal Authority Structure
X_3	= Business Strategy
X_4	= Organizational Culture

4. Results and Discussion

4.1. Result

4.1.1 General Description of Respondent

The number of questionnaires returned as many as 60 copies with the details of the return is: accepted until the deadline date of 26th February 2016 was 51 questionnaires, while 9 questionnaires received after the deadline set. As much as 20 questionnaires were not returned because the manager were not willing to fill the questionnaires. A total of 8 questionnaires could not be included because it is incomplete. Thus only 52 pieces of questionnaires that can be processed and analyzed further used for research.



4.1.2 Data Quality Testing

Results of the test of validity can be seen in Apendix, can be determined that the validity of the items or questions on these variables is greater than the value of r table at 0.279 at the 95 percent confidence level or $\alpha = 0.05$ (n – 2). Thus it can said all the statements in the variable is valid so that it can be forwarded weeks to be analyzed further. reliability test results can be found in Appendix. all of management variable is reliable.

4.1.3 Non-Response Bias

Testing of non-response bias in this study was conducted to determine differences in the characteristics of respondents who returns the questionnaire answers right on time with respondents who did not return the questionnaires (non-response). Non-response bias test is done by grouping the respondents into two groups: the early group (representing a group that returned the questionnaire) until the deadline date of February 26, 2016 and the final group (representing a group that did not return the questionnaires) after the February 26, 2016. Based on the number of questionnaires returned and can be processed as many as 52, where 43 questionnaires were returned on time (early respondent) and 9 answers back beyond the limit specified time (late respondent). The test results of non-response bias by using T-test are presented in appendix. variable structure of formal authority, structure informal authority, business strategy, organizational culture, and management accounting information system between early respondens with late respondens not have a significant difference of 5 percent (p > 0.05). This suggests that early or late respondens respondens come from the same population and the non-response bias is not an issue in this study so early and late respondens can be combined (Babbie, 1990 in Chairina, 2006).

4.1.4 Classic Assumption Test

Kolmogorov-Smirnov test results show that the value of the Kolmogorov-Smirnov and all the significant value was greater than 0.05. This means that the data are normally distributed residuals. The result of the calculation of Variance Inflation Factor (VIF) also show the same thing is not an independent variable which has VIF value of more than 10. Thus, it can be concluded that there is no multicolinearity between the variables independently in the regression model. Glacier Test results shows that the study variables are free from



heteroscedasticity evidenced by the absence of independent variables were significant at the 5 percent level (Ghozali, 2007).

4.1.5 Multiple Regression Analysis

T test was used to test the effect of prtially independent variables on the dependent variable. From the analysis results with confidence level or 95 percent or $\alpha = 0.05$. The all of hypothesis which stated the formal authority, informal authority, business strategy and organizational culture influence the management accounting information system positively, is **accepted**.

No.	Variables	Coefficient Regression (B)	t statistic	t table	Sig.
1	Formal Authority Structure	0.249	3.713	1.677	0.001
2	Informal Authority Structure	0.216	2.752	1.677	0.008
3	Business Strategy	0.128	2.101	1.677	0.041
4	Organizational Culture	0.424	3.320	1.677	0.002
Constanta		0.541			
Coefficient Determines		0.714			
F Statistic		29.295			
F Table		2.57			

Table 1Multiple Linear Regression Analysis Result

Source: Data processed, 2016

4.2. Discussion

4.2.1. Analysis of Formal Authority Structure on the Management Accounting Information System

The result of the research shows that the acceptance of the first hypothesis that formal authority structure has effect on the management accounting information system. These findings found that in terms of formal authority to the accounting information system, in which the delegation of tasks authority shows the relationship that control each individual to cooperate and manage



all existing resources to realize the objectives of organizations exist. With the implementation of the formal authority structure that have good responsibility at the cost incurred, regulation to all matters within its authority and responsibility in the achievement of budget targets and result so the management accounting information system will have good quality and implemented clearly, or in other words, managers in the company have big responsibility in their unit in the preparation of information accounting. So, the output that was done by the managers to be more guarantees and can minimize the unethical actions that can affect to the managers how to estimate the accuracy, relevance, timeliness and format of the information presented in the budget of the operational activities which is characteristics of the management accounting information system.

4.2.2. Analysis of Informal Authority Structure on the Management Accounting Information System

The result of the research shows that the acceptance of the second hypothesis that informal authority structure has effect on the management accounting information system. The results of this study also illustrates that the powers that be in the managers that registered in AMA-Indonesia (legitimate power) through the formal structure of companies in which the delegation of authority is run by individuals who have responsibility for the decision. Informal authority structure is a proxy of the power that demonstrates the ability of a person or parts of the organization in influencing others in order to get an outcome that is needed. With the implementation of the informal authority structure, the management accounting information system will have clear influence to make decision, or in other words, managers in the company have big chance to making decision in their agency include making decision about services expansion, agreement on the new staff, procedure, and regulation in the company. So, the decisions that was resulted by the managers to be more resonsibilited that can affect the broad scope, timeliness, aggregation, and integration which include the characteristics of the management accounting information system.

4.2.3. Analysis of Business Strategy on the Management Accounting Information System

The result of the research shows that the acceptance of the third hypothesis that business strategy has significant effect on the management accounting information system. Business



strategy can encourage the improvement of management accounting information systems. By the effectiveness of the business strategy on systems/information technology in support of the organization's, it can make the broad scope, timeliness, aggregation, and integration in the management accounting information system measured successfully and will have good quality. Acceptance this hypothesis shows that strategy which used by the organizations is tend to business strategy in prospector type. Company that use prospector strategy can be improved the accounting information system better. So the possibility that can be produce the output in company operation more good. Increasing competition in the business of making the players in the world of enterprise organizations working to set up, enhance, or prepare new strategies that make companies able to survive and thrive in the competition. Therefore, companies develop strategies that offers innovative products and services which further facilitate the mobility of clients, service delivery fast, accurate, and responsive, the use of advanced technology of modern, up to the construction of a positive image in the eyes of consumers through relationship. Companies with orientation prospector strategy has good management accounting information system higher on the managers than the company with strategic orientation defender. Characteristics broad scope of information, timeliness, aggregation, integration and implementation of adequate orientation prospector strategy will be a positive impact on management accounting information system.

4.2.4. Analysis of Organizational Culture on the Management Accounting Information System

The result of the reserach shows that the accpetance of the forth hypothesis that organizational culture has significant effect on the management accounting information system. Acceptance of the hypothesis is because, when viewed from an organizational culture in which managers registered in AMA-Indonesia more likely in open systems culture. In the open system organizational culture tends to open to the outside, causing the amount of information available for decision-making because information tends to be confidential (Hofstede, 1991 in Chairina, 2006). Assess the norms and value that guide the behavior of members of the organization, each member will behave in accordance with the prevailing culture in order to fit in. This can be seen from the activities of the organization. The activities can be seen from the description of the position which is the basis for conduct the tasks well. The people that are in the organization open to each other and everyone feels comfortable in the organization. So that, the process of transformation of the information needed for decision making can be easily



obtained, this is include in open system oriented in organizational culture that make organization quickly respond to changes that occur outside environmental organization which have influence also to the broad scope, timeliness, aggregate, and integration in improved management accounting information system better.

This result also explain that companies that have organizational cuture in tight control oriented will influences the management accounting information system better

5. CONCLUSIONS, IMPLICATIONS AND LIMITATIONS

5.1. Conclusion

- 1. The structure of formal authority affect the management accounting information system in the organization.
- 2. Structure of informal authority also affect the management accounting information system in the organization.
- 3. Business strategy affect the management accounting information system in the organization.
- 4. Organizational culture influence the management accounting information system in the organization.

5.2. Implications

- 1. The results of this study can be a contribution for companies in Indonesia also can be used as an input in the running routine improvements to ensure management control, business strategy, and organizational culture that associated with decision-making so that the company's management accounting information systems can be improved.
- 2. The results of this study are expected to contribute to the development of literature in the field of management accounting, particularly the use of management control, business strategy, and organizational culture in order to improve management accounting information system that is also a motivation to do next research mainly related to accounting information.

5.3. Limitations

1. The sample of the research in the Association Management of Indonesia (AMA-Indonesia) is slightly classified, so that the questionnaire spreading is not prevalent.



- The instruments of measurement used in this study is based on the perception of respondents score so it is likely to cause problems if the perception of respondents differ from actual conditions.
- 3. The study was only done at one time, so it is possible to change the behavior of individuals at any given time.

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APPENDIX

1. Validity Test Result of Formal Authority Structure (X₁)

Item	r statistic	r table	Explanation
X1.1	0.896	0.279	Valid
X1.2	0.902	0.279	Valid
X1.3	0.909	0.279	Valid
X1.4	0.876	0.279	Valid

Source: Data processed, 2016

2. Validity Test Result of Informal Authority Structure (X₂)

Item	r statistic	r table	Explanation
X2.1	0.888	0.279	Valid
X2.2	0.884	0.279	Valid
X2.3	0.760	0.279	Valid
X2.4	0.894	0.279	Valid
X2.5	0.872	0.279	Valid
X2.6	0.892	0.279	Valid

Source: Data processed, 2016

3. Validity Test Result of Organizational Culture (X4)



Item	r statistic	r table	Explanation
X4.1	0.450	0.279	Valid
X4.2	0.325	0.279	Valid
X4.3	0.630	0.279	Valid
X4.4	0.708	0.279	Valid
X4.5	0.621	0.279	Valid
X4.6	0.456	0.279	Valid
X4.7	0.493	0.279	Valid
X4.8	0.425	0.279	Valid
X4.9	0.539	0.279	Valid
X4.10	0.592	0.279	Valid

Source: Data processed, 2016

4. Validity Test Result of Management Accounting Information System (Y)

Item	r statistic	r table	Explanation
Y.1	0.886	0.279	Valid
Y.2	0.817	0.279	Valid
Y.3	0.908	0.279	Valid
Y.4	0.884	0.279	Valid
Y.5	0.898	0.279	Valid
Y.6	0.908	0.279	Valid
Y.7	0.880	0.279	Valid
Y.8	0.858	0.279	Valid
Y.9	0.799	0.279	Valid

Source: Data processed, 2016

5. Realibility Formal Authority Structure Variable (X1)

Reliability Statistics			
	Cronbach's Alpha Based		
	on		
Cronbach's	Standardized		
Alpha	Items	N of Items	
.914	.919	4	

6. Realibility Informal Authority Structure Variable (X2)



Reliability Statistics

	Cronbach's Alpha Based	
	on	
Cronbach's	Standardized	
Alpha	Items	N of Items
.932	.933	6

7. Realibility Organizational Culture Variable (X4)

Reliability Statistics

	Cronbach's Alpha Based on	
Cronbach's	Standardized	
Alpha	Items	N of Items
.715	.707	10

8. Reability Management Accounting Information System Variable (Y)

Reliability Statistics

	Cronbach's Alpha Based	
	on	
Cronbach's	Standardized	
Alpha	Items	N of Items
.959	.960	9



9. Normality Test Result

		Unstandardize d Residual	Standardized Residual	
N	-	52	52	
Normal Parameters ^a	Mean	.0000000	.0000000	
	Std. Deviation	.61692914	.95998366	
Most Extreme Differences	Absolute	.060	.060	
	Positive	.049	.049	
	Negative	060	060	
Kolmogorov-Smirnov Z		.432	.432	
Asymp. Sig. (2-tailed)		.992	.992	

One-Sample Kolmogorov-Smirnov Test

a. Test distribution is Normal.

10. Multicolinearity Test Result

Coefficients^a

		Correlations			Collinearity	Statistics
Model		Zero-order	Partial	Part	Tolerance	VIF
1	FORMAL	.700	.476	.290	.632	1.581
	INFORMAL	.679	.373	.215	.601	1.664
	BS	.454	.293	.164	.852	1.173
	OC	.632	.436	.259	.742	1.348

a. Dependent Variable: MAIS



11. Heteroscedasticity Test Result

Coefficients ^a							
		Unstandardized Coefficients		Standardized Coefficients			
Model		В	Std. Error	Beta	t	Sig.	
1	(Constant)	1.427	.411		3.476	.001	
	FORMAL	077	.058	225	-1.331	.190	
	INFORMAL	.014	.068	.036	.209	.835	
	BS	.078	.053	.217	1.488	.143	
	OC	182	.110	257	-1.644	.107	

a. Dependent Variable: ABSRES

12. Regression Analysis Result

Model Summary^b

-			Adjusted R	Std. Error of
Model	R	R Square	Square	the Estimate
1	.845ª	.714	.689	.64265

a. Predictors: (Constant), OC, BS, FORMAL, INFORMAL

b. Dependent Variable: MAIS

ANOVA^b

Mode	el	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	48.395	4	12.099	29.295	.000ª	
	Residual	19.411	47	.413			
	Total	67.806	51				

a. Predictors: (Constant), OC, BS, FORMAL, INFORMAL

b. Dependent Variable: MAIS



Coefficients ^a							
		Unstandardized Coefficients		Standardized Coefficients			
Model	_	В	Std. Error	Beta	Т	Sig.	
1	(Constant)	.541	.475		1.138	.261	
	FORMAL	.249	.067	.364	3.713	.001	
	INFORMAL	.216	.078	.277	2.752	.008	
	BS	.128	.061	.178	2.101	.041	
	OC	.424	.128	.301	3.320	.002	

a. Dependent Variable: MAIS