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# A Model of Managerial Decision Making in a Republic of Indonesia Ministry: What Should We Do?

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**Abstract:** This research is aimed to investigate and test the influence of performance measurement systems to managerial decision making by the intermediary's internal audit, internal control systems of government and accountability for performance. Data were obtained through a survey of 417 respondents, including Echelon II, II and IV in a Republic of Indonesia Ministry. Data analysis used Structural Equation Model by using Warp PLS 4.0.

The results showed that the performance measurement system is significantly positive affect on internal audit, internal control systems of government, performance accountability and managerial decision making. The internal audit significantly and positively affects the system of internal control and accountability of government performance, but does not significantly and positively affect managerial decision making. Government system of internal control significantly and positively affects the performance and accountability of managerial decision making. Next, performance accountability significantly and positively affect managerial decision making.

Furthermore, the results of testing the indirect effect with 2 segments, segments 3 and 4, indicate that internal audit can be partially mediate the relationship of the performance measurement system of internal control systems. Internal control systems of government can be a partial mediation relationship: (1) performance measurement system with performance accountability, (2) the internal audit with performance accountability, and (3) internal audit with managerial decision making. Furthermore, performance accountability partial mediation relationship: (1) performance measurement system with managerial decision making, and (2) internal control system of the government with managerial decision making.

Testing through the internal audit and internal control systems of government can be a partial mediation relationship with the performance measurement system of performance accountability. The testing of the internal control system through government performance and accountability partial mediation can be an advanced internal audit relationship with managerial decision making. Finally, testing 4 segments indirect effect through the mediation of internal audit, internal control systems and accountability of government

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performance can be an a full mediation relationship of performance measurement system on managerial decision making.

Keywords: System Performance Measurement, Internal Audit, Internal Control Systems of Government, Performance Accountability and Managerial Decision Making.

#### RESEARCH BACKGROUND

Phenomena that occur in government sector, that the managerial decision-making process by the leadership in general is influenced by personal interests / group or political elements, so that the resulting decisions are less in line with organizational goals and less in favor of the community. The condition is not in line with Scholten (2007), that the decision should be based on information and understanding of information according to the number and quality of information.

Mardiasmo (2009) said that the decision making is required at all stages of organization and management activities, including planning, implementation and operation, accountability and oversight. Decision making at planning stage addressed to alternative programs and priorities. In the implementation phase in an organization, leaders must be able to gradually take decisions on a regular basis in order to control activities in accordance with the plans and conditions, as well as regulations. As for the stage include monitoring surveillance, examination and assessment to evaluate the implementation of decision-making that has been done.

# THEORETICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

Past research has shown that the performance measurement system focuses on the relationship between performance measurement systems to organizational performance both perceived and actual (Ittner et al, 2003; Hassab Elbany and Wier, 2003; Chenhall, 2005; Davis and Albright, 2004) and the use of multidimensional measurement system to evaluate the performance considerations (Schiff and Hoffman, 1996; Lipe and Salterio, 2000 and Banker *et al*, 2004). In addition, there are also research about the implementation of performance measurement system development which investigate the factors that influence the development and benefits of results-oriented performance measurement (Cavalluzzo and Ittner, 2004 and Nurkhamid, 2008).

Institutional theory in general says that the long-term success of an organization is depend on the actions and behavior of the individuals involved in it (Otley, 1999; de Haas and Kleingeld, 1999). Therefore, the implementation of a performance measurement system can be used to drive the achievement of organizational goals that have been set (Chenhall and Langfield-Smith, 2007).

Van der Stede, Chow and Lin (2006) suggested that the performance measurement system plays a key role to assist management in planning and controlling the organization, translating strategy into organizational behavior and achievement of expected outcomes. In addition, the role of performance measurement provides useful information for planning, decision making, control of the organization, communicate the expectations of the organization, monitor the progress and development, providing information as feedback, and motivating employees through awards based on performance (Banker, Potter, and Srinivasan, 2000; Ittner, Larcker, and Randall, 2003).

Based on the above arguments, the main problem of this research is how to influence the performance measurement system to managerial decision making with the mediation of internal audit, internal control

systems and performance accountability. The fundamental reason to enter the internal audit and internal control system as a mediating variable that is to ascertain whether internal audit and internal control system can control the performance measurement system in accordance with the objectives and targets of the organization, and the results are accounted for by the leadership as a basis for managerial decision making.

Furthermore, in order to build a model of research to answer the research questions, the research framework was built with institutional theory (Scott, 1995; Lounsbury, 1997), goal-setting theory (Locke and Latham, 1990; 2002;), and decision theory (Kahneman and Tversky, 1979; Moon and Fitzgerald, 1996;, and Scholten, 2007). The argument underlying the use of these theories to base this research with major premise to encourage implementation of performance measurement system in helping the leader to achieve organizational goals through adequate internal controls.

The units of analysis in this study are echelon II, III and IV in an Indonesian ministry. Submission of questionnaires to respondents was conducted in two ways, namely addressed directly to the selected respondents and by electronic mail. Shipping questionnaire by electronic mail sent through an email address active respondents by providing a link to the respondents. The respond rate of the questionnaire is as much as 417 or 68.36% of 610 copies. The method used to analyze data is structural equation model with the help of the program WarpPLS 4.0.

Based on the argumentations, theory, literatures and research model, the proposed alternative hypotheses are:

- H<sub>1</sub>: Performance measurement system positively influences internal audit practices.
- H<sub>2</sub>: Performance measurement system positively influences internal control system.
- H<sub>2</sub>: Performance measurement system positively influences performance accountability.
- H<sub>4</sub>: Internal audit practices positively influence internal control system.
- H<sub>5</sub>: Internal audit practices positively influence performance accountability.
- H<sub>2</sub>: Internal control system positively influences performance accountability.
- H<sub>2</sub>: Internal audit practices positively influences managerial decision making.
- H<sub>o</sub>: Performance accountability positively influences managerial decision making.
- H<sub>o</sub>: Internal control system positively influences managerial decision making.
- H<sub>10</sub>: Performance measurement system positively influences managerial decision making.

#### RESEARCH METHOD

The study population is Echelon II, III, and IV in the Ministry of Agriculture. The sample in this study was conducted using stratified random sampling. This method was chosen as the target population of respondents has known with certainty. The submission of questionnaires to the respondents carried out in two ways, namely directly delivered to the selected respondents and by e-mail. Delivery of questionnaires via electronic mail sent through the email address is active respondents by providing a link to the respondents. The total questionnaire returned is as much as 417 (68.36%) of 610 copies. The method used to analyze the data is a structural equation model.

## **RESULTS**

Based on the results of data analysis and hypothesis testing, this study confirmed some of the findings of the study are summarized as follows:

- 1. Positively related to performance measurement system and significantly affect internal audit (H1), the internal control system of government (H2), the accountability of performance (H3) and managerial decision making (H10). It indicates that the performance measurement information is able to provide an overview of the important parts of the organization both for the leadership of the organization and external parties, such as the purpose of the activity / organization that is equipped with targets and indicators of activity that comes with achievement strategies.
- 2. Internal audit and significantly positively related to the government's system of internal control (H4) and accountability of performance (H5), but positively related to managerial decision making (H7). These findings indicate that the practice of internal audit is able to fulfill its role in both the pass in a systematic and objective assessment and to encourage the implementation of the internal control system related to the handling of the risks the organization based on the identification of areas that have not been functioning internal controls and procedures and organizational policies is less clear. In addition, the practice of internal audit is able to provide constructive recommendations for the management of the implementation of activities and utilization of resources effectively, efficiently and economically in order to improve organizational performance accountability. On the other hand, the practice of internal audit have not been able to assist management in the managerial decision making process.
- 3. The government's internal control systems and significant positive effect on performance accountability (H6) and managerial decision making (H9). These findings indicate that the internal control system of the government is able to provide reasonable assurance to the leaders on the implementation of effective and efficient, reliable financial reporting quality and compliance with regulations such as through the implementation of Review for institution performance in order to encourage increased accountability of the organization's performance.
- 4. Performance accountability positive and significant impact on managerial decision making (H8). These findings indicate that the performance is able to provide accountability and information disclosure (disclosure) on the activity and performance (financial and non-financial) to the leadership and interested parties.
- 5. Based on the results of testing the indirect effect through the two segments can be argued that: (1) internal audit as partial mediation relationship with the performance measurement system of internal control systems of government; (2) the government's internal control systems of partial mediation relationship: (a) the performance measurement system with accountability for performance; (b) the internal audit with performance accountability, and (c) internal audit with managerial decision making; (3) partial mediation performance accountability relationships: (a) the performance measurement system with managerial decision making and (b) internal control system of government with managerial decision making.
- 6. Indirect effect 3 segments through internal audit and internal control systems of partial mediation of government relations with the performance measurement system accountability and

performance testing of the internal control system through the government and partially mediate performance accountability of internal audit relationship with the managerial decision making, which was originally not significant change to be significant. As for testing 4 segments indirectly through mediation of internal audit, internal control systems mediate performance accountability of government and the full effect of the performance measurement system to managerial decision making.

- 7. Based on the results of these studies several conclusions can be drawn as follows: (1) encourage the implementation of the performance measurement system of internal audit practices are more objective and independent, the implementation of adequate internal control systems, improved accountability and performance support managerial decision making quality. In addition, the head of the organization can use the performance measurement system as a means of control to achieve organizational goals effectively and efficiently; (2) the practice of internal audit have not been able to quickly understand the organization's business processes, so that the audit recommendations are not in accordance with the expected management in order to improve the efficiency and effectiveness of the organization; (3) the internal control system is able to push governmental organizations in improving performance through control performance against appropriate performance measurement indicators of performance that has been planned through continuous monitoring, so the results can be used as a basis for leadership decision making.
- 8. The results of the study have implications for both theoretical and policy implications. The results of the study confirm and support the theories underlying the research, namely: institutional theory, goal setting theory, decision theory and contingency theory, that translates the performance measurement system as an important part of the operations and strategy of the organization and integrate across functions / values that bring consequence of the wide scope of responsibility for the achievement of organizational goals.
- 9. The findings of empirical studies suggest that the performance measurement system has positive influence on managerial decision making. Performance measurement system provides information about the objectives, targets and indicators of activities, thus helping in the decision-making leadership. In addition, the internal audit system mediates the effect of the implementation of the performance measurement system of internal control and accountability of government performance. This proves that the contingency theory of internal audit as mediation in achieving organizational effectiveness in implementing internal control systems is adequate government. In addition, also mediate performance accountability performance measurement system to managerial decision making. Although based on the empirical results prove that internal audit does not significantly affect the managerial decision making.

#### PRACTICAL IMPLICATIONS

The results of this study have practical implications for leadership in the public sector, as follows:

1. Performance measurement system helps internal audit, implementation of internal control systems of government, increase accountability and managerial decision making performance. Thus the leadership of the government agencies needs to design a performance measurement system that

- includes a variety of key aspects of the organization in order to better motivate employees, integrated with the vision, mission and strategy of the organization and the values associated with cross-functional organization.
- 2. The design of the performance measurement system needs to consider the consequences of the behavior given the performance measurement system can serve as a means of management control that can be used to align organizational behavior in order to achieve organizational goals. Therefore, leaders of government agencies should look at the overall performance measurement systems (holistic) as a means for empowerment of resources (human, facilities and infrastructure) in order to achieve organizational goals.
- 3. Government agencies need to have a standard mechanism to monitor progress and report the results of activities. In addition, develop the management openness for example in the goal setting activities involving cross-functional teams / sections to integrate inter-section and cross-functionality in the form of a performance measurement system that is more adequate.
- 4. General Inspector needs to improve its internal control services by increasing capacity and capability, professionalism and integrity of auditors so as to understand the duties / functions of the organization quickly and provide adequate information based on criteria and facts, honesty and integrity still needs to be improved, and in order to increase the effectiveness of implementation of activities. In addition, it is time to develop other forms of supervision, through assistance / consultation and implement risk-based auditing practices so that the role of internal control is effective.
- 5. Government agencies were time to develop: (1) the pattern of risk management activities more appropriate to use the standard and standard mechanism and (2) self-assessment of the effectiveness of internal control systems as well as to control the risk of organizations and activities. In addition, notes and documents on the use of resources, transactions and significant events in an orderly and timely and controlled.
- 6. Government agencies in order to further improve the quality of performance by adding accountability reports about the comparison between the time information and important information / dominant on the things that lead to success / failure of the implementation of the plan / activity targets are clear, transparent and accountable in order to meet the demands and forms of overall responsibility to community as an expression of good governance (good governance).
- 7. Leaders government agencies need to develop transparency by engaging leaders in stages in managerial decision making, then the decision is communicated to the parties concerned and implement reward and punishment are sufficient in order to further motivate employees to improve their performance.

# **LIMITATIONS**

This study has several weaknesses / limitations, namely: (1) a new data collection is done at the ministry / agency, and this research has not been able to justify / generalize about the condition of the ministries /

institutions; (2) studies have not entered the Echelon-1 leadership as research respondents, so the results of this study have not been comprehensively describes the related process performance measurement system design, implementation of internal audit, performance accountability and managerial decision making; (3) The questionnaire used in this study have not been tested through a pilot test, before being used for data collection in the field, so the potential is still relatively high bias; (4) research model has not been hypothesized reciprocal relationship between internal audit with the internal control system of government, so that the relationship / influence of both cannot be explained in this research.

#### **IMPLICATIONS**

Based on the results, the limitations of this research, there are several agendas for the development of future research, namely:

- 1. Consider other research methods, such as the study of medium-term and long-term to test the effect of the implementation of the performance measurement system of planning, implementation, and evaluation. Considering the result of statistical test used in this study based on data cross-sectional. This means that the data obtained through the survey is based on the perception of respondents selected at the time of filling the questionnaire. Therefore, the perception of the respondents did not reflect the conditions and consistent opinions from time to time in line with the implementation of performance measurement systems.
- 2. The indicators of the variables used in the study still needs in-depth testing with a pilot test in order to provide a level of validity and reliability are more adequate.
- 3. The model of this research is the development and modification of previous studies. So, it needs to be tested for the research on the other government agencies to be developed to make it more perfect, by adding a variable or change the design of the research model fit existing conditions.

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