

The effect of budget tightness and internal audit on the perceived usefulness of management accounting systems.

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Abstract. The objective of this research is how to effect and measure the budget tightness and internal audit on the perceived usefulness of management accounting systems. Mail questionnaires were distributed to 149 stated-owned enterprise in Indonesia and than we have responcy rate of 85 Indonesia enterprise. Data validity and reliability of independent variable is valid and reliable. Hypothesis testing use regression analysis. The result show that positively effect of the budget tightness and internal audit on the perceived usefulness of management accounting systems. Base on research, characteristics of management accounting informations including of broadscope, timeliness, the level of aggregation and integrative nature can be support by the roles of implementation of tight budget and internal auditor's function.

Keywords: *Budget Tightness, Internal Audit, Information of Management Accounting, Perceived Usefulness of Management Accounting Systems, and The Role of Internal Auditors and Management Accountants.*

Preliminary

Management accounting provides information to the management (Garrison, *et. al.*, 2006). Management accounting information is in the form of financial and non-financial details which can be used for decision making, planning, and controlling, so that the company is expected to perform more preferably. Management accounting information is also used to coordinate product design, production, marketing, and performance assessment (Horngren, Datar, and Rajan, 2012).

Referring to the reports by management accounting committee on researches on management accounting, Atkinson, *et. al.* (1997) state that quality management accounting means management accounting that is able to assist management in the composition of planning, supervising, decision making, and problem solving; management accounting can provide a variety of information for management to built a range of initiatives to respond to changes in the external environment. Still according to Atkinson, *et. al.* (1997), management accounting also assists and supports risk management in managerial level, as well as in the corporate level in order to bear the characteristics of management accounting information in accordance with the needs of management.

Meanwhile, Chenhall and Norris (1986) describe the characteristics of quality accounting information as broad-scope, timeliness, aggregation, and integration. Such information can only be produced by superior management accounting as well (Belkaoui, 2002 and Horngren, Datar, and Rajan, 2012).

Management accounting information is utilized in terms of its usefulness and beneficial quality served for management's decision-making and how well management accounting may help and motivate managers to work better so it has positive impacts on the performance and the usefulness of the information must be greater than the costs incurred to obtain the information (Horngren, Datar, and Rajan, 2012; Brandon and Drtina, 1997). In other words, management accounting system provides quality information that can help, direct, and oversee the management so that the decision-making right on target that the company's performance increases. The same opinion is also delivered by Hansen and Mowen (2005) that accounting management system reflects generated information; when the information is used, it may improve the quality of service and efficiency, and allows management to identify the current environmental conditions.

Hoque and Mia (2001) agree that budget is an input to produce information for management. Jackson, *et. al.* (2009) add that budget is an integral part of the activities of planning, operation, and supervision. According to Van der Stede (2001), budget may be carried loosely (loose budget) and tightly (tight budget) which implementation is tailored to the needs of day-to-day management. Thus budget is expected to continue to assist and provide information about the activities of the company's decision-making and help management to determine future changes, for example, changes in external environment that may disrupt the company's operations. Therefore, budget should ideally always consider and understand exactly what is going to change in the days to come and it should be anticipated that the budget is aligned with the change so it becomes the source of information for management (Govindarajan, 1986).

Monitoring ensures that the company's activities run according to programs (Robbins and Coulter, 2009). According to Hilton (2009) monitoring is an activity to secure the company is operating at a predetermined line. Jackson, *et. al.* (2009) describe the monitoring aiming to establish company's goals and ideals. Meanwhile Simons (1988) states that monitoring is an internal audit activity.

Internal auditing is a review of accounting system, as well as control/internal supervision (Morariu, 2009). The Institute of Internal Auditors (2011) reports internal audit is useful to increase the added value, internal consultants, ensuring the effectiveness of internal controls and to seek the establishment of good corporate governance. Sawyers and Dittenhover (2003), Elder, *et. al.* (2010) and Ratliff, *et. al.* (1996) add that internal audit functions as an assessment for reliability and integrity of financial information and the company's operations; assessment for management's principal adherence to the procedures and operating standards that apply; review for the feasibility and safety of the company's assets; identification and minimizing operational risks; assessment for management's ability to use resources economically and efficiently; and confirmation to the planning and work programs that have been drawn up and the implementation in accordance with applicable regulations so that the company's goals can be achieved.

Furthermore, Horngren, Sundem, and Stratton (1996) and Anthony and Govindarajan (2007) explain that budget tightness is an important tool for increasing use of information of management accounting, because budget tightness is elaboration of practices of budget emphasis, budget revisions, budget detail, budget deviations and budget intensity (involvement); thus, the company's activity is always based on the budget, with analysis of variance and its cause, detailed preparation involving all elements of the company, and budget targets set to be a shared commitment and providing a variety of information for management. This, in turn would improve the quality of management accounting.

Sawyers and Dittenhover (2003), IIA (2011) and Horngren, Sundem, and Stratton (1996) agree that internal audit can improve management accounting information by monitoring, assessment, and review to determine whether the risk management, measures, working procedures, internal control system, and accounting records are in accordance with the standards and regulations. Internal audit is performed by independent and competent internal auditors to ensure achievement of company's goals (economic, efficient, and effective).

Referring to the research motivation and research question, it is agreed that it is time to declare formulation of the problem and deeper identification, namely: (1) whether internal audit affects on the usefulness of management accounting systems, and (2) whether budget tightness affects on the usefulness of management accounting systems.

Finally, the research objectives include: (1) to determine whether internal audit affects on the usefulness of management accounting systems, and (2) to determine whether budget tightness affects on the usefulness of management accounting systems.

Framework and hypotheses development

Previous research results by Linn (1997), Bredmar (2011), and Frezatti, *et. al.* (2011) identify the effects of budget tightness to the use accounting management system, thus helping the management in terms of providing information for decision making. According to Linn (1997) budget emphasis and budget participation affect the provision of broad scope management accounting information. Bredmar (2011) finds that budget goal setting and budget commitment improve management accounting information. Meanwhile, Frezatti, *et. al.* (2011) come to the conclusion "that poor or fully implemented budget tightness can effect to management accounting activities of the Brazilian organizations". Furthermore, Islahuzzaman (2005) confirms that participatory budgeting has impacts on the implementation of accounting in the form of provision of information timeliness and aggregation.

Results from researches conducted by Zeigenfuss (1994) and Crockett (1988) show the effect of internal audit on the provision of management accounting information. According to Ziegenfuss, *et. al.* (1994) internal audit has positive effects on the management accounting information system. Then Crockett (1988) suggests that internal audit and internal audit director may cooperate during the operational audit by providing audit report influential to management accounting system. According to Dedi Kusmayadi (2005) results showed operational audit influence on management accounting by way of provision of information *timeliness* and *aggregation* management accounting.

Exposure results of these studies in line with the opinion of Horngren, Sundem and Stratton (1996) and Anthony and Govindarajan, (2007) tightness of the budget is an important tool to improve the provision of management accounting information. Management accounting information is reflection of the effectiveness of internal audit in overseeing the company's operations (Sawyers and Dittenhover, 2003; Horngren, Sundem and Stratton, 1996: 8).

Horngrén, Sundem and Stratton, 1996) and Anthony and Govindarajan, 2007) explains that the tightness of the budget is an important tool for increasing the use of management accounting, because the tightness of the budget is the elaboration of practice *budget emphasis, budget revisions, budget detail, budget deviations* and *budget intensity (involvement)*. Thus the activity of the company is always based on the budget, the analysis of variance and its cause, the preparation is detailed by involving all elements of the organization and budget targets are set to be a shared commitment, the budget is the guidance of the company's operations and can provide a variety of information that supports decision-making so that the effect on the usefulness of management accounting information systems.

Van der Stede (2001) explains that the implementation of tight budget by performance assessment is based on the achievement of budget targets, budgets prepared involving all elements of management, realization and budget irregularities are analyzed the cause and prepared in the form of reports and then reported to management, so that in the end impact on the provision of management accounting information. This means that budget tightness affects the provision of management accounting information. According to Horngrén, *et. al.* (2012) and Chenhall and Morris (1986) monthly, quarterly, and annual budget reports are submitted to the management may result in the timeliness, integration, and aggregation characteristics of management accounting information.

Furthermore, Sawyers, and Dittenhover (2003), IIA (2011) and Horngrén, Sundem, and Stratton (1996) agree that internal audit may improve management accounting system by performing monitoring, assessment, and review to determine whether the risk management, measures taken, work procedures, internal control system, and accounting records are in accordance

With the standards and regulations, by an independent and competent internal auditor to ensure the success of company's goals (economic, efficient, and effective). Audit reports are in the form of a report of findings and suggestions for improvements to the management for further action, and useful to management for decision making. In other words, internal audit affects management accounting system.

Internal audit provides information that helps the company's operational management in corporate management. It also conducts review for internal control system, economizing, efficiency, and effectiveness of the achievement of company's objectives, reviewing the effectiveness of the implementation of good corporate governance and risk management so the accountability of the operational management becomes transparent and accurate (Ratliff, *et. al.*, 1996, and Sawyer and Dittenhover, 2003). Internal audit also assists management in providing information cash opname, stock opname reports of physical inventory of fixed assets, quarterly and annual audit reports and special audit reports. Audit reports will result in a wide range of information including timeliness, aggregation, and integration of management accounting information (Horngrén, *et. al.*, 2012; Chenhall and Morris, 1986).

Based on the framework above, the hypotheses proposed in this study are:

H1: Budget tightness influences on the usefulness of management accounting systems.

H2: Internal audit influences on the usefulness of management accounting systems.

Research methodology

The population for this research includes State-Owned Enterprises (SOEs) which legal entities are incorporated company and general company totaling 149 companies. SOEs are considered for population because they have a relatively high reporting accountability with an operating budget of more than 1,100 trillion rupiah, and control assets to 2,500 trillion rupiah. The total assets represent a large portion of business activity nationwide. Data are collected using questionnaires sent with shipping services aimed at the middle and top manager level represented by the financial director or operational director or marketing director. Once sorted, it is set for 85 pieces of questionnaires ready to be processed.

Operationalization of budget tightness variable (x_1) refers to the dimensions developed by Van der Stade (2001): budget emphasis, budget revision, budget detail, budget deviation, and budget intensity. Internal audit variable (x_2) cites the theoretical concepts developed Ratliff, *et. al.* (1996), Reider (2002), and Sawyer and Dittenhover (2003), which consists of dimensional evaluations of the internal control systems, economizing (cost of operations), efficiency (method of operations), and effectiveness (results of operations). While for management accounting system variable (y) the concept of characteristics of management accounting information system developed by Chenhall and Morris (1986) is used for analyzing the hypotheses, namely dimensions of broadscope information, timeliness, levels of aggregation, and integrative nature.

Results and discussion

Descriptive data. The correlation between budget tightness and internal audit variables with management accounting system variable is 0.711 (0.01) and 0.609 (0.01) respectively. While budget tightness and internal audit variables are positively and significantly correlated with management accounting system.

The positive correlation means the higher the contribution of internal audit and budget tightness, the higher the provision of management accounting information, and also shows the importance of internal audit and budget tightness for management to meet the needs of management accounting information. Table of correlation as follows:

Variabel	X_1	X_2	$Y_{1.1}$	$Y_{1.2}$	$Y_{1.3}$	$Y_{1.4}$
Internal Audit (X_1)	1					
Budget Tightness (X_2)	0,523**1	1				
Broadscope ($Y_{1.1}$)	0,605**0,452**1		1			
Timeliness ($Y_{1.2}$)	0,649**0,578**0,708**1			1		
Aggregation ($Y_{1.3}$)	0,604**0,515**0,595**0,637* 1				1	
Integration ($Y_{1.4}$)	0,641**0,635**0,583**0,708**0,691**1					1

**) Significant 0,01
*) Significant 0,05

Table 1
Correlation Analysis

Correlation is reinforced by the results of validity and reliability test at budget tightness, internal audit, and management accounting system variables. The scores for the measure of sampling adequacy (MSA) and Crombach's alpha are respectively budgetary tightness (0.809 and 0.909), internal audit (0.864 and 0.942) and management accounting system (0.898 and 0.961). Thus, these instruments can be used to measure the research

constructs in order to provide consistent and trustworthy results (Kaiser and Rice, 1974 and Nunnally, 1978).

Hypothesis testing. Testing hypotheses one and two is conducted on the effect of budget tightness (X_1) and internal audit (X_2) on the usefulness management accounting system (Y). Research results show that the *R-square* (r^2) is 0.583, and can be used to view the influence of internal audit and budget tightness to management accounting system is determination coefficient (DC) amounted to 58.30%, while the remaining 41.70% is allegedly influenced by unexamined factors, such as the role of the audit committee, the uncertainty of external environment, and others. If the F-test shows significant value to 0.000, it means that the prediction model used is called goodness of fit model. Models produced:

$$Y = 9.261 + 0.541X_1 + 0.326X_2 + \epsilon$$

Based on the t-test, the p-value is $0.000 < 0.05$ alpha defined, it partially and together with internal audit and budget tightness has positive and significant impact on management accounting system which respectively amounts to 84.40% and 46.70%. It can be concluded that the study results are in accordance with the theory and the results of previous research that there is positive and significant influence of internal audit and budget tightness to management accounting system.

The test also indicates whether the internal audit and budget tightness affect the dimensions of provision of broad scope information, timeliness, aggregation and integration. The result shows that internal audit and budget tightness have positive and significant impact on accounting management system, as summarized below:

Dependent Variable	Independen Variable		R Square	F - Test	
	Internal Audit	Budget Tightness		F	Sig
Broadscope	0,508**	0,186*	39,20%	26.407	0,000
Timeliness	0,477**	0,328**	49,90%	40.839	0,000
Aggregation	0,461**	0,273**	41,90%	29.627	0,000
Integrations	0,425**	0,412**	53,40%	47.023	0,000

**) Significant 0,01

*) Significant 0,05

Table 2

The Effect of Internal Audit and Budget Tightness on the Characteristics of Management Accounting Informations Dimension

Based on the output in Table 2, it can be inferred that internal audit and budget tightness variables in the SOEs have positive and significant effect on the perceived usefulness management accounting system by the provision of management accounting information characteristics of broad-scope, timeliness, aggregation, and integration.

Conclusions and recommendations

Conclusions. The results of empirical research state that budget tightness has positive and significant impact on management accounting system. Furthermore, internal audit also represents the similar effect on management accounting system. Such merits occur because tight budgetary provides guidance towards the budget achievement and should be accounted for by the line-level and middle managements to the top management so that information is produced in accordance with the needs of management. Internal auditors have a major role in

the success of law enforcement. Budgetary team and internal auditors together with management (agent) uphold the stance of prudence, risk assessment program, governance process, and fairness.

Suggestions. Based on the findings above, it is suggested that: (1) the management to always pay serious attention to the functions of the internal control unit and consistent management accountant; (2) the top management to always request for performance reports and budget irregularities so that management accounting information is right on target; and (3) to optimize the continuity of training and hard skills and soft skills improvement for internal auditors and management accountants so that they can oversee and provide accurate and relevant information.

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