The Effect of Management Accounting Information System Application on Information Quality and Its Implication on Good Government Governance

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Abstract—The main purpose of this study is to find empirical evidence of the effect of Management Accounting Information System application toward resulted information quality, the effect of information quality on good government governance (accountability, transparency, participative), and the direct effect of Management Accounting Information System application on good government governance. Meanwhile, the special purpose of this study is to find the indicator of the success of Management Accounting Information System application, the indicator of qualified information, and the indicator of accountable, transparent, and participative government at local government in Lampung, Indonesia. This study uses survey method with descriptive and verification approach in the population of all regional Working Organization (Organisasi Perangkat Daerah / OPD) in districts/cities in Lampung, Indonesia, by using primary data through questionnaire distribution. Data analysis uses SEM Partial Least Square (PLS). The result of this study gives empirical evidence that the application of management accounting information system positively affects information quality of management accounting. Moreover, information quality of management accounting positively affects Good Government Governance. In this case, information quality of management accounting is proven playing role as mediating variable between variable of Management Accounting Information System (MAIS) application and Good Government Governance (GGG). However, there is no direct effect of MAIS application of GGG which is accountability, transparency, participation. The limitation of this research is limited population in lampung province since this research uses questionnaire as primary data. The practical implication of this result is that government is expected to be able to improve and apply the right policy to overcome the weaknesses in regional MAIS application in order to increase resulted information quality and eventually would affect good government governance. MAIS can affect GGG directly or indirectly via information quality as mediating variable.

Index Terms—Accountability, Information quality, Management accounting information system, Participative, Transparent.

1 INTRODUCTION

Today is a New Public Management (NPM) era that is a reformation in financial information system. This change is an important element in improving management and decision making in governmental institutions that is known as New Public Financial Management (NPFM) (Guthrie et al., 1999). The reformation of financial information system has much occurred in many countries including Indonesia. The practice of NPM also has occurred in government focusing on efficiency, effectiveness, accountability, and transparency of information (Crespo et al., 2017). In in this case, e-government is the use of information and communication technology, especially internet that plays an important role in increasing access and efficiency as well as giving information and services of government (Crespo et al., 2017).

However, there are still many obstacles faced in managing government financial management that is accountable, transparent, and participative, one of them is information technology that has not been optimal, both in technology application and resulted information quality. The examination result of Indonesian Supreme Audit Institution shows that governance, development, and implementation, as well as financial reporting information technology operation of regional government have not been fully effective to support government financial reporting because there are still some problems (IHPS BPK RI, 2016). Based on the study done by National Institute of Public Administration (NIPA), the implementation of management accounting information system or e-government in Indonesia has not been effective in working process and its management system, less strategic planning, and less coordination between governmental institutions (OECD, 2014).

To head to clean regional government, it needs openness in making APBD (Regional Government Budget), both from planning process, budgeting, and managing. Novianto (2017) stated that through e-government development, it is expected to create transparency and objectivity of government governance to public in order to actualize good governance, and to ensure the success of annual performance target determination toward the achievement of regional government’s vision and mision and the efficiency of regional budgeting use according to performance determination. The basic policy of electronic-based government system (e-government) is Presidential Instruction No.3 Year 2003 about Policy and National Strategy of Information Technology Development (e-government), Law No. 1 Year 2008 about Electronic Information and Transaction, Law No. 14 Year 2008 about Public Information Openess, Government Regulation No. 61 Year 2010 about the Act Implementation Guidelines No. 14 Year 2008 about Public Information Openess.
Regional government needs a system that can produce financial report and other financial information more comprehensively that include the information about regional financial position. BPKP in this case, Deputy of Regional Financial Management Supervisor has determined the development of Regional Management Information System (RMIS) as an activity to support performance achievement and the increase of BPK opinion level toward Regional Government Financial Report (RGFR). In Indonesia, application program of RMIS has been operated in 425 regional governments from the total of 542 existing regional governments or as much as 78.41. The application of RMIS can be implemented for regional financial management in an integrated manner using information technology, from budgeting, budget implementation, and financial accountability both in Satuan Kerja Pengelola Keuangan Daerah (SKPKD) / Regional Financial Management Working Unit and in Satuan Kerja Pemerintah Daerah (SKPD) / Working Unit of Regional Government (BPKP, 2017). Many studies have also found that there are problems of transparency and accountability related to regional government financial matters (Fjeldstad et al., 2004). They are based on the reality that many people do not receive information about regional finance, lack of communication on various decisions made, not conducting cost analysis, and the low quality of produced information. The result of the studies done by Chalu and Kessy (2011) and Crespo et al. (2017) proved that accounting information system can increase the transparency in regional government. Next, the result of studies done by Jesus and Eirado (2012) and Ole (2014) proved that accounting information affects the accountability in public sectors. Based on those phenomena, the problems, theoretical basis as well as the results of previous studies, the author is interested in investigating “the effect of Management Accounting Information System Application on Information Quality and Its Implication on Good Government Governance (Accountability, Transparency, Participative) in Regional Government of District/City in Lampung”.

2 LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1 Application of Management Accounting Information System

Management accounting information is a supervision that can simplify supervision by making report and creating real actions toward performance evaluation from each component in organization (Chia, 1995). It is supported by Warren et al. (1999) who identified accounting information system as a method and procedure to collect, classify, conclude, and report financial report operational information of an organization.

Regional management information system is a system based on technology application that is developed to support the achievement of accountability for regional government. This application is expected able to help regional government in planning and budgeting making, as well as the implementation and governance of Regional Government Budget and RGB accountability (www.BPKP.go.id). Delone and Mclean (1992) stated that the determining factor of the success of information system is System Quality, Information Quality, Service Quality, Use, and User Satisfaction. System Quality is the characteristics needed by information system, for example: user convenience, system flexibility, reliability, easy to be learned, system feature, and the number of responses. Information Quality is the characteristics needed by system output (such as management report), for example: relevance, understandable, accuracy, conciseness, completeness, timeliness, and usability. Service Quality is the support quality received by system users from information system organization, and supporting personnel of information technology, for example: responsiveness, accuracy, reliability, technical competence, and empathy of the IT personnel. Use is the degree and how the employee and customer in using the capability of an information system, for example: the number of uses, frequency of uses, characteristics of uses, compatibility in uses, width of uses, and purpose of uses. User satisfaction is the level of satisfaction of user on report, websites, and support services, for example: the wider use of instrument attribute in measuring information satisfaction.

2.2 Quality of Management Accounting Information

Based on McLeod (2007), quality of management accounting information has dimensions of relevance, accuracy, and completeness. Relevance is the presence of information suitability produced with the one needed, accuracy is that the quality produced reflects the real condition, and completeness is that the information given must be complete. Management Accounting Information System (MAIS) is an organization controlling mechanism, as well as an effective instrument in providing useful information in order to predict the consequence that might occur from the activities done Chenhall and Morris (1986). In this study, MAIS is defined as a formal system designed to provide information to management party (government). From the study result of Chenhall and Morris (1986), empirical evidence is found about the characteristics of useful information consisting of: (1) broadscope, (2) aggregation, (3) integration, (4) timeliness. Characteristic of broadscope has three sub-dimensions which are: focus, quantification, and time. Focus is related to information from inside or outside the organization, quantification is related to financial and non-financial information, and time is related to estimation of event that will occur in the future. Characteristic of aggregation or collecting is information summary according to function, time period, and decision model. Information according to function will provide information related to decision result from other units. Characteristic of integration provides a means of coordinating among segments in sub-unit or among sub-units in organization. Complexity and interdependence among sub-units will be shown in the integrated information of MAIS (Chenhall and Morris, 1986). Characteristic of timeliness has two sub-dimensions namely reporting frequency and reporting speed. Frequency is related to how often information is provided for managers. Meanwhile, speed is related to deadlines between the needs of information and information availability.
2.3 Good government governance (accountable, transparent, participative)

Good government can be defined as efficient public services, reliable justice system, and responsible government (accountable) to its public. Good government is governmental management that is solid and responsible as well as efficient and effective by maintaining constructive interaction synergy between domains (state, private public and society). Three basic element pillars that are interrelated with one another in actualizing good government (Osborne and Geabler, 1992: The Organisation for Economic Co-operation and Development (OECD); World Bank, 2000) are as the following:

1. Transparency is openness in governmental management, environment, economy, and public.
2. Participation is application of democratic decision making and acknowledgment of Human Rights, press freedom, and freedom of expressing opinion/people aspiration.
3. Accountability is obligation to report and to answer the trustee and to be responsible for the success or failure to the trustee, until the trustee is satisfied and if the trustee is not satisfied or there is no satisfaction, there will be sanction.

Governmental Accounting Standard Board (GASB) (1999) stated about accountability as the following: “Accountability requires government to answer to the citizenry to justify the raising of public resources and purposes for which they are used. Governmental accountability is based on the belief that the citizenry has a right to know, right to receive openly declared facts that may lead to public debate by the citizens and their selected representatives, financial reporting play a mayor role in fulfilling government’s duty to be accountable in a democratic society”.

2.4 The Effect of Management Accounting Information System Application on Management Accounting Information Quality

O’Brien and Maracas (2010) argued that information system with computer causes manager is able to obtain information quickly and provide more reports. Information technology simplifies in managing decentralization activity and decision making. The application of accounting information system is very important in preparing qualified accounting information (Sacer and Oluic, 2013). The study from Muslichah (2004) proved that information technology application can increase characteristics of management accounting information quality such as broadscope, timeliness, aggregation, integration. Based on the theory and the results of the previous studies, a hypothesis is formulated as the following:

H1: The application of management accounting information system positively affects management accounting information quality in regional government.

2.5 The Effect of Management Accounting Information Quality on Good Government Governance

The function of accounting information system does not only process data transaction into financial report, but also as a controlling instrument on financial report so that reliable financial report can be produced (Mancini, 2013). Each organization tries to increase its ability in producing profit and income through resources use and produce the right decision based on right, accurate, and timely information. It can be achieved through the increase of management accounting information system. Therefore, the quality of management accounting information system can produce qualified financial management (transparent, accountable, and participative). It is not only limited to private organization, but also applies for governmental organization. (Abdallah, 2013). Accounting information quality has relation with the quality of good governance (Byard et al., 2006; Bushman and Smith, 2001), because accounting information is the instrument used in the process of governance.

The result of study from Ramdhani (2015) proved that there is effect of accounting information system quality on financial reporting quality. As well as Abdallah (2013), he found that the use of accounting information affects financial management in Jordan. Next, Ismail and King (2007) proved that management information system that runs well will produce qualified financial management. Based on the theory and the results of previous studies, a hypothesis is formulated as the following:

H2: Quality of Management Accounting Information positively affects Good Government Governance (accountability, transparency, and participation) in regional government.

2.6 The Effect of Management Accounting Information Application on Good Government Governance (accountability, transparency, participation).

Management accounting information has two goals: increasing accountability by giving information to external users to enable them to evaluate cash flow and organizational performance; and increasing efficiency by providing management with useful information to plan and control (Seddon, 1991; Mellemvik, Monsen and Olson, 1988 in Chalu and Kessy, 2011). Transparency is related to openness on policy and decision that are achieved for accountable regional government on the activity done. Transparency is achieved by publishing disclosure on payment and income of regional government from various internal and external resources such as donors and central government. Transparency is important for building trust between regional government and community through the guarantee of easy access to accurate and adequate information. Regional government is expected able to use accounting information system to increase transparency in giving information to stakeholders about the financial of regional government (Chalu dan Kessy, 2011).

Next, the result of study from Jesus and Eirado (2012) proved that accounting information affects accountability in public sector and able to explain achieved performance or able to increase responsibility on the performance (accountability). As well as Ole (2014), he found that regional management
accounting information system (RMAIS) is able to produce information with accuracy or better level of truth compared to manual data processing, so it can help leaders (District Head, District Secretary, Head of OPD as Budgeting Use) in decision making according to existing data and information. The use of management accounting information system will increase transparency and the relation of institution and community and business, as well as increasing the ability to conduct other activities efficiently and accountably (Crespo et al., 2017). Based on the previous literature, a hypothesis is stated as the following:

H3: The application of management accounting information system positively affects good government governance (accountability, transparency, participation) in regional government.

2.7 Research Framework

![Figure 1. Research Framework](image)

3 RESEARCH DESIGN

Targeted population in this study is Regional Working Organization (RWD) in regional governments of Province/City/District in Lampung, Indonesia (consisting of 16 districts/cities), or 48 RWDs. The respondents are financial managing divisions in each RWD, as many as 216 respondents. This study uses survey method with explanatory approach explaining causal relation between variables (Sekaran, 2003). Primary data are obtained through questionnaire distribution and interview. Data analysis uses Structural Equation Modelling (SEM) Partial Least Square (PLS). Berikut adalah pengukuran variabel:

![Table 3.1](image)
4. Empirical results and discussion

4.1 Result of Descriptive Analysis

Table 4.1
Score of Application of Management Accounting Information System (X)

<table>
<thead>
<tr>
<th>No</th>
<th>Dimension</th>
<th>Indicator</th>
<th>Average score</th>
<th>Average score of dimension</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>System quality</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>1.1 Financial report information access</td>
<td>3.68</td>
<td>Moderate</td>
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<tr>
<td></td>
<td>1.2 Procurement of goods information access</td>
<td>3.81</td>
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<td></td>
<td></td>
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<tr>
<td></td>
<td>1.3 Employee recruitment information access</td>
<td>3.48</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.4 Information access for various parties related to decision making</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Service quality</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.1 Involvement of various parties in budgeting decision</td>
<td>3.86</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.2 Involvement of community social institution in decision making</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>System use</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.1 Accountability of financial report</td>
<td>3.97</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.2 Accountability of budgeting implementation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.3 Accountability of performance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.2
Score of Quality of Management Accounting Information (Y)

<table>
<thead>
<tr>
<th>No</th>
<th>Dimension</th>
<th>Indicator</th>
<th>Average score</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Relevance</td>
<td></td>
<td>3.87</td>
<td>Moderate</td>
</tr>
<tr>
<td>2</td>
<td>Accuracy</td>
<td></td>
<td>3.69</td>
<td>Moderate</td>
</tr>
<tr>
<td>3</td>
<td>Completeness</td>
<td></td>
<td>3.87</td>
<td>Moderate</td>
</tr>
<tr>
<td>4</td>
<td>Timeliness</td>
<td></td>
<td>3.77</td>
<td>Moderate</td>
</tr>
<tr>
<td>5</td>
<td>Broadscope</td>
<td></td>
<td>3.33</td>
<td>Moderate</td>
</tr>
<tr>
<td>6</td>
<td>Aggregation</td>
<td></td>
<td>2.32</td>
<td>Weak</td>
</tr>
<tr>
<td>7</td>
<td>Integration</td>
<td></td>
<td>2.88</td>
<td>Weak</td>
</tr>
</tbody>
</table>

Table 4.3
Score of Good Government Governance (Z)

<table>
<thead>
<tr>
<th>No</th>
<th>Dimension</th>
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<th>Average score</th>
<th>Average score of dimension</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Transparency (Z1)</td>
<td>Financial report information access</td>
<td>3.80</td>
<td>3.58</td>
<td>Moderate</td>
</tr>
<tr>
<td></td>
<td>1.2 Procurement of goods information access</td>
<td>3.49</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.3 Employee recruitment information access</td>
<td>3.12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.4 Information access for various parties related to decision making</td>
<td>4.53</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Participation (Z2)</td>
<td>Involvement of various parties in budgeting decision</td>
<td>4.06</td>
<td>4.60</td>
<td>Good</td>
</tr>
<tr>
<td></td>
<td>2.2 Involvement of community social institution in decision making</td>
<td>4.51</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Accountability (Z3)</td>
<td>Accountability of financial report</td>
<td>4.08</td>
<td>4.39</td>
<td>Good</td>
</tr>
<tr>
<td></td>
<td>3.2 Accountability of budgeting implementation</td>
<td>4.39</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### 4.2 Result of Statistic Testing

This study uses Structural Equation Model Partial Least Square (SEM PLS) as the analysis method. Based on the result of validy testing, all variables have been valid, proven by the value of AVE is higher than 0.4 which means that information in all dimensions and indicators have been represented in latent variables. By using analysis method of PLS, it result path diagram model in Figure 3.1 below.

![Path Diagram Model](image)

#### Table 4.4

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Path Coefficient</th>
<th>t value</th>
<th>P Value</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>PSIAM → KIAM</td>
<td>0.765</td>
<td>25.06</td>
<td>0.000</td>
</tr>
<tr>
<td>H2</td>
<td>KIAM → GGG</td>
<td>0.429</td>
<td>4.514</td>
<td>0.000</td>
</tr>
<tr>
<td>H3</td>
<td>PSIAM → GGG</td>
<td>-0.089</td>
<td>0.942</td>
<td>0.346</td>
</tr>
</tbody>
</table>

Note:
PSIAM : management accounting information system application
KIAM : quality of management accounting information
GGG : Good Government Governance

P value significance at alfa 5%

#### Table 4.5

<table>
<thead>
<tr>
<th>Variable</th>
<th>R square</th>
<th>R square adjusted</th>
</tr>
</thead>
<tbody>
<tr>
<td>GGG (regression 2)</td>
<td>0.271</td>
<td>0.264</td>
</tr>
<tr>
<td>KIAM (regression 1)</td>
<td>0.853</td>
<td>0.852</td>
</tr>
</tbody>
</table>

R square model of this study for regression model 1 is 0.853 meaning that variable of Management Accounting Information System Application (PSIAM) can explain the quality of management accounting information (KIAM) as much as 85.30%. R square for regression model 2 is 0.271 (the model at moderate level or quite good) meaning that variable of Management Accounting Information System Application (PSIAM) and the quality of management accounting information (KIAM) can explain the variable of Good Government Governance (GGG) as much as 27.10%.

### 4.4 Discussion

#### 4.4.1 The Effect of Management Accounting Information System Application on Management Accounting Information Quality

There is a positive and significant effect from management information system application on management accounting information quality at the significance level of 5% with path coefficient of 0.765. The better regional management information system application, the more increasing information quality produced. It is in accordance with O’Brien and Maracas (2010) stating that information system with computer causes manager is able to get...
information quickly and provide more reports (timeliness, completeness, broadscope, aggregation, and integration). The application of accounting information system is very important in preparing qualified accounting information (Sacer and Oluic, 2013). Based on the result of this study, the dimensions that represents variable of regional management information system application are System Quality, System Use, and System Service. That indicates that the success of regional information system application really needs System Quality (easiness of use and system reliability), System Use (level and goal of use), and System Service (system ability in responding the needs and timeliness in processing). The result of this study is in line and supports the result of the previous studies by Ritchi et al. (2015), Muslichah (2004), Davis and Albright (2000), O’Brien (1999), Prud’homme (1991), Sacer and Oluic (2013).

4.4.2 The Effect of Management Accounting Information System Quality on Good Government Governance (accountability, transparency, participation)

There is a positive and significant effect from management accounting information quality on Good Government Governance (accountability, transparency, participation) at the significance level of 5% with path coefficient of 0.429. The better information quality produced, the better Good Government Governance (accountability, transparency, participation). As stated by Abdallah (2013), qualified management accounting information system can produce good financial management (transparent, accountable, and participative). As well as Byard et al. (2006), Bushman and Smith (2001) stated that accounting information quality has a relation with good governance quality because accounting information is an instrument used in the process of governance. The result of this study supports the result of studies from Ismail and King (2007), Mancini (2013), Abdallah (2013), Ramdhani (2015). Based on the result of this study, dimensions of completeness, timeliness, broadscope, aggregation, integration, relevance and accuracy are quite valid to reflect information quality of regional management accounting. Those indicate that the information have been qualified which is the information has been complete, available when it is needed (timeliness), able to estimate event in the future (broadscope), the brief yet complete information (aggregation), the information that reflects the relation between divisions (integration), and creates good government governance, which is good government governance (transparent, accountable, and participative).

4.4.3 The Effect of Management Accounting Information System Application on Good Government Governance (accountability, transparency, participation)

There is no direct effect from Management Accounting Information System Application on Good Government Governance (GGG) which is (accountability, transparency, participation). The application of MAIS is unable to increase GGG (accountability, transparency, participation) directly. However, the application of Management Accounting Information System is able to affect GGG indirectly, through mediating variable of Management Accounting Information Quality. The application of MAIS will not achieve the goal of good government governance if the information produced is not qualified. Therefore, system quality, service quality, and system use needs to be increased based on the the result of the empirical study proven that it still has weakness in its application in regional government of Lampung. In this case, management accounting information quality is able to play role as mediating variable between variable of MAIS and variable of GGG.

5. CONCLUSION

Based on the phenomena, hypotheses, and the results of descriptive and statistic analysis, the conclusion that can be drawn is as the following:

1. The application of management accounting information system positively and significantly affects management accounting information quality. MAIS is applied quite well (in system quality, service quality, and system use), so it can increase information quality produced (information that is relevant, accurate, complete, timely, able to predict the future, aggregate, and integrated).

2. The quality of management accounting information positively and significantly affects Good Government Governance. The more qualified information produced (information that is relevant, accurate, complete, timely, able to predict the future, aggregate, and integrated), the better government management will be (transparent, accountable, having participation from all related apparatus).

3. There is no direct effect of Management Accounting Information System Application (MAIS Application) on Good Government Governance (GGG) which is (accountability, transparency, participation). Management accounting information quality is proven as mediating variable between variable of MAIS application and GGG.

6. SUGGESTION

1. Adequate socialization and assistance are needed for apparatus in using information system, the presence of supervision system and performance measurement in government management is needed.

2. Government is expected to be able to improve and apply the right policy to overcome the weaknesses in regional MAIS application in order to increase resulted information quality and eventually would affect good government governance.

REFERENCES


