

Application of Management Accounting Information Systems Textile Company in Indonesia

Rima Rachmawati
Universitas Widyatama
Universitas Padjadjaran, Bandung Indonesia
rima.rachmawati@widyatama.ac.id

Abstract: Quality accounting information generated from an integrated system of accounting information between one part and another. This study used a qualitative approach to the textile companies in Indonesia. The results showed a quality impact on the quality of information system of management accounting information with the magnitude of Influence 55% in the category of strong influence.

Keywords: *information, management accounting systems, quality information*

1. Introduction

For companies, the information is viewed as a business resource, as well as other business resources such as raw materials, machinery and labor, such information is necessary to maintain the viability of the company (Hall, 2013). Management accounting information is the result of the accounting process management in the form of financial information and non-financial information presented for the benefit of the company's internal (Hansen et al., 2009). In fact, management accounting information system used in an institution still has problems. In the non-business organizations (government) as expressed by Usman Abdhali Watik (2011) that the government has not been able to integrate all data and wealth of the country well, the government has yet to consolidate the data assets and property owned of each ministry, such as a building owned by the state, official cars, and investment assets. Other problems associated with management accounting information systems occur in PT Angkasa Pura, data from the finance/ accounting, manufacturing, sales and service parts are not yet integrated one part and the other because of the weakness of the system used (Tommy Soetomo, 2012). In particular, the low quality of accounting information system management also happened in the company Textiles and Textile Products (TTP) causing problems related to management accounting information systems TTP occurred repeatedly. According to Kevin Harnanto (2014), some of the problems often faced by accounting information systems companies TTP, among others: software finance available is not equipped with a manual use this causes frequent errors when entering data so that the accuracy of information doubtful. Based on the research background made formulation of the problem is whether the quality of accounting information management systems affect the quality of accounting information management. Objective: to determine whether the quality of information systems affect the quality information
Benefits: the development of science and solving problems

2. Literature Review

An Management Accounting Information Systems: *Accounting information system is a collection of data and processing procedures that creates needed information for its users (Bagrahoff et al., 2010)* Management accounting information system is a formal system that provides environmental information from internal and external environment for managers. Gordon & Narayan (1984) adding that the accounting information system management is defined as a formal system that is designed to provide managers with the necessary information to facilitate decisions and evaluation of managerial activities. Belkaoui & Riahi (2010) explain management accounting information system is a set of human resources and capital in an organization that is responsible for the production and dissemination of information considered relevant for internal decision making. According to Hongren et al. (2001) defining a system of management accounting information as a formal mechanism to collect, organize, and communicate information about the organization's activities. The next, according to Hansen et al., (2009) adding that the accounting information system of an organization has two major subsystems: management accounting information system and financial accounting system, be distinguished both in terms of its objectives, inputs and processes that run to turn inputs into outputs, in a statement : *'Accounting information system can be divided into two major subsystems: (1) the financial accounting systems and (2) the cost management systems'*

Hansen *et al.*, (2009), state: 'Cost management systems are primarily concerned with producing outputs for internal information users, provides information for three broad objectives: costing of products, services and other objects of interest to management, planning and control, decision making'. This is in line with the opinion Bouwens & Abernethy (2000) are "management accounting information system is a formal system designed for providing information to managers." Hansen & Mowen (2007: 4) further added that: "management accounting information system is an information system that procedures output using inputs and process needed to satisfy specific management objectives". Agree with Cassia *et al.* (2005) explains that: "Management accounts systems as a set of tools involving the activities of information collection and classification in order to help the strategic decision makes process". Based on the above understanding can be interpreted that the management accounting system is a set of tools that involve collecting and classifying information to assist strategic decision-making process. Davila & Foster (2005) define the management accounting system "as a subset of management control systems (MCS) –interpreted as formal, informational-based routines and procedures managers use to maintain or alter patterns in organizational activities". The same opinion of Moores & Yuen (2001) "management accounting systems is conceptualized as formality of routines and procedures with greater use of computers, technical staff, and financial modelling". Next Agbejule & Burrowes (2007) define "management accounting systems is as a formal system designed for providing managers with requisite information to facilitate decision and evaluation of managerial activity". According to Barata & Cunha (2013) that the information system "...an integrated man /machine system for providing information to support the operations, management and decision making functions in an organization".

Further Quality is an indicator of how well the results of the activities fulfill the goals set by management (Laudon & Laudon, 2012). Meanwhile, according to Heidman (2008) accounting information system of quality management is a reflection of the results of the processing system of quality management accounting information. Furthermore Hoque (2003) certify the quality management accounting information system is a statement of a condition in which a system of management accounting information generates management accounting information useful to managers in carrying out its functions. So are De Lone & Mc Lane (2003) explaining the success of an information system as a system of quality information by focusing on efforts to produce quality information. Based on the definition put forward by Agbejule & Burrowes (2007), Heidman (2008), Hoque (2003) and DeLone & McLane (2003) the quality of accounting information systems referred to in this research is the ability of management accounting information system in generating accounting information management have quality characteristics that are useful in supporting decision-making. Furthermore, according to Nelson, Todd & Wixom (2005) the quality of accounting information system of quality management can be gauged from the characteristic: "accessibility, reliability, response time, flexibility, and integration. Nelson, Todd & Wixom (2005) add a description of the quality dimensions of information systems as follows:

1. *Accessibility, the degree to which a system and the information it consistent can be accessed with relatively low effort.*
2. *Reliability, the degree to which a system is dependable.*
3. *Response time, the degree to which a system offers quick (or timely) response to requests for information or action.*
4. *Flexibility, the degree to which a system can adapt to a variety to user needs and to changing conditions.*
5. *Integration, the degree to which a system facilities the combination of information from various sources to support business decisions.*

Heidman (2008), adding five dimensions of quality management accounting information systems, namely; integration, accessibility, formalization and media richness. While, success model of information system by DeLone & McLean (2003) indicated by the dimensions: *ease of use, system flexibility, system reliability and ease of learning*. As well as Gordon & Miller (1976) measuring the quality of accounting information systems management through dimensions: a) the capacity to gather information about the external environment, b) the capacity to gather information about the external environment, c) The same accounting system from one sub-unit to another, d) internal information flow in the department (lateral) and authority levels (vertical) should be done without obstacles and timely, e) data analysis should be presented to the top management of low-level detail, f) information given to the manager should be broad enough.

Next Whitten & Bentley (2007) mention the information system that has quality is an integrated information system of various components such as software, hardware and network. The same thing in

the statement Azhar Susanto (2008) that all components are either hardware, software, brain ware, procedures, databases and communication networks and sub-components of each of the components work together in an accounting information system to process the data necessary financial management in decision making. Added by opinion Barata & Cunha (2013) that the information system consists of: "hardware, programs, data, procedures and people". Barata & Cunha (2013) Further explaining the dimensions of the information system is: "context, people, and process". So is Ba, Stallaert & Whinston (2001) detailing the dimensions of an information system among others: "software engineering, technology acceptance, incentive alignment". Next Gable, Sedera & Chan (2008) add information system if the quality is said to have an impact on individual users where the impact is assessed based on the following: "individual impact, organizational impact, information quality". Gul (1991) add a dimension of management accounting system:

"broadscope, integration, timeliness and aggregation. Broadscope refers to information that is external, non-financial and future oriented. Timelines refers to the frequency and speed of reporting. Aggregation involves the use of analytical or decision models".

Based on the definition and dimensions or characteristics of quality management accounting information systems mentioned above, the dimensions used to measure the quality of management accounting information system in this study refers to the dimensions or characteristics proposed by Heidman (2008), DeLone & McLean (2003), Nelson, Todd & Wixom (2005) and (Romney & Steinbart, 2012) are: integration, flexibility, accessibility, formalization and media richness. The dimensions and indicators of the quality of the management accounting information system are:

1. Integration, measuring the extent of facilities management accounting information systems can connect between the components with other components or between the sub-components in one component.
2. Flexibility, measuring the extent of facilities management accounting information system can adapt to different user needs and changing conditions occur.
3. Accessibility, to measure the extent of facilities management accounting information system available when needed with ease.
4. Formalization, measuring the extent to which the management accounting information system contains the rules or procedures.
5. media richness, measure the extent of management accounting information system is able to provide facilities that can simplify convey the results of the processing of the data (information).

Management Accounting Information: *Before discussing the management accounting information is necessary to first discuss the information. According to Steel & Al-Hakim (2009) "information is factual and its meaning is deciphered through the process of construction, whereby artefacts come into being". So are Hardcastle (2008) explain: "information is that it is data that have been processed so that they are meaningful". More Hall (2013): "information is often defined simply as processed data". Stair & Reynolds (2010) also states: "information is a collection of facts organized so that they have additional value beyond the value of the individual facts". While more detail Bagranoff, Simkin & Norman (2010), explain management accounting information has the following characteristics:*

- 1) *"Focuses on providing accounting information for internal parties, such as management, rather than for external investors and creditor.*
- 2) *Mostly forward-looking.*
- 3) *Not regulated by generally accepted accounting principle, nor is it mandatory to prepare it.*
- 4) *Report includes both non-monetary and financial data.*
- 5) *Influenced by many business and non-business discipline, such as economics, behaviour science and quantitative methods.*
- 6) *Flexible and frequently involves non-routine reporting".*

Management accounting information is information that is used by managers for planning, control and decision-making Hoque (2003). So that decisions taken by managers in line with expectations, the necessary quality information Romney & Steinbart (2012 :). Statement Heidman (2008) supporting statement Hoque (2013), that management accounting information includes information presented to internal or external parties, the information in the form of financial and non-financial, quantitative or qualitative information. While Atrill & McLaney (2009), suggests that management accounting information needed to help managers to make decisions in four broad fields: develop long-term plans and strategies, performance evaluation and control, allocate resources and determine the costs and benefits. Next Anthony *et al.* (2008), states that management accounting information is information that is used by

managers in planning, coordinating and controlling the activities of the organization. A similar sentiment was expressed by Boisot&Canals in Heidman (2008) is: "management accounting information systems is process data and provide the result as management accounting information to managers". The statement can be interpreted that the accounting information management is the process of data and presents the results as management accounting information for managers. Thus, in the context of this study, is a management accounting information is the information generated from the data processing both financial and non-financial used by management in carrying out its functions (planning, of control and decision-making).

Quality is an indicator of how well the final results meet the goals set by management Laudon & Laudon (2012). According to Nelson, Todd & Wixom (2005) that the quality of the information indicates the extent to which such information can assist in completing certain tasks. Similar delivered Stair & Reynolds (2012) that the quality of the information indicates the extent to which such information can help people and organizations in achieving efficiency and effectiveness. The same thing according O'Brien&Marakas (2010) that:

"Information of high quality, that is, information product whose characteristics, attributes or qualities help makes it valuable to them. It is useful to think information as having the three dimensions of time, content and form."

Opinion O'Brien&Marakas (2010) explained that high-quality information, is, product information characteristic, attribute or quality assistance to help it qualified. Supported by the opinion Nelson, Todd & Wixom (2005) that information quality is said if the information can be interpreted and understood. Likewise Hardcastle (2008) explained that the information can be good or bad on the basis of such information have information quality attributes which consists of: "timing, content and form of the information". Management accounting information will be used by managers for planning, control and decision-making (Hoque, 2003:04). While Zaleha *et al.* (2012) explained that the accounting information management is an integral part of a management process to generate information that will be used as: *controlling the current activities of an organization; planning its future strategies, tactics and operations; optimizing the use its resources; measuring and evaluating performance; reducing subjectivity in the decision-making process and improving internal external communication.*

Based on the definition put forward by Stair & Reynolds (2012); Nelson, Todd & Wixom (2005); O'Brien & Marakas (2010); Hoque (2003); Zaleha *et al.* (2012) the quality of management accounting information referred to in this research is the information used by managers in carrying out its functions (planning, control and decision-making) the inherent attributes of quality on such information. Attributes in question is characteristic of the quality information submitted by some experts the following: Wilkinson *et al.* (2000:5), mention the main characteristics of quality management accounting information according to which: *relevance, accuracy, timeliness, conciseness, clarity, quantifiability and consistency.* The same opinion is expressed by Heidman (2007), which revealed four dimensions of quality management accounting information, i.e.: 1) The scope of that measure how much information as is relevant to the user population represented in the stored information, 2) Timeliness measure the extent to which the information is up-to-date, or the extent to which the right information reflects the current state of the world that represent, 3) Format measuring the extent to which the information is represented in a way that can be understood and interpreted to users and thus assist in the completion of the task, 4) Accuracy of the influence the extent to which information is correct, clear, meaningful, trustworthy and consistent.

Next Chenhall&Morris (1986) reveal the characteristics of quality management accounting information can be grouped into four sections, namely; broad *scope*, *timeliness*, *aggregation* and *integration*. Added by Gul&Chia (1994), stating the characteristics of management accounting information, among others: *scope* (information to external parties and internal, financial and non-financial information, and future-oriented), *aggregation* (aggregate with a period, the aggregate by functional areas and the analytical models or decision). Nelson, Todd&Wixom (2005) add the dimension of the quality of information as follows:

1. *Accuracy, the degree to which information is correct, unambiguous, meaningful, believable, and consistent.*
2. *Completeness, the degree to which all possible states relevant to the user population are represented in the stored information.*
3. *Currency, the degree to which information is up-to-date.*

4. *Format, the degree to which information is presented in a manner that is understandable and interpretable to the user and thus aids in the completion of a task”.*

Attributes of quality management accounting information according to Blocher, Stout&Cokins (2010): *accuracy, timeliness*. Al-Sharairi (2012) have the quality attributes of accounting information with dimensions *relevance, reliability, comparability* and *consistency*. Furthermore, according to COBIT (2007) dimensional quality of the information consists of: *effectiveness, efficiency, confidentiality, integrity, availability, compliance, reliability*. Likewise Hardcastle (2008) explained that the information can be good or bad on the basis of such information have information quality attributes which consists of: *timing, content and form of the information*. These attributes are described in detail if it is :

1. *Timeliness refers to that information should be available when needed.*
2. *Content of the information refer to factors such as the accuracy of the information and relevance of the information to a particular situation and user.*
3. *The form of the information refers to aspects such as the clarity of the information which should be appropriate to the intended recipient”.*

Based on the definition and dimensions or characteristics of quality management accounting information mentioned above, the dimensions used to measure the quality of management accounting information in this study refers to the dimensions or characteristics proposed by Wilkinson *et al.* (2000), Heidman (2008), Chenhall & Morris (1986), Nelson, Todd & Wixom (2005), Gul & Chia (1994) dan (Romney & Steinbart, 2012) is:

- 1) *Scope is measuring the level of completeness of the presentation relevant to all users have been presented in the stored information. The indicators used are:*
 - a) External and internal information
 - b) Financial and non-financial information
 - c) Future-oriented
- 2) *Timeliness is to measure the level of timeliness presentation of management accounting information in accordance with the time it takes a user. The indicators used are:*
 - a) How Far management accounting information can be presented to the user when needed.
 - b) How Far management accounting information accurately reflects the real conditions that occur at this time.
 - c) How often management accounting information is presented on a regular basis (daily, weekly, monthly, quarterly, semiannual or yearly).
- 3) *Accuracy is to measure the level of truth, usability, reliability and consistency of the presentation of information. The indicators used are:*
 - a) How Far management accounting information is free of misstatement.
 - b) How Far management accounting information is presented to the methods and means that are consistent over time.
- 4) *Format is to measure the level of ease of understanding and use of management accounting information is presented. The indicators used are:*
 - a) How Far management accounting information is presented easily understood by users.
 - b) How Far management accounting information presented is easy to use by the user.
- 5) *Relevance is to measure the extent to which information management accounting can be applied and are very helpful in performing the tasks / work.*
 - a) As far as the management accounting information Where can resolve the problems faced.
 - b) The extent to which management accounting information according to user needs.

3. Methodology

This study uses a qualitative method because the problem is not yet clear, the quality of accounting information in the management of textile enterprises can be explained by aspects of the scope, timeliness, relevance, format, accuracy. This research was conducted in a textile company in West Java. The source of data is the result of observation / interviews to users of management accounting information system applications in textiles. The population used to make the hypothesis that the textile companies in Indonesia determining the sample using simple random sampling.

4. Result

The general condition of accounting information system implementation in textiles

Table 1: The general condition of accounting information system implementation

Used Computer Facilities		amount	%
A	Shared computers interchangeably with other personnel	16	19%
	Computers reserved	64	75%
	Computer-premise	5	6%
		85	100%
Internet Network		amount	%
B	Available with either	60	71%
	Available on certain parts	23	27%
	Not available	2	2%
	in the plan	0	0%
		85	100%
Accounting Software Applications (Apps Accounting Information Systems Management (SIAM)) who currently use, obtained by:		amount	%
C	Buying from other parties outside the company	47	55%
	Renting of other parties outside the company	7	8%
	Developed by the company	31	36%
		85	100%
Technically, maintenance programs / applications (software), computer facilities (hardware) information system used, carried out by:		amount	%
D	Section / Division concerned	36	42%
	Sections / Special Division is centralized	37	44%
	Outside companies	12	14%
		85	100%

Descriptive Analysis: As presented by Weinberg&Abramowitz (2002) that *descriptive statistics are used when the purpose of an investigation is to describe the data that have been (or will be) collected.* Descriptive analysis is used with the aim to describe the data that has been collected or by Groves&Robert (2004) descriptive analysis aims to provide a quantitative overview of the summary of observations (size / distribution) of each variable research. Used as a basis of interpretation of respondents categorizing each score on each variable research. According to Cooper&Schindler (2014) Data ordinal / interval / ratio has a symmetric distribution, measures of central tendency of data can be done using the distribution of inter-quartile range. Criteria for categorization top score responder defined as follows:

$$\text{The range of scores kategori} = \frac{\text{Skor maximum} - \text{skor minimum}}{\text{number of categories}}$$

Information :

Skor maximum = 5

Skor minimum = 1

Number of categories = 5

So it can be arranged interval following categorization:

interval score	Category
1,00 – 1,80	Not good
1,81 – 2,60	Not good
2,61 – 3,40	Enough
3,41 – 4,20	Good
4,21 – 5,00	Very good

The quality management system of accounting information measured by the five dimensions, namely *integration, flexibility, accessibility, formalization* and *media richness*. Here recapitulation average score of respondents votes each dimension of the variable quality of management accounting information system, See Table 2.

Table 2: Recapitulation Average Score Answer Respondents to the variable quality of management accounting information system

No	dimension	Average Score	Category
1	Integration	3.62	Good
2	flexibility	3.80	Good
3	accessibility	3.62	Good
4	Formalization	4.11	Good
5	Media Richness	3.66	Good
	Quality of Accounting Information Systems Management	3.72	Good
	Ideal score	5.00	
	Gap	1.28	

Based on the recapitulation of the above, the quality of management accounting information systems at textile companies included in both categories. Nevertheless, there is still a gap between the scores that should have been with a score of 1.23 that actually that this case illustrates although respondents were in either category but employ there are disadvantages that may result from the ability of management accounting information system applications in terms *integration, flexibility, accessibility, formalization* and *media richness*. Quality of management accounting information measured by the five dimensions, namely *scope, timeliness, accuracy, format* and *relevancy*. Here recapitulation average score of respondents' votes each dimension of the variable quality of management accounting information See Table 2.

Data analysis is shown to prove the hypothesis then calculated the correlation and determination coefficient (influence). Calculation of results Obtained using the SPSS program quality management accounting information system influence on quality management accounting information of 0741, the coefficient of determination $(0.7412) = 0.55$, this means that the higher the quality of accounting information management system will be higher quality management accounting information, Influence the quality of the information system on the quality of management accounting information for $0,55 \times 100\% = 55\%$. Thus the hypothesis which determined that states there is a relationship between the qualities of information systems with quality management accounting information can be received. Large 55% influence on the quality system quality management accounting information included in the category of high impact by Cooper&Schindler (2014).

Table 3: Recapitulation Average Score Answer Respondents in the variable quality of management accounting information

No	Dimension	Average Score	Category
1	Scope	2.97	Good
2	Timeliness	4.00	Good
3	Accuracy	4.24	Good
4	Format	3.76	Good
5	Relevancy	3.83	Good
	Quality of Accounting Information Systems Management	3.71	Good
	ideal score	5.00	
	Gap	1.29	

5. Conclusion

The quality management system of accounting information affects the quality of accounting information management. Management accounting information is not integrated yet because the quality of data between the data with other parts.

Based on this research can provide suggestions to improve the quality of accounting information systems management in a way:

- a) Completing the application of management accounting information systems with facilities that can help users to use the system information whenever and wherever they are.
- b) Completing the accounting information system management with data storage facilities and maintenance data such as the facility to collect data into several categories, doubling the data to multiple documents, sort data based on several characteristics, data storage (storing) as well as the facility to open the data to perform a process or send the report to user.

Completing the application of management accounting information systems with facilities capable of producing a report in two forms namely hardcopy and softcopy. Hardcopy most reports in the form of printing using the printer, so that the information system must be equipped with facilities / menus to print a report through the printer. While the most common form of softcopy form on-screen display and information systems must be equipped with facilities / report delivery menu either via email, or copy the data.

References

- Agbejule, A., & Burrowes, A. (2007). Perceived Environmental Uncertainty: Supply Chain Purchasing Strategy and Use of MAS Information. *Management Auditing Journal*.
- Al-Sharairi, J.A. (2012). The Impact of Internal Control to e-commerce activities on Quality of Accounting Information in the Bank Jordan. *The Journal of American Business Review*, 244-251.
- Azhar Susanto. (2013). *Sistem Informasi Akuntansi*. Bandung: Lingga Jaya.
- Ba, S., Stallaert, J., & Whinston, A.B. (2001). Research Commentary: introducing a third dimension in information systems design the case for incentive alignment. *Information systems research*, 225-239.
- Bragranoff, N. A., Simkin, M. G., & Norman, C.S. (2010). *Accounting Information Systems*. USA: John Wiley & Sons.
- Barata, J., & Cunha, P.R. (2013 October). Five Dimensions of Information Systems: a perspective from the is and quality managers. *European, Mideterranean & Middle Eastern*.
- Belkaoui, & Riahi, A. (2010). *Behavior Management Accounting*. USA: Quanrumbooks.
- Blocher, E., Stout, D., & Cokins G. (2010). *Cost Managemnt*. New York: McGraw-Hill.
- Bouwnens, J., & Abernethy, M.A. (2000). The Consequences of Customization on Management Accounting Systems Design. *Accounting Organization and Society*, 221-241.
- Cassia, L., Paleari, S., & Redondi, R. (2005). Management Accounting Systems and Organizational Structure. *Sources Small Business Economics*, 373-391.
- Chenhall, R., & Morris, D. (1986). The Impact of structure, environment and interdependence on the perceived usefulness of management accounting systems. *The Accounting Review*, 61(1), 16-35.
- Cooper, D., & Schindler, P. (2014). *Business Reseach Methods*. Singapore: McGraw-Hill.
- Davila, A., & Foster, G. (2005). Management Accounting Systems Adoption Decisions: Evidence and Performance Implication from Early-Stage/Starup Companies. *The Accountitng Review*, 80(4), 1039-1068.
- DeLone W. H., & Mc Lean E.R. (2003). The De Lone and Mc Lane Model of Information Systems Success : A Ten-year Update. *Journal of Management Information Systems*, 19(4), 9-30.
- Gable, G.G., Sedera, D., & Chan, T. (2008). Re-conceptualizing information systems success: the IS-impact measurement model. *Journal of the Association for information systems*, 377-408.
- Gordon L., & Narayan, V. (1984). Management Accounting Systems Perceived Environmental Uncertainty and Organizational Structure. *Empirical Investigation and Society*, 33-47.
- Gordon, L., & Miller, D. (1976). Contingency Framework for the design of accounting information systems. *Journal information systems*, 59-69.
- Groves, & Robert M. (2004). *Survey Methodology*. USA: John Wiley&Sons.
- Gul, F.A., & Chia, M.Y. (1991). The Effects of Management Accounting Systems and Environmental Uncertainty on Small Business Manager's Performance. *Accounting and Business Research*, 57-61.
- Hall, J. (2011). *Accounting Information Systems*. USA: Cengage Learning.

- Hansen D.R., & Mowen M.M. (2009). *Cost Management (Accounting & Control)* . Canada : Cengage Learning.
- Hardcastle, E. (2008). *Business Information Systems*. London: Ventus Publishing.
- Heidman, M. (2006). *The Role of Management Accounting Systems in Strategic Sensemaking*. Belanda: Gabler.
- Hongren,C., Sundem G., & Stratton, W. (2001). *Introduction to Management Accounting*. USA: Prentice Hall.
- Hoque, Z. (2013). *Strategic Management Accounting: Concept, process and issues*. London: Great Britain.
- Kevin Hartanto. (2010). *Kinerja Tekstil Jawa Barat*. melalui <http://www.api.co.id>.
- Laudon K.C, & Laudon J. P. (2012). *Management Information Systems Managing the Digital firm*. USA : Prentice Hall.
- [Moores, K., & Yuen, S. (2001). Management Accounting Systems and Organizational Configuration : a life-cycle perspective. *Accounting Organization and Society*, 351-389.
- Nelson, R.R., Todd, P.A., & Wixom, B.H. (2005). Antecedents of Information and Systems Quality: an empirical examination within the context of data. *Journal of Management Information Systems*, 199-235.
- O'Brien, J., & Marakas, G. (2010). *Introduction to Information Systems*. New York: McGraw-Hill.
- Stair, R., & Reynolds, G. (2010). *Principle of Information Systems*. New York: Cengage Learning.
- Steel, A., & Al-Hakim, L. (2009). *Information System, Research Methods, Epistemology and Applications*. New York: Wiley.
- Tommy Soetomo. (2012). *Angkasa Pura Airport Implementasikan Tahap Pertama Proyek ERP*. melalui <http://www.angkasapural.com>{2/2/2012,14:05}.
- Usman Abdhani Watik. (2011). *Data Aset Negara Belum Terintegrasi Baik*. melalui <http://bisnis.com>[01/12/2011,16:49].
- Weinberg , S. L., & Abramowitz, S. K. (2002). *Data Analysis for the Behavioral Sciences Using SPSS*. United Kingdom: Cambrige University Press.
- Whitten, J.L., & Bentley, L.D. (2007). *Systems Analysis and Design Methods*. New York: McGraw- Hill.
- Wilkinson J.W., & Cerullo M. J. (1997). *Accounting Information Systems, Essential Concepts and Application*. USA: John Wiley & Sons.
- Zaleha, S., Rasid, A., Rahim, A., Rahman, A., Khairuzzaman, W., & Ismail, W. (2012). Management Accounting Systems in Islamic and Conventional Financial Institution in Malaysia. *Journal of Islamic Accountng and Business Research*, 2(2), 153-176