

THE EFFECTIVENESS OF MANAGEMENT ACCOUNTING SYSTEM ON MANAGEMENT PERFORMANCE

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ABSTRACT

Management accounting systems provide the necessary information for planning and control. The activities of such system include collecting, classifying, summarizing, processing, analyzing and reporting information to management, so on. The management accounting reporting, unlike financial accounting information should play an effective role in inter-organizational decision making. The present study is done by using questions from senior managers of manufacturing companies in the industrial city of Kermanshah. The research instrument was a questionnaire. To prove the hypotheses, Fisher test and the regression analysis were used. In this study, it was proved that: There is a positive relationship between management accounting system and managers' non-financial performance. There is a positive relationship the broad Scope of management accounting system and managers' non-financial performance. There is a positive relationship the aggregation of management accounting system and managers' non-financial performance. There is a positive relationship between Integration of management accounting system and managers' non-financial performance. There is a positive relationship between the timeliness of management accounting system and managers' non-financial performance. The management accounting prioritization in terms of the effectiveness on managers' non-financial performance are aggregation, timeliness, Integration, broad Scope, respectively.

KEYWORDS: Aggregation, Broad Scope, Integration management accounting system, Timeliness.

INTRODUCTION

Management is the continuous process of effective and efficient use of human and material resources based on an accepted value system by planning, organizing, mobilizing resources and facilities, operation conduct and control to achieve the pre-determined goals. Management accounting is referred to as a process of identifying, measuring, collecting, preparing, interpreting and transfer of financial information and other quantitative information provided by management to plan, control and evaluate the operations within an economic unit. The essence of management is decision making which essentially deals with future events. Therefore, unlike financial accounting that focuses primarily on the past data, management accounting provides the current and future information. In addition, in order that management accounting information can help managers of organizations in decision-making and evaluation, it should be as detailed and as soon as available. Finally, management accounting information is useful when it is relevant, accurate, reliable, and if it is going to be estimated, it should be based on correct estimation procedures.

Chenhall and Morris (1986) specified four features of management accounting system including the broad Scope (extension or limitation of management accounting system), timeliness (ranging from slow, standard or quick to dependent upon the request of customers), aggregation (ranging from summarized to very elaborate and detailed) and Integration (ranging from information dedicated to an organization to information specific to other departments). In planning process, management accountants play helpful roles in formulating future plans through providing information on decision making on purchase, production and selling of product and also an evaluation of capital projects. Management accountants contribute to control process through providing performance reports in which a comparison is made between actual results and results planned for each center of responsibility. To be ensured of effective performance, organizational structure deals with specializing and authorizing activities. Utilizing responsibility evaluation accounting, management accounting implements accounting system to better define and integrate such relations. By deployment and maintenance of effective systems to provide and report information,

accounting management contribute to the better transfer of information. Budget and performance reports provided by management accountants significantly can influence the motivation of organization personnel. Considering the significant role of management accounting system in efficient administration and management process in an organization, this question is raised that ,to what extent and in what way ,the performance of managers is influenced by management accounting? The present paper seeks to find a proactive answer to such question.

Literature review

The present mainly attempts to investigate the effectiveness of management accounting system on non-financial performance of managers. In this regard, the management accounting system is categorized into four sub-categories including broad Scope of management accounting system, the aggregation in management accounting system, integration of management accounting system and timeliness of management accounting system (Soobaroyen, 2008). Management has different definitions and interpretations along with special forms and meanings. However, despite a superficial difference, all definitions of management have one or more common feature such as coordination and a good combination of intellectual and material factors to achieve the ultimate goal. Overall, all definitions mainly highlight the achievement of goal or goals. This is because without the existence of goal, management would be meaningless and futile. Stephen Linstead believes that management is a comprehensive process and central core of a formal organization which is responsible for organizing all activities, information and active non-official groups in organization (Linstead,1995). According to Robert kreiter, management is the process of resolving problems with proper realization of organization needs through effective and efficient use of resources in an ever-changing environment. He believes that the main components this definition include problem solving process through decision making, objectives of organization and justifying such objectives, efficiency, rare resources and changing environment (Kreiter 1980).

Abraham Maslow states that management has two fundamental structural dimensions; first, economic utilization and enhancement of commodity quality, service, etc. Second, human and social issues, i.e. observance of mental health of personnel, encouraging them to move toward “self-actualization”, use of necessary and effective techniques and strategies to enhance sense of security and loyalty to organization, etc. These two aspects collaboratively can maximize the efficiency of management.

In 1960s and early 1970s, several studies were done on the organizational effectiveness. By reviewing such studies, 30 different criteria are obtained as follows.

Criteria and scales of organizational effectiveness

- General effectiveness: it is a general evaluation which benefits from a variety of criteria commonly through a combination of evidence on past performance or to achieve general evaluations, or an assessment made by expert and knowledgeable personnel regarding the performance of organization.
- Productivity is defined as the amount or volume of products or services offered by organization, and it could be measure at three levels including personal, group, and organizational levels, which are assessed through referring to document and existing evaluations or a combination of both.
- Effectiveness: it is standard to make a comparison between some aspects of unit performance and costs to fulfill it.
- Profit: revenue generated from sale minus total costs and obligations. Capital return rate and the efficiency percent of total sale could be regarded as an equivalent to profit.
- Quality: the quality of product or service provided by organization may take various forms, and it is determined by the type of products and service presented by organization
- Events: the rate of accidents that occur during the job and causes waste of time.
- Growth: it is represented by the increase in variables such as total workforce, plant capacity, assets, sales, profits and market share as well as the amount of new innovations and inventions. It compares the current situation of the firm with its past situation.
- The rate of absenteeism at work: common definition refers to unjustified absences, but in addition there are numerous definitions of absence (such as the total absence of events)
- Shift work (leaving the service): the voluntary termination of service that is usually detectable through referring to archival documents.

- Job satisfaction: this factor could be interpreted in different ways. But based on a valid theory, it is individual satisfaction obtained from job
- Motivation: it is usually the willingness to engage in targeted acts or career activities. Motivation is not a sense of satisfaction from results. Rather it is to have more desire to be prepared for the realization of the objectives of the job.
- Morale: a group phenomenon that involves an enhanced effort, integration of the goals of individual and organization and creates a sense of belonging and commitment. Morale relates to group, while motivation is relevant to individual.
- Control: it is amount and distribution of control in an organization to help influence and direct the behavior of members of the organization.
- Coordination / Conflicts: consistency of the people in the organization to love each other, work together well and to establish full and open communication with each other and coordinate their work efforts; and the conflict is defined as physical and literal clash, and poor coordination and communication Ineffective communications.
- Flexibility/adaptability: flexibility and ability to adapt to change of organization's standard operating procedures in response to environmental changes on the organization.
- Planning and targeting: it is the extent that an organization takes fundamental and regular future steps and becomes dedicated to a targeted behavior
- Goal consensus: apart from genuine commitment to organizational goals, goal consensus is related to the extent that all of an organization's individuals perceive a single objective for their organization.
- The institutionalization of organizational goals: it is the acceptance of organizational goals and believes that organizational goals are correct and true.
- Consistency of norm and role: it is the limits that the members of the organization impose on supervisory issues such favorable attitudes, role expectations, spirit and requirements.
- Communication & management skills: it is the level of managers' skill in communication with supervisors, subordinates and colleagues in the form of providing various supports or facilitating constructive interaction and creating passion for achieving the goals and high performance.
- Skills needed to perform administrative functions: they are general skills needed for the organization's managers and leaders to realize organizational tasks. However, the skills which managers use when interacting with organization's members are not included in this category.
- Member management and communication: efficiency and accuracy in analyzing the new tasks that are required to perform successfully.
- Utilization of environment: amount or extent of successful interaction of members with their environment and the achievement of rare and valuable resources needed.
- Evaluation by external events: the assessment of the organization or unit which can be done by individuals and organizations in the area. Loyalty and trust in the organization, support groups such as raw material suppliers, customers, shareholders, executive agencies and members of community are referred to as external phenomena.
- Stability: Maintaining the structure, organization's functional components and there sources needed at the time, especially during critical periods of time.
- The value of human interests: a combined measure of the total value of organization's members which is expressed in terms of the balance sheet or accounting.
- Partnership and joint penetration: rate or the extent of personnel's participation within the organization in making decisions that directly affect their destiny and work .
- The emphasis on training and development: organization's efforts to develop its human resources.
- The emphasis on success: it is an analogy between individual needs to achieve success and the organization's valuation of its main new objectives.

Figures 1 show the models and different definitions on the organizational effectiveness based on the view of Quinn and Roherbaugh, PFE & PEM shape the human relation model. This model emphasizes individuals and flexibility and it can also define effectiveness in the form of an integrated and skilled manpower (as the final result).

The open systems model covers OFE & OFM cores. This effectiveness model is defined in terms of flexibility (for example, facilities and installations) and ability to absorb resources (as final result). The logical objective model includes OCE & OCM cores. The presence of special plans and objectives (as facilities and installations) and effectiveness and efficiency (as final result) is a criterion to determine organizational effectiveness, and finally PCE & PCM cores shape internal process model. This model emphasizes individuals and logistics and pay special attention to the sufficient dissemination of information (as facilities and installations) and order (as final result) in evaluation of organizational effectiveness.

How each model shows a series of values and has a different view from its opposite model. Human relations model with its effectiveness model emphasizes on the value and significance of individuals and flexibility to organization. While the open system model is defined by organization's values and flexibility, the internal process model underlines its effectiveness and unstable structures.

As competitive models possess both final results and facilities and installations, they do not have any problem with the achievement of goals and system approaches. The relevant approach includes competitive values of beneficiaries' satisfaction; however, it does not attempt to overcome potential obstacles. The methodology of competitive values approach helps such approach better fulfill its tasks with regard to eight-fold criteria which were mentioned, while it is unable to determine the criteria underlined by beneficiaries. Use of the life cycle model to determine organizational effectiveness models are considered by management. However, many studies should be done to determine whether organizations change the effectiveness models with time or they emphasize on competitive value approach or not. Any attempt to determine and define such organizational effectiveness requires paying attention to multiple criteria and conflicting interests. In addition, competitive value approach is able to limit many of the effectiveness models to four-fold organizational models conceptually, and so to enable manager to determine and recognize different criteria and also their proportion to different stages of life cycle (Quinn and Roherbaugh, 1983).

The latest and most acceptable definition of management accounting is a definition presented by the Accountants International Federation (AIF) and is supported by expert accountants associations in UK. International Federation of Accountants has presented the following definitions of management accounting:

The management accounting is the process of measurement, accumulation, analysis, setting trends and interprets information (financial and operational) which is applied for planning and evaluation of system, and to ensure accountability and the use of resources utilized by managers.

The main objectives of management accounting are outlined as follows:

- Providing the information needed for managers to plan and to make decisions
- Assist the leadership for more efficient leadership and management of operational activities
- Motivating managers and personnel to take actions in line with the objectives of the organization, and
- Evaluation of subordinate units, administrators and other employees of the organization (Shabahang, 2001)

The management accounting system is categorized into four main sub-scales including: board scope of management accounting system domain, aggregation in management accounting system, integration of management accounting system and the timeliness of management accounting system. The board scope in management accounting system refers to the breadth and comprehensiveness of such system. Timeliness is to present timely information by management accounting system and simple and quick access to the information in different parts of a firm. Aggregation is applied to the capability of management system to gather, classify and present information to analyze managers' performance. Integration of accounting system means ability of management accounting system provide information that reveal mutual impacts of departments' operations and managers' decisions on the decisions made by other managers and overall operation of a firm. Chenhall and morris first formalized the four key informational characteristics of MAS figure 2 shows a summary of the information characteristics, namely scope (narrow to board), timeliness (slow/standard to fast/customized to requests), aggregation (from summarized to very detailed) and integration (information for the department only to information from other departments)

Hypothesis development

According to the study analytic model in the figure 3, the following hypotheses were collected. Then by using statistical methods related to responding to questions, acceptance or rejection of the hypotheses were performed.

Main Hypothesis: There is a positive relationship between management accounting system and managers' non-financial performance

Secondary Hypothesis 1-1: There is a positive relationship the board scope of management accounting system and managers' non-financial performance

Secondary Hypothesis 1-2: There is a positive relationship the aggregation of management accounting system and managers' non-financial performance

Secondary Hypothesis 1-3: There is a positive relationship between integration of management accounting system and managers' non-financial performance

Secondary Hypothesis 1-4: There is a positive relationship between the timeliness of management accounting system and managers' non-financial performance

Thus, regarding the hypotheses related to the performance of managers as the dependent variable of the study, and accounting management system as an independent variable, it is said that the relationship between such variables are analyzed using statistical methods.

Summary of the studies performed on the subject of the present paper is as follows

1- Subject: market competition, management accounting systems and business unit performance

The result of the research: increased intensity of market competition is associated to a higher use of board scope (Mia and Clarck, 1999).

2- Subject: The consequences of customization on management accounting system design

The result of the research: No fit to performance in this study. MAS dimensions were the outcome variables whilst the level of customization is the independent variable, as a strategic priority, customization has an indirect relation with MAS via interdependence (Bouwens and Abernethy, 2000)

3- Subject: The impact of culture on the relationship between budgetary participation, management accounting systems and managerial performance

The result of the research: both moderating variables modeled at same time in the relationship between MAS scope / timelines and performance. The combination of high participation and high MAS significantly reduced the performance amongst Chinese managers as opposed to the case of western managers (Tsui, 2001)

4- Subject: Job-relevant information and its role with task uncertainty and management accounting systems on managerial performance

The result of the research: both moderating variables modeled at same time in the relationship between MAS scope and performance. Three-way interaction found to be significant (Chong, 2004)

5- Subject: a study of application of management accounting instruments by managers of manufacturing firms listed in Tehran Exchange Market

The result of the research: the results indicated that budgeting instruments to analyze deviation has the maximum advantage for managers. In addition, managers do not use balanced evaluation card, re-engineering processes and responsibility assessment process, and the most significant obstacles to management accounting instruments are expense and profit, application of expert and skilled manpower and public short term temporary policies (Khodamipour, 2010).

6- Subject: the development of strategic control framework and its relationship with management accounting

The result of the research: management accounting systems consider mostly the short term performance of commercial units, and so such systems do not study long term objective and strategies. To resolve such problems, it is suggested to the organizations to adapt management accounting methods and management control systems to achieve their own strategic objectives (AhadiSerhani, 2005).

7- Subject: the role of managements accounting in the increase of the efficacy of commercial units

The result of the research: the results show that management accounting has not been ever static and it is developing with regard to environmental changes (Mehrani, 2006).

8- Subject: the role of management accounting in decision making by industries managers

The result of the research: an evaluation of management accounting and its role in decision making by industries managers shows that despite many actions taken to deploy developed techniques and methods in the area of management accounting in most of organizations, there is still a huge gap between existing state and an appropriate state (Tajiani and Khosravani, 2011).

9- Subject: the qualitative characteristics of management accounting information and its role in decision making by management

The result of the research: the management accounting information in the manufacturing firms listed in Tehran Stock Exchange Market has a variety of characteristics such as extension, relevancy, timeliness and perfection.

The management of the firms listed in Tehran Stock Exchange Market utilizes management accounting information and creates a direct relationship between these two relationships (Bahramfar&Rasouli, 1998).

8- Subject: the impacts of management accounting on organizational behavior

The result of the research: organizational behavior is affected by management accounting performance in organization. Production, cost, sale and income as the variables of management accounting phenomenon influence organizational behavior and guide it toward higher efficiency and effectiveness. Due to the increasing significance of management accounting, new methods and techniques are created and the system has been changed from actual expense to standard expense assignment. In the new system, the expected price and profit provide management with standard final price in the form of decision making instruments. To take privilege of organizational behaviors, it is recommended to use new accounting instruments as strategic accounting (Kadkhodaei, 1995).

9- Subject: an analysis of the impact of characteristics of the accounting information system on the enhancement of decision making by managers: case study: Bahman Group

The result of the research: the results obtained from the study of the accounting information system related to Bahman Group indicated that this system did not provide information required for managers to make decisions. Overall, the results indicate that there is a difference between the present states of accounting information system related to Bahman Group (Dastgir, *et al.*, 2002).

10- Subject: management accounting and its role in access to organizational objectives

Result of the research: with the development of technology in the industry and create change in production systems, organizations are faced with complex and profound changes that management alone has not enough knowledge about the environment of the organization. Therefore, it is essential that a system is developed in order to enable organization to identify problems, set goals, identify problems, define possible solutions, evaluate solutions, select optimal solutions and implement and monitor affairs. The management information system has been developed in this area, so that it fulfills a main part of information required for management. Therefore, the role of management accounting is to prepare relevant and profitable information to help management in planning actions, management control and rational decision making to achieve organization goals (Gholozadeh and AzadikahSalimi, 2009).

MATERIALS AND METHODS

The study statistical community is composed of managers of the firms located in Kermanshah Industrial City. The study was done with respect to limiting factors such as time and expense; the selected sample was categorized using sampling method and was selected based on random sample size table related to the definite statistical population proposed by Kerjesi and Morgan.

In the present study, to gather data, a questionnaire with Likert Spectrum by a scale of 1-5 was used.

The data relevant to the hypotheses was analyzed using Fisher Test at the confidence level of 95%, and also validity and reliability of the questionnaire was calculated using Cronbach alpha test.

RESULTS AND DISCUSSION

In this study, it was proved that:

There is a positive relationship between management accounting system and managers' non-financial performance

There is a positive relationship the extension of the board scope of management accounting system and managers' non-financial performance

There is a positive relationship the aggregation of management accounting system and managers' non-financial performance

There is a positive relationship between integration of management accounting system and managers' non-financial performance

There is a positive relationship between the timeliness of management accounting system and managers' non-financial performance

The management accounting prioritization in terms of the effectiveness on managers' non-financial performance is aggregation, timeliness, integration, board scope, respectively.

Therefore, it could be concluded that among the components of management accounting system, aggregation is the most significant and the extension of scope is the least significant.

Tables and Figures

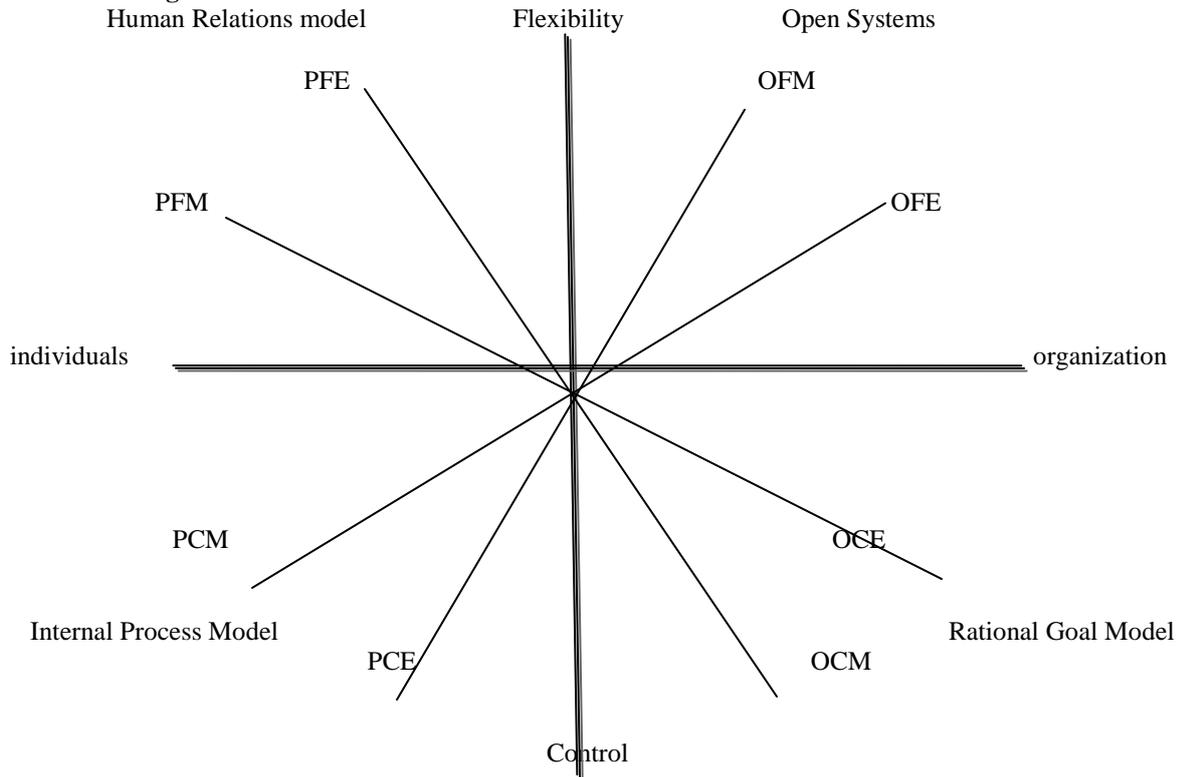


Figure 1 - competing values framework (Quinn and Roherbaugh , 1983)

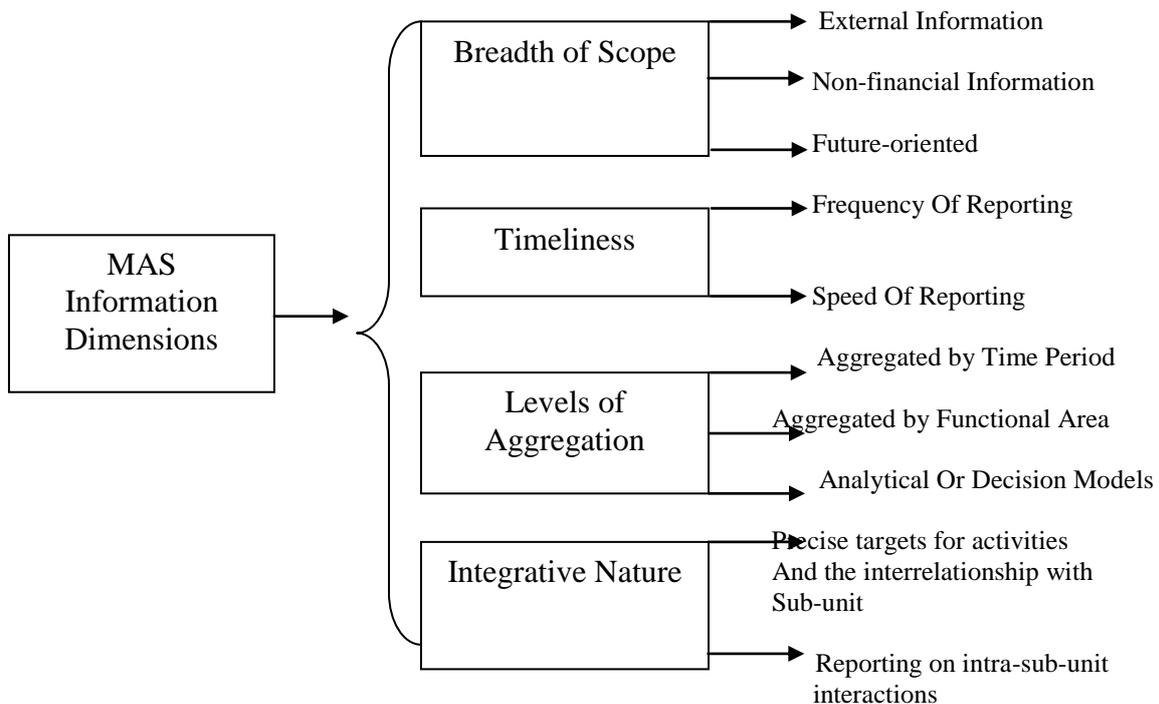


Figure 2 - Classification of the MAS information dimensions (chenhall and morris ,1986)

Management accounting system

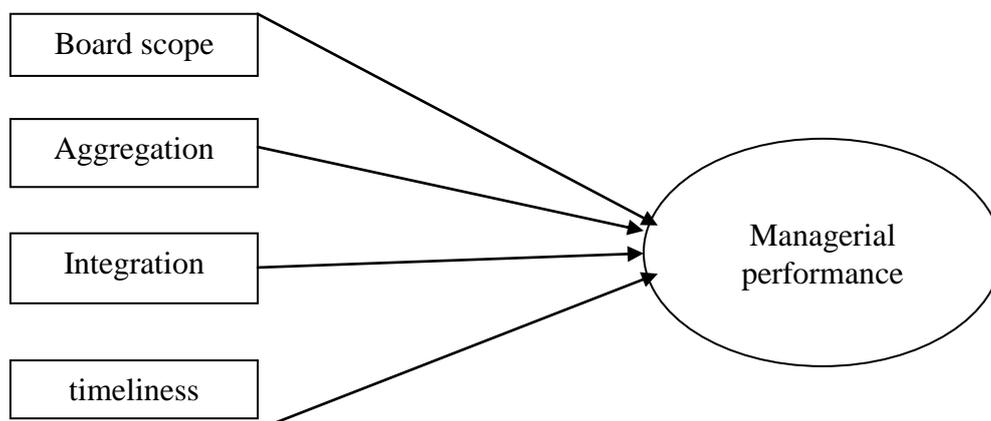


Figure 3 – components of management accounting system and Managerial performance (Soobaroyen, 2008)

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