International Journal of Development and Economic Sustainability

Vol.5, No.6, pp.59-83, November 2017

Published by European Centre for Research Training and Development UK (www.eajournals.org)

# THE ROLE OF ACCOUNTING THOUGHT IN THE EVOLUTION OF MANAGEMENT ACCOUNTING: WHERE ARE WE REALLY?

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**ABSTRACT:** *The dearth of the reasoning stage in the scrutiny of evolution of management accounting thought creates a serious gap in this classic topic in management accounting literature. Liberalization of the advance economies in early 1800 increased the intensity of international competition and changed in the internal information needs of corporations' managers. This study explores the evolution of a broad range of management accounting practices but focused on management control systems, using theoretical frameworks. The ultimate purpose of this paper is to explain how management accounting (MA) evolved and current state of the main theories behind management accounting so as to guide researchers and advance further business scholars. In addition to identifying the management accounting theoretical development, the study identifies the main criticisms of these theories, thus creating a ground for prospective enquiry. The differences in management accounting practices are examined in relation with corporations and academic experiences. The study finds evidence of change in management accounting practices and development is associated with shift in external environment. The study show that accounting though and events of the last two decades have spurred development of managerial accounting. Additionally, MA it is becoming widely recognized as a field of expertise separate from financial accounting. And that the number management accounting innovations during the last two decades is higher than those of two earlier decades of 1960s and 1970s.*

**KEYWORDS:** Management Accounting Evolution, Management Accounting Theories, Agency Theory, Contingency Theory, Strategic Management Accounting.

## INTRODUCTION

The contribution of accounting thought to evolution and understanding of management accounting (MA) has been impressive, although there are some contradictions that still remain. The main contradiction found so far is that from the academic perspective, development of theories does not adequately respond to the demands of practice. However, the evolution observed in management accounting practices is not random, it is environmentally driven. The development is constantly observed that the major breakthroughs in the field came from two different sources: corporations' practices and the incorporation of concepts, models and theories of other disciplines both in central economies as well as in developing countries. Additionally, worth to notice is the time lag between innovations and adoption of those practices in corporations.

In addition, a review of management accounting development usually starts with a review of the classic literature. These literature are based on Anglo-Saxon writings, mostly from the USA and



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UK, the scholars performed their studies in a context, with which potential and new scholars in most developing countries may not be familiar. The literature offered in this work does not omit the understanding of that context but organizes the central ideas or tools identified in the classic works. This study contributes to knowledge by highlighting the main criticisms of the theoretical frameworks that explain the management accounting evolution, and the gaps that exist between the theory and practice of management accounting, thus, highlighting the areas that require further investigation. The purpose of this study is to infer the development of research in management accounting innovations from accounting thought. The innovation in this is signified by the advanced management accounting and control systems practices and operations management techniques. In a nutshell, enquiry in management accounting innovations inclined to the design and implementation aspects. With the implementation-based research, descriptive studies generally identified the extent of adoption and use of the practices. Meanwhile, empirical and field studies usually sought to explain various factors associated with the implementation and the outcome of management accounting innovation.

During the past two decades, conventional management accounting practices have been under extensive criticism for their malfunction to instigate change and inability of accounting thought to support management accounting innovations in coping with the requirements of a changing environment. The academic literature has been crucial of conventional management accounting systems particularly for its lack of efficiency and capability to present comprehensive and the latest information and to assure decision makers and potential users of such information in corporations. Focusing on this debate, this study assessed the evolution of management accounting over the past century around the world and to examine whether there has been a significant impact accounting thought on management accounting development. Prior literature suggest that accounting history is changing and impacting on other branches of accounting, however, these changes do not have much bearing on management accounting techniques. Rather they focus on the manner through which management accounting is being used.

The remainder of this study is organized as follows: Section one is an overview of two competing perspectives on the origin of management accounting while section two identifies the main underlying theories that could unify the body of research around some groups that share enough elements that permit to discriminate among them, arranging management accounting studies in four different frameworks. Each of those lines of thought arises in many cases due to incompleteness of the predecessors, a fact that has been reflected in the critiques. Section three highlights the critiques that have shaped the development of management accounting while section four is devoted to a discussion of the origin and evolution of management accounting. The paper ends with a conclusion and a suggested way forward in management accounting practices.

**Perspectives on the origin of management accounting.** Academic literature traces the origin of management accounting from two different perspectives. One perspective takes the economic approach, this is supported by scholars such as Chandler (1977), Kaplan (1984), and Johnson and Kaplan (1987). The other approach is supported by scholars such as Miller and O'Leary (1987), Hoskin and Macve (1988), and Ezzamel et al. (1990), this school of accounting thought is referred to as the non-economic approach (Luft, 1997). The proponents of the economic approach argue that management accounting practices originated from the private sector to support business operations. For example, Johnson and Kaplan (1987) state that the origins of modern management



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accounting can be traced to the emergence of managed hierarchical enterprises in the early 19th century. During this period the need to gain more efficiency in production was realized. Factory owners started hiring workers on a long-term basis in a centralized workplace and hence, the development of hierarchical organizations. Factories were frequently located in a considerable distance from the head office of the owners, and an information system was required to increase and judge the efficiency of the managers and workers at the factory. Before this time, the industrial revolution period, workers were hired on a short-term basis and paid on work done, while factories were owner managed. The role of accounting was, thus, limited to record keeping. The emergence and rapid growth of railways in the mid-nineteenth century was another major driving force in the development of management accounting systems. New measures, such as cost per ton per mile, cost per passenger per mile and ratio of operating expenses to revenue, were created and reported on a segmented and regional basis. These measures were subsequently adopted and extended in other business sectors.

Johnson and Kaplan (1987) concluded that management accounting systems evolved to motivate and evaluate the efficiency of internal processes and not to measure the overall profits of the organization. Hence, a separate financial accounting system were operated to record transactions and process data for preparing annual financial statements for the owners and creditors of the firm. Management accounting and financial accounting should, therefore, operate independently of each other. Drury (1996) argued that advances in management accounting were associated with the scientific management movement. Proponents of this movement was led by Fredrick Taylor, Taylor concentrated on improving the efficiency of the production process by simplifying and standardizing the operations which in turn will improve profitability. In 1911, Charter Harrison published the first set of equations for the analysis of cost variances. By 1920, sophisticated systems to record and analyze variances from standards had been implemented and articulated in accounting literature.

Additionally, advances in management accounting may also be attributed to the growth of multi-activities and diversified organizations in the early 20th century. Where different managers run the firms' divisions. The role of top management became that of co-coordinating the diverse activities, directing strategy and deciding on the most profitable allocation of capital to a variety of different activities. New management accounting techniques were devised to support these activities. Then, budgetary planning and control systems were developed to ensure that the diverse activities of different divisions were in harmony with the overall corporate goals. In addition, a measure of return on investment was devised to measure the success of each division and the entire organization. Systems of transfer pricing were subsequently devised that sought to provide a fair basis for accounting profits between divisions. Most of the management accounting practices currently in use had been developed by 1925 and, for the following years, there was a slowdown in management accounting innovations (Johnson & Kaplan, 1987).

During this period external financial conventions encouraged a financial accounting mentality resulting in management accounting following and becoming subservient to financial accounting practices. It was argued that the cost of running the two systems was by then too high, hence, making it difficult for managers to run the two systems separately. Later developments in management accounting may be traced to the work of Boer (2000). Boer asserts in his work that management accounting began under the label 'cost accounting' in the distant past and split to



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management and cost accounting in the 1950's. Boer (2000) further identified only four management accounting works that were published prior to 1960, one in 1953 and the rest were the works done after 1956. During this period, standard costing was viewed as the key accounting tool in cost control and few people questioned the ability of standard costing to provide effective managerial control. According to Anita (2000), standard costing was promoted by both academic and professional organizations prior to the 1970's. Cost variance, net profit, and return on investment were the primary financial measures of managerial performance.

The International Federation of Accountants (IFAC) (1998) identified four stages in which management accounting has evolved: the first Stage was prior 1950, the focus then, was on cost determination and financial control, through the use of budgeting and cost accounting technologies. The second stage in 1965, the focus had shifted to the provision of information for management planning and control, through the use of technologies such as decision analysis and responsibility accounting. The third stage was in 1985, at that time, attention was focused on the reduction of waste in resources used in business processes, through the use of process analysis and cost management technologies. Lastly the fourth stage was 1995, by 1985, attention had shifted to the generation or creation of value through the effective use of resources, through the use of technologies, which examine the drivers of customer value, shareholder value and organizational innovation.

It should be noted that the four stages are recognizable, the process of change from one to another has been evolutionary. Consequently, each stage is a combination of the old and new, with the old reshaped to fit with the new in addressing a new set of conditions in the management environment (IFAC, 1998). In the first stage, management accounting was seen as a technical activity necessary for the pursuit of the organizational objectives while in the second stage it was seen as a management activity performing a staff role to support line management through the provision of information for planning and control. In the third and fourth stages management accounting was seen as an integral part of the management process. With improved technology, information is available in real time to all levels of management. The focus, therefore here, shifts from the provision of information to the use of the available resources to create value for all the stakeholders. Figure 1 below shows the four stages of management accounting evolution and how each stage encapsulates the previous ones.

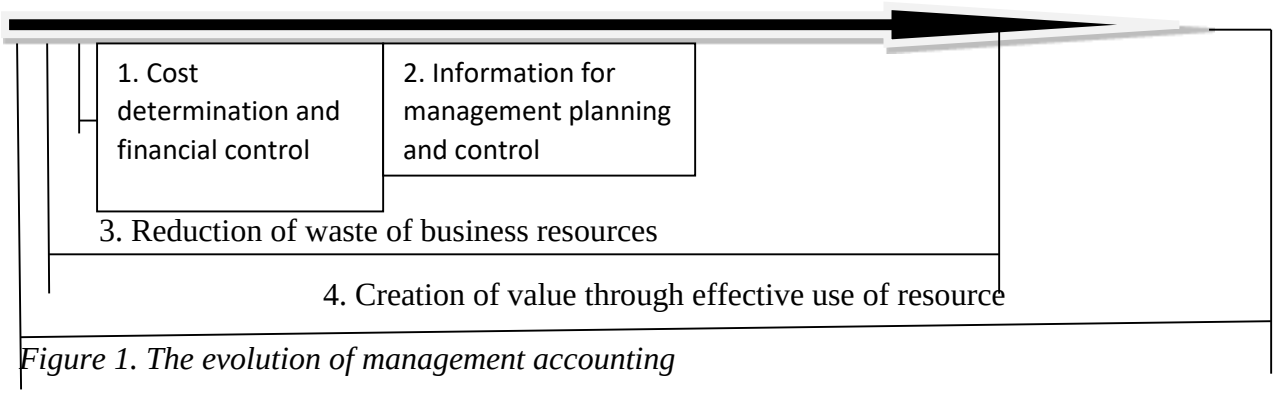


*Figure 1. The evolution of management accounting*

Source: IFAC, 1998



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The proponents of the noneconomic approach argue that in the nineteenth century and early twentieth century, control through measuring individual performance and analyzing it by comparison with norms or standards was developed in governmental institutions such as the military (Hoskin & Macve, 1988). Offices that collected national health statistics (Hacking, 1990) also introduced these measures before they were common in firms. They argue that management accounting practices were developed for disciplinary and academic evaluation purposes and were not meant to support business as argued by the proponents of the economic approach. Hoskin and Macve (1988) quoted two institutions that may have contributed to the development of management accounting in the USA in the early parts of the nineteenth century: the West Point Military Academy and the Springfield Armory. The academy, using numbers to grade students (examinations) produced graduates who later worked at Springfield occupying top positions. At Springfield they introduced the management by numbers learnt at the institute. Hoskin and Macve (1988) argued that later development in accounting grew out of advances in technology of writing which include: the disciplinary techniques for grading texts and information retrieval; and two the use of formal examinations that had been developed in academic institutions. Additionally, the introduction of written examinations and the mathematical marking systems in the universities greatly promoted the growth of accountability and accounting. Moreover, most of the graduates were later to hold top positions in the corporate world. Hoskin and Macve (1988) conclude that it is, therefore, possible to trace the transmission of management accounting techniques from government to the private sector. According to Hoskin and Macve (1988), production control and accountability were introduced at the Springfield Armory by Roswell during the period of 1815-1833. However, accountability was more of a disciplinary system than one for supporting the production effort through cost reduction. Chandler (1977) observation of complete accountability system that was introduced in the military failed to produce accurate cost figures on any item manufactured at the armory supported his view.

Miller and O'Leary (1987) reported that the development of new performance measures in both private and public sectors was intertwined by the emergence of modern social sciences in the nineteenth century. Their ideas and norms of human performance, record keeping on individuals and control through observation and analysis, occasioned this. They argued that without this broad movement in the intellectual currents of the time, it is questionable whether owners and managers of firms would have adopted new organizational practice as they did. In conclusion, the proponents of the non-economic approach argued further that management accounting practices were originally developed not to support business operations but for disciplinary purposes. Based on this argument, the issue of relevance lost advocated by Johnson and Kaplan (1987) does not arise. They supported the argument that traditional management accounting practices are not relevant to support business operations but this relevance has been lacking from the beginning of these practices.

**Management accounting theories.** Regardless of how management accounting emerged, the economic framework played a central role in shaping it development. Other subject areas, such as management science, organization theory, and lately behavioral sciences were undoubtedly present, but economics and specially the marginality principles of neoclassical economics, had the dominant influence in the last century. The evolution of management accounting in the last century can also be assessed on historical grounds. Figure 2 below shows the four main theoretical frameworks that can be used to describe the development of management accounting.



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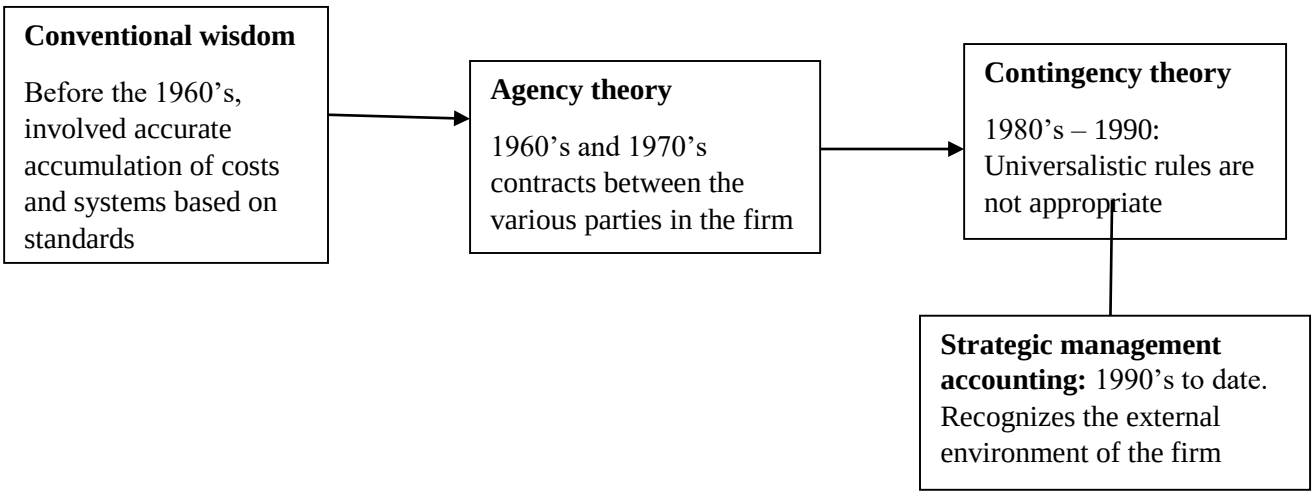


*Figure 2. Management accounting development: theoretical framework*

**Management Accounting and the Old conventional wisdom.** It is agreed that the final developments in management accounting occurred in the early decades of the twentieth century to support the growth of multi-activity and diversified corporations such as Du Pont (Kaplan, 1982; 1984; Scapens, 1985; Boritz, 1988; Johnson & Kaplan, 1987; Atkinson, 1989; & Puxty, 1993). This stage is based on the absolute truth approach and principles of management which were rooted in an engineering view. Giglioni and Bedeian (1974) provided a good overview of the roots of management control issues that lie in early managerial thought. Emerson (1912) may be credited with the first meaningful contribution to the development of 20th century management control theory, in his work on 'The Twelve Principles of Efficiency' where he heavily stresses the importance of control. Church (1914) also contributed to the development of early management control theory; for him one of five organic functions of administration was control, identified as the mechanism that coordinates all the other functions and in addition supervises their work. Fayol (1949) identified control as one of the five functions of management, control being the verification of whether everything occurs in conformity with the plan adopted, the instructions issued and principles established. It is interesting to note that Lawson (1920) wrote the first text devoted entirely to the subject of management control, while Urwick (1928) had the first work to identify a set of five control principles: responsibility, evidence, uniformity, comparison and utility. One of the first empirical studies of corporate organization and control was performed by Holden, Fish and Smith (1941), where one of its conclusions was that control is a prime responsibility of top management.

Historical studies have played a conspicuous role in management accounting in recent years. Both research and practice have been strongly influenced by Kaplan (1984) and Johnson and Kaplan (1987), who call for more relevant product costing. As a precedent, Chandler (1962 & 1977) showed the importance of cost and management control information (MCI) to support the growth of large transportation, production and distribution enterprises during the period of 1850-1925. Management accounting systems evolved in the late 1880s to provide information about internal transactions, and



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by mid 1920s MCI was being used for diverse activities like planning, controlling, motivating, analyzing and evaluating (Boritz, 1988). Johnson (1981 and 1983), Johnson and Kaplan (1987) and Lee (1987) made a convincing case for the development of managerial accounting practices in the US. They argued that real changes have not occurred, despite the changes in sheer size and scope of the enterprises of the late 19th and 20th century. Despite these arguments it is interesting to note that there is no difference between the role of management accounting depicted by Johnson (1981 and 1983) and that explained by De Roover (1974) regarding the Medici Family (Florence) and Fugger Family (Austria) some centuries ago (Flamholtz, 1983). The absence of specific evidence on how new management accounting information changed business decisions is striking. The more this history is condensed, as in Johnson and Kaplan (1987), the more it creates a wrong impression that management accounting responded smoothly to environmental changes in the past, meeting the information needs of management as those needs arose (Luft, 1997). Current works on this stream can be found in accounting journals, but old traditional and conventional concepts, that are at variance with management accounting practice, are still at the very heart of any management accounting research.

**The role of agency theory on the development of management accounting.** The irruption of economics in the field led academicians to work on very elegant mathematical models. Agency theory and transaction costs are a refinement of the mathematical modeling based on economic concepts and theory. The agency theory assumes that there exists a contractual relationship between members of a firm. It recognizes the existence of two groups of people; principals or superiors and agents or subordinates. The principals will delegate decision making authority to the agents and expect them to perform certain functions in return for a reward. Both the principals and the agents are assumed to be rational economic persons motivated solely by self-interest but may differ with respect to preferences, beliefs, and information (Jensen & Meckling, 1976). The principal/agent relationship can exist throughout any organization and usually starts from the shareholder director and ends with the supervisor-shop floor worker. In an organization context, which involves uncertainty and asymmetric information, the agent's actions may not always be directed to the best interests of the principal. Agents' pursuit of their self-interest instead of those of the principal is what is called the agency problem (Jensen & Meckling, 1976).

To counter this behavior, the principal may monitor the agents' performance through an accounting information system. The owner can also limit such aberrant behavior by incurring auditing, accounting and monitoring costs and by establishing, also at a cost, an appropriate incentive scheme (Jensen & Meckling, 1976). Agency theory is based on several assumptions: That Individuals are assumed to be rational and to have unlimited computational ability. They can anticipate and assess the probability of all possible future contingencies. That the contracts are assumed to be costless and accurately enforceable by courts. The contracts are expected to be comprehensive and complete in the sense that for each verifiable event, they specify the actions to be taken by the contracting parties. However, this assumption may not hold in most developing countries where judicial systems still lack the necessary resources to act efficiently. That both principals and agents are motivated solely by self-interest. That the agent is assumed to have private information to which the principal cannot gain access without cost. Additionally, the agent is usually assumed to be work averse and risk adverse (Baiman, 1990).



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During the 1970s, researchers modified the economic model on which management accounting's conventional wisdom was built. They introduced uncertainty and information costs into management accounting models. Agency theory researchers have taken this modification process a step further by adding some behavioral considerations to the economic model. Although the agency model relies on marginal economic analysis, it includes explicit recognition of the behavior of the agent whose actions the management accounting system seeks to influence or control (Scapens, 1985). Agency theory is built around the key ideas of self-interest, adverse selection, moral hazard, signaling, incentives, information asymmetry and the contract (Macintosh, 1994). Among academicians this is one of the dominant approaches today, maybe because it is perceived as being 'hard' and of enough quality to be accepted in traditional financial accounting journals. However, this approach is not free from critics regarding the limitations of single period behavior, validity of a utility maximizing of behavior, two persons, and formal contracting not being usable in all organizations (Tiessen & Waterhouse, 1983).

Baiman (1990) recognizes the three branches of agency theory that are principal-agent, transaction costs and Rochester school based on the work of Jensen and Meckling (1976). The principal-agent model typically takes the organization of the firm as given and concentrates on the choice of ex-ante employment contract and information systems. The objective of the Rochester model was to understand how agency problems arise and how they can be mitigated by contractual, and more generally by organizational design (Baiman, 1990). All three branches of the works provided similar frameworks for analyzing the interaction of self-interested individuals within an economic context, understanding the determinants and causes of the loss of efficiency created by the divergence between cooperative and self-interested behavior, and analyzing and understanding the implications of different control processes for mitigating the efficiency loss from agency problems. Baiman (1990) claimed that the efficiency loss from agency problems creates the demand for management accounting procedures and processes within the firm. Examples of such procedures and processes include monitoring systems, variance investigation systems, budgeting systems, cost allocation systems and transfer pricing systems.

In spite of the existence of the three branches, the first is the prominent one. The essential ingredients of the model are the production function and the market prices. A review of the economist's view of the firm stresses the notion that the firm has productive opportunities, cataloged in a production function. The firm exploits these opportunities by straddling input and output markets, to maximize its profit. The firm is a mechanical enterprise in this view; it has no control problems, no imagination, no entrepreneurial spirit, and no professional management, but only has markets and a production function. However, some problems arise when moving from microeconomics to accounting. Viewing accounting as a source of information naturally presumes information is valuable or useful; it must be able to tell something that need to be known. Economic rationality is the choice of managerial behavior, implying that preferences are so well defined that they can be described by a criterion function, a utility function. Expected utility analysis relies on tastes, encoded in the utility function, and beliefs, encoded in the probability assessments, and information alters beliefs in systematic fashion. The important point is expected utility analysis that leads us to think of information in terms of how it changes the odds of various outcomes or consequences and to act accordingly. From an economic perspective, monitoring can be an effective mean for reducing moral hazard and, thereby, for reducing shirking (Kren & Liao, 1988).



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There are many works in agency theory; however, the classic ones are clearly identified. The agency model studied by Ross (1973) does not allow the agent to be better informed than the principal, Holmstrom (1979), extended the basic model to allow for situations in which the agent had access to private information. Holmstrom (1979) is a classic study that sets up a principal-agent model where effort is not observable, moral hazard exists, and information asymmetries arise in long-term contracts. Only the second-best solution, which trades off some of the risk-sharing benefits for provision of incentives, can be achieved. The source of this moral hazard or incentive problem is an asymmetry of information among individuals that happens because individual actions cannot be observed and, hence, contracted. By creating additional information systems, as cost accounting, or by using other available information about the agent's action or the state of nature, contracts can generally be improved.

It is interesting to mention that agency theory makes important contributions to management accounting, specially improving its modeling skills. Christensen (1981) is an interesting work that makes a clear link between agency models and managerial accounting communication devices, specially budgeting. Christensen (1981) shown that the agency is not always better off if the agent is supplied with more information, since he might use that information to shirk. Rogerson (1985) is a model that links memory in repeated games with preferences, because the repetition of a moral hazard relationship creates the opportunity for inter-temporal risk sharing. Miller and Buckman (1987) explored and confirmed the statement of Zimmerman (1979) that fixed costs allocations are appropriate surrogates for the opportunity costs of using service departments, because there is over congestion if no cost is placed on the use of the fixed resource.

In Antle and Demski (1988), agency theory is used to model compensation plans at a theoretical level. Banker, Datar and Kerke (1988) model suggests that capacity in excess of expected demand is required to absorb overloads arising from uncertainties in the timing of orders and variability in set-up and processing. Foster and Gupta (1990) is another interesting work that focuses on manufacturing overhead costs, and empirically analyzes it from three perspectives, finding that the explanatory variables are more related with volume than with efficiency and complexity. Nandakumar, Datar, and Akella (1993) develop a comprehensive model that accounts for all quality costs and shows the joint effects, as well as optimization strategies in total quality management (TQM). Roodhooft and Warlop (1999) show the results of an experiment where managers are highly sensitive to buy assets decisions, but appear to be inappropriately sensitive to the sunk costs typical of outsourcing decisions. Demski and Dye (1999) is a long and complex work that deals with optimal principal-agent contracting, finding that the tendency to downward bias the project report made by the manager depends on the project's output, manager risk aversion, and the bonus portion of the manager compensation.

Despite the contributions of agency theory to management accounting, it has some limitations. The principal/agent model typically ignores the effect of the capital markets by assuming a single owner rather than a group of owners and debt holders (Baiman, 1990). The theory also leaves no room for trust and fairness, which are also claimed to influence behavior. Furthermore, agency theory concentrates on problems encountered by the owner when the manager relies on asymmetric information to cheat and shrink (Mackintosh, 1994). Asymmetric information is not a one-way street as is assumed by agency theory. Owners would also have access to private information, which they would use in negotiating contracts. However, according to Baiman (1990), the above criticisms are less compelling if one view the principal-agent model as a framework for analyzing issues and



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highlighting problems which arise and must be considered in applying managerial accounting procedures to real world situations. Consequently, agency theory offers insights into some of the tough issues and difficult problems involved in the design of management accounting systems.

**Contingency theory.** The contingent control literature was based on the premise that a correct match between contingent factors and a firm's control package will result in desired outcomes. Contingency theory explains how an appropriate accounting information system can be designed to match the organization structure, technology, strategy, and environment of the firm. It suggests that universal applications are inappropriate and a framework for analysis is developed to suggest alternative performance measures, incentives and evaluation used in organizations (Otley, 1980; Emmanuel, Otley & Merchant, 1990; Innes & Mitchell, 1990; Drury, 2000). As is the case of the other approaches, contingency theory also borrowed something from other disciplines. The contingency theory approach in organization theory was a reaction against scientific management and human relations approaches, both of which had prescribed universalistic rules for management (Puxty, 1993). Galbraith (1973) outlines some studies such as Bruns and Stalker (1961) that differentiate the mechanistic vs. the organic type of organizations, Woodward (1965) showed that structure relates to effectiveness only when production was controlled for, and Lawrence and Lorsh (1967) were able to develop two basic concepts and mechanisms known as differentiation and integration.

In management accounting the conflicting finds of Hopwood (1972) and Otley (1978) could be reconcile only by adopting a contingent approach, and Birnberg et al. (1983) attempt a unified contingent framework, based on the ideas of Thompson (1967), Perrow (1970) and Ouchi (1979 and 1980). It was only in the late 1970s that the open systems ideas in contingency theory, which followed primarily from the use of environment as a contingent variable, began to be reflected in the management control literature. Gordon and Narayanan (1984) suggested that the management accounting and organization structure were both functionally related to the environment. A more recent innovation is the intervention of strategy as a variable as argued by Simons (1987). According to Innes and Mitchell (1990) and Fisher (1995), the specific circumstances influencing management accounting comprise a set of contingent variables which may include but are not limited to: the external environment (Khandwalla, 1972; Otley, 1978; Waterhouse & Tiessen, 1978), the technology (Woodward, 1958), the organization structure, size and age (Hayes, 1977; Merchant, 1981 & 1984; Gordon & Narayanan, 1984; Chenhall & Morris, 1986), the firm's competitive strategy and mission (Dermer, 1977; Govindarajan & Gupta, 1985), and culture (Flamholtz , 1983; Markus & Pfeffer, 1983). These contingencies are regarded as important determinants of the design of the most appropriate management accounting system. However, Innes and Mitchell (1990) point out that it is not clear whether the contingent variables affect management accounting directly or through their impact on the organizational structure, hence, a need for further research.

Chapman (1997) is an interesting work that covers contingency theory in management accounting from its very beginning. Chapman identifies three main streams: accounting performance measures (Hopwood, 1972; Hayes, 1977; Hirst, 1981), centralization of control and accounting (Bruns & Waterhouse, 1975; Gordon & Miller, 1976; Waterhouse & Tiessen, 1978), and strategy and accounting (Hambrick, 1981; Govindarajan & Gupta, 1985; Simons, 1987; 1990). Another point of view taken from the work of Fisher (1995), this work provided an overview and synthesis of the literature on contingency theory and management control in complex organizations. Fisher classification is based on the levels of contingent control analysis, that generates four levels of



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correlations: one contingent factor with one control system variable (Macintosh & Daft, 1987; Thompson, 1967), contingency/control interaction on an outcome variable (Govindarajan & Gupta, 1985; & Simons, 1987), system approach to contingent control design (Waterhouse & Tiessen, 1978; Govindarajan & Fisher, 1990), and simultaneous multiple contingent factors (Fisher & Govindarajan, 1993). Complementarily, Chenhall (2003) is among the more recent and relevant work.

**Major contributions of contingency theory to the development of Management Accounting since 1970s.** Hayes (1977) is a basic and classical work on contingency theory. The Hayes' works consist of three factors that are: subunit interdependence, environmental relationships, and factors internal to the particular subunit of interest, and he found that the factors systematically differ across different functions such as R&D, marketing, and production. Ouchi (1977) is another empirical work that separates structure from organizational control, being the control system of the organization embedded in its structure. The control system seems to consist of two parts: a set of conditions which govern the form of control to be used, and the control system itself that could be based on output or behavior controls. Ouchi deduction is that the more non-routine and un-analyzable the task, the less appropriate behavior control is, and the more important output control ought to be. Hofstede (1981) is another good example of this approach. Hofstede used four criteria to come up with six types of management control: routine control (prescribed in precise rules and regulations), expert control (entrust control to an expert), trial-and-error control (learn to control through its own failures), intuitive control (management control is an art rather than a science), judgmental control (control of the activity is subjective), and political control (use of hierarchy, rules and policies and negotiation to solve ambiguities). Eisenhardt (1985) integrated organizational approaches and agency theory to come up with a model of control systems design where the task characteristics determine which control strategy is appropriate.

Additionally, more programmed tasks required behavior based controls while less programmed tasks require more elaborate information systems or outcome based controls. One of the last contributions has been made by Merchant and Van der Stede (2006) with their idea of results, action and personnel controls. This approach had been criticized on valid grounds by various scholars. Otley (1980) explained how contingency theory emerged and the conscious efforts to develop it, but he concluded that its propositions are too general, vague, and weak in terms of empirical tests. Tiessen and Waterhouse (1983) proposed an integrative approach through the lens of contingency, agency, market, and hierarchies' theories but also make very strong critiques. Furthermore, Haldma and Laats (2002) and Seal (2001) argued that the list of contingencies and relations in a theoretical framework cannot be considered exhaustive, since it is not possible to identify and include all the factors and impact. In summary, this approach is appealing because it can explain almost everything that does not fit completely in other theories, however, contingency theory reviews are largely negative proclaiming the lack of an overall framework for the analysis of the relationship between contingent factors and accounting (Chapman, 1997).

**Strategic accounting.** Strategic accounting is the last stream of thought that had an important impact on development of management accounting. There are two schools of thought, one related to Simmonds and Chandlers they seek to understand the causes and effects, and the other is associated with Robert Kaplan, Thomas Johnson, and Robin Cooper has taken an interest in developing new cost control and decision methods and tools (Puxty, 1993). The second line has the dominant presence in today's management accounting, Tom Johnson advanced the activity management approach as a



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vital ingredient for companies pursuing total quality management and just-in-time operations, while Bob Kaplan with Robin Cooper, extended the transaction-costs approach into comprehensive activity-based cost management systems (Johnson & Kaplan, 1987), the balanced scorecard (Kaplan & Norton, 1996) and strategic maps (Kaplan & Norton, 2000; Armitage & Scholey, 2006).

The traditional view of management accounting as passive and relatively unchanging reflections of corporate strategy is open to doubt. Management accounting may also be used interactively by top management to focus organization members' attention on the threats and opportunities presented by a changing and uncertain environment (Emmanuel, Otley, & Merchant, 1990). The strategy-control fit is expected to foster such a commitment to the current strategy, however, if the control system is too closely related to the current strategy, it could result in over-commitment, thereby, inhibiting the manager from shifting to a new strategy (Anthony & Govindarajan, 2007). Most of the scholars agree that understanding and analyzing the cost structure of a firm is the key to developing successful strategies. Cost analysis is traditionally viewed as the process of assessing the financial impact of managerial decision alternatives; however, strategic cost analysis is cost analysis in a broader context, where the strategic elements become more conscious, explicit, and formal (Shank & Govindarajan, 1989). Porter (1985) has developed a good tool to perform a strategic cost analysis that involves the following steps: define the firm's value chain and assign costs and assets to value activities, investigate the cost drivers regulating each value activities, and examine possibilities to build sustainable competitive advantage either through controlling cost drivers or by reconfiguring the value chain. Other interesting methodology has been proposed by Kaplan and Cooper (1997). They identified three areas of action of strategic activity based management, namely: product mix and pricing, customers and supplier relationships, and product development.

Although this is the newest development, interesting literature can be found (Dent, 1990; Langfield-Smith, 1997). The first contributions were the link of strategy to performance through incentive plans and control design (Govindarajan & Gupta, 1985; Simons, 1987). Management accounting function was enriched to control strategy plans at the formulation and implementation stages (Schreyögg & Steinmann, 1987; Govindarajan, 1988; Simons, 1990). However, some authors assert that MCS are only useful for strategy evaluation (Goold & Quinn, 1990; Preble, 1992; Gittell, 2000). The last major and popular contributions came from the same school of thought in the US. Kaplan and Norton (1992, 1993; 1996), they introduced the balanced scorecard (BS), and Simons (1994; 2000) presented his model of levers of control. The balanced scorecard can be used to support and enable innovation, operations, and post-sale service processes. BS communicates the multiple, linked objectives that companies must achieve to compete based on their intangible capabilities and innovation. A good BS should have an appropriate mix of outcomes (lagging indicators) and performance drivers (leading indicators), however, it retains the financial performance perspective because financial measures are essential in summarizing the economic consequences of strategy implementation (Kaplan & Norton, 1992; 1993; 1996; Epstein & Manzoni, 1997). The model of levers of control asserts that control of business strategy is achieved by integrating the four systems of beliefs, boundary, diagnostic and interactive control (Simons, 2000). The belief systems inspire both intended and emergent strategies (strategy as perspective), boundary systems ensure that realized strategies fall within the acceptable domain of activity (strategy as position), diagnostic control systems focus attention on goal achievement for the business and for each individual within the business (strategy as plan), interactive controls give managers tools to influence the experimentation and opportunity-seeking that may result



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in emergent strategies (strategy as patterns of action). The main proposition of Simons (2000) asserted that the use of levers of control inspires commitment to the organization's purpose, stakes out the territory for experimentation and competition, coordinates and monitors the execution of today's strategies, and stimulates and guides the search for strategies of the future. Although these two tools represent an important contribution, among academicians but they are not well accepted as such (Lipe & Salterio, 2000).

**Criticisms that shaped the development of management accounting.** Over the period from 1960s to the mid-1980s there were a very clear split between the school of thought of management accounting research that concentrated on the practice of management accounting, and the school of thought that concentrated on academic works in the US. According to Argenti (1976), it appeared that the 1970s were the era of simple techniques and that complex alternatives were unlikely to be implemented. Coates et al. (1983) concluded that there appears to be a substantial gap between theory and practice. In another study by Gregory and Piper (1983) found little evidence of sophisticated techniques for stock control. This arid mathematic and economic modeling broke down in the mid-1980s when it became clear that the world of practice was completely uninterested, and the refinement of techniques had reached an advanced stage of ratification where a small number of researchers were, in effect, talking only to themselves (Puxty, 1993). The control system designed to satisfy external reporting requirements, however, does not facilitate process control within cost centers and leads to inaccurate and distorted individual product costs. Some scholars then begin to study management accounting in practice in order to gain better understanding of its role within the organization (Scapens, 1985). All that was required to return to basics, to ask what makes sense and what is important for the organization (Johnson & Kaplan, 1987).

These two inconsistencies, the gap between theory and practice in managerial accounting based on external reporting systems, have been addressed from various angles along the history. The few critiques are related to human relations, managerial-ism, goal congruence, relevance lost, and radical theory (Macintosh, 1994). Some of these critiques is briefly discussed below. The human relations critique focuses directly on the effects of people working in organizations. Many insights emerged, particularly from a growing understanding of the social dynamics of budgeting, and the way different styles of using accounting information by superiors affect subordinates (Macintosh, 1994). This critique allowed the accounting community to start working on behavioral approaches to managerial accounting in the mid 1960's.

Furthermore, the managerial-ism critique can be thought of as a package of ideas, beliefs, and values based on the premise that managers and managerial functions are essential ingredients of today's organizations. Simon (1957) following the line of reasoning of Barnard (1938) declared that managerial decision-making is the very heart of organization and administration, but managers have to be conceived as individuals that take decisions. This critique gave rise to the HIP approach in the late 1960's where emphasis is put on the decision-making process of individual managers. The goal congruence critique is associated with the followers of the management accounting school of thought. In corporations responsibility center managers almost routinely make some decisions contrary to the overall interest of the organization, but which make themselves look good under the prevailing scorekeeping method (Macintosh, 1994). Agency theory devotes a lot of effort to design optimal contracts, although this critique helps to realize that the same bottom line cannot be used for all



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purposes, giving rise to contingent approaches and further refinements of agency theory and transaction costs economics.

Additionally, the relevance lost movement started in 1982 with a work by Robert Kaplan, which stated that the problem with the US manufacturing performance could be traced to management accounting techniques and practices which do not match today's manufacturing environment. The proponents of relevance lost offer strategic cost management as a solution (Macintosh, 1994). This critique has originated the latest strategic approach that is being widely used by practitioners and analyzed by academicians. In an attempt to narrow the gap between the theory and practice of management accounting, consultants working with practitioners have developed several management accounting techniques during the last five decade. For example, the declining use of ABC, suggested by Cooper and Kaplan (1988) has led to the introduction of the Time-Driven Activity-Based Costing (Kaplan & Anderson, 2004). Kaplan and Norton have also extended the balanced scorecard philosophy to include strategy maps (Kaplan & Norton, 2000; Armitage & Scholey, 2006). The success of these innovations is a fertile area for future research.

**The source and evolution of management accounting.** Johnson and Kaplan (1987) argued that sixty years of literature emerged advocating the separation of costs into fixed and variable components for making good product decisions and for controlling costs. However, this works never addressed the question of whether fixed cost is needed to be covered by each of the products in the corporation's repertoire. Johnson and Kaplan noted that academic literature concentrated on elegant and sophisticated approaches to analyzing costs for single product, single process corporations while companies tried to manage with antiquated systems in settings that had little relationship to the simplified model as summed for analytical convenience by researchers. Johnson and Kaplan (1987) concluded that the lack of management accounting innovation in decades and its failure to respond to the changing environment resulted in a situation in the mid 1980's where corporations were using management accounting systems that were obsolete and no longer relevant to the competitive manufacturing environment.

Ezzamel et al. (1990) report that in the USA business practices were developed in the period between 1832 and 1842 and consisted of developing key disciplinary practices, disciplinary in being both practices of power and based on expert knowledge, which for the first time then, made it possible to manage by numbers. Ezzamel et al. maintained that traditional management accounting practices were problematic and were bound to be problematic from the outset. Unlike Johnson and Kaplan (1987), who portray a situation where management accounting was meeting the needs of business, Ezzamel et al. (1990) argued that management accounting problems prowl within it and there was unlikely to be a quick remedy. This argument was based on the theory that managing by numbers emerged for disciplinary purposes in academic institutions and was not developed to promote production by way of reducing costs, improving performance or to motivate workers in the business sector. Consequently, this was not relevant practice in business, which operated, in a dynamic setting.

Additionally, a review of management accounting works (Johnson & Kaplan, 1987; Drury et al., 1993; Drury, 1996, 2000; Bromwich & Bhimani, 1989; 1994) suggested that the main criticisms of then, management accounting practices could be grouped into the resulting subheadings:



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- Traditional product costing systems could provide misleading information for decision making purposes.
- Traditional/conventional management accounting practices follow and have become subservient to financial accounting requirements.
- Management accounting focuses almost entirely on internal activities and relatively little attention is paid to the external environment in which the business operates.
- The failure to meet the needs of today's manufacturing and competitive environment. Though there was a lag in the development and implementation of innovations between central economies and emerging economies, implying that the lack of fit between tools and practices was not critical in developing countries.
- Management accounting tools and systems were developed mostly in central economies but were not fully used in developing countries particularly by endogenous medium to small sized companies.

As a result of the above criticisms of management accounting practice, the Chartered Institute of Management Accountants (CIMA) commissioned an investigation to review the state of development of management accounting. From CIMA findings Bromwich and Bhimani (1989) concluded that the evidence for arguments advanced by advocates of wholesale changes in management accounting was not sufficient to justify such change(s) at a faster speed. Unfortunately, little has been advanced since then.

**Recommendations on way forward in management accounting practices.** In this study, the researchers tried to recap the origin and evolution of management accounting literature. First, the historical evolution was discussed, putting special emphasis on organizing the disperse body of research. A historical analysis allows for focus on the diverse research that has dominated the field since the beginning of 1900s. The study discusses the theories and the critiques that have shaped the development of management accounting. In so doing, the main criticisms were highlighted of these theories and have suggested opportunities for future research. Below are some insights of the way forward in management accounting practices. Firstly, the environment in which management accounting is practiced has changed greatly during the last decade. Globalization and liberalization of markets leading to intensive competition have created the need for corporations to require quality and timely information. Additionally, different organizational structures and new management practices have emerged (Hope & Fraser, 1998). Managers are now appear to be using their accounting systems and routine financial reports more flexibly, and in conjunction with a range of other performance measures both financial and non-financial (Miller & O'Leary, 1993; Davila & Foster, 2005).

In view of environmental changes, management accountants must be able to provide accurate and reliable feedback on the relative success or failure of their corporations' missions. These feedbacks include: Accurate prime cost data since each strategic alliance or negotiation with a purchasing group may result in different prices and different returns. In addition, cautious allocation of overheads since even activity-based allocation can become distorted as underlying critical factors of success and cost drivers may change quickly, and Sensitivity analysis on the impact of changes in sales mixes so that



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capacity constraint and contract feasibility can be evaluated. From Pearson (1996) point of view, management accountants can provide vital information in the implementation of corporate strategy to assist their organization in a competitive and changing environment in two ways: one, by linking qualitative or perceptual product characteristics with their underlying costs (for example, quality), and by quantifying their companies' cost advantage relative to existing or potential competitors. According to Pearson, this knowledge can result in sustainable high returns to the company. Pearson (1996) further pointed out that management accountant should be involved in the changes their corporations were going through in the following ways: By providing timely feedback on the performance and financial controls over discrete projects, involving project lines or company acquisition (including work on integrating predecessors' accounting systems to maintain reporting conformity; by exerting control over the day-to-day activities by providing benchmarks for measuring progress towards strategic objectives; By emphasizing the flexible basis for data to be able to provide forecasted or simulated results under various competitive strategies; By Providing oversight and advising on data reliability provided by other corporations in strategic alliances as a basis for contractual agreement, and By clarifying that, the above issues are critical if management accounting is to continue add value in the present day organizations.

Although the contributions to management accounting evolution and understanding have been impressive, management accounting continues to rely too much on financial accounting, projecting the image of being the 'little sister' of a more mature field. Moreover, it seems that real needs of corporations are not well assessed by academicians, labeling as 'not scientific' those researchers and consultants that focus on developing useful ready-to-use tools. This academic behavior acts as a reinforcing cycle that is hard to brake by researchers engaged in non-traditional works that are regularly committed during researches that are more relevant to their local environments than to peer review works. In summary, management accounting has evolved in these last two centuries adapting to the environment, however, there is still a long way to go before MA can become independent of financial accounting, and be more focused on solving corporations needs within the framework of robust theories.

From the study, is plausible to conclude that the innovations seem stagnant, with the research tend to extend the existing ones. Certain management accounting practices such as ABCM and performance measurement systems have received considerable interest in the literature involving various technical, behavioral, and sociological aspects. Therefore, comprehensive review of these studies is needed to provide overall understanding on what have been known in the literature and to reach consensus on conflicting findings. On the other hand, studies on target costing, benchmarking, value-based management, and life-cycle costing are still lacking. Whether the management accounting practices are in the same pace with operations management techniques, more research is needed to conform to different techniques. What has been known, within the TQM and JIT setting, management accounting systems have been improved with more emphasis given on non-financial information. This study is believed to add to understanding on the management accounting literature by providing the attributes of management accounting practices and operations management researches. The assessment involves a sample size of research works, thus caution must be applied as the findings might not be generalized to the management accounting literature as a whole. Nevertheless, this study has provided a number of enquiries to be considered for further investigation.



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