

Historical Evolution of Management Accounting

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Abstract

The obsolescence of most companies' cost accounting and management control systems is particularly unfortunate for the global competition of the 1980s (Johnson & Kaplan, 1987). During the past two decades, conventional cost and management accounting practices have been under extensive criticism for their malfunction to instigate change and their inability 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 their lack of efficiency and capability to present comprehensive and the latest information and to assure decision makers and potential users of such information. Focusing on this debate, current study reviews the evolution of cost and management accounting innovations over the past century around the world and to examine whether there has been a significant impact of management accounting in the organization. The analyses suggest that management accounting is changing. However, these changes do not have much bearing upon the type of management accounting techniques. Rather they focus on the manner through which management accounting is being used.

Keywords : Obsolescence, global competition, management accounting, evolution, conventional management accounting

1. Introduction

There has been an extensive debate in recent years over the extent to which management accounting is changing. Johnson and Kaplan (1987) argued that management accounting had not changed since the early part of the twentieth century and had lost its relevance for the purpose of informing managers' decisions. Since then, and possibly in response to these criticisms, a number of innovative management accounting techniques have been developed across a range of industries. The most prominent contributions are activity based techniques¹, strategic management accounting and the balanced scorecard. These techniques have been designed to prop up modern technologies and management processes, such as total quality management (TQM) and just-in-time (JIT) production systems, and the search for a competitive advantage to meet up the challenge of global competition. These recent techniques, it has been argued that², have affected the entire process of management accounting and have shifted its spotlight from a simple role of cost determination and financial control to a sophisticated role of creating value through improved exploitation of resources. It has also been argued that the environment in which management accounting is practiced has changed significantly - with advances in information technology, markets that are more competitive, different organizational structures and new management practices.

This paper attempts to think about the challenges that an organization faces and what factors it critically needs for developing much-needed management accounting practices. In addition, the evolution of management accounting practices around the world with their idiosyncratic features has also been checked in order to provide a better understanding of their development. In this connection, following questions have been delved:

- What are the management accounting systems in use in the organizations?
- Have management accounting systems in the organizations changed significantly during the last decade?

2. Literature Review

During the last two decades, the criticism of conventional cost and management accounting practices for their lack of efficiency and capability in

dealing with the requirements of a changing environment relate to the collapse of such practices to provide comprehensive information on activities necessary for organizations Lawrence & Ratcliffe, 1990 uphold this argument by providing survey evidence of levels of dissatisfaction among both management accountants and managers with the cost and management accounting techniques afterward being used in industry. (Bork & Morgan, 1993) reiterate this observation signifying that conventional cost and management accounting systems have failed to keep up with the increasing demands imposed on them by technological change in manufacturing environments. Noticeably, for that reason, the management accounting literature has witnessed a growing attention into the study of the flow of cost and management accounting innovations

Research on management accounting change mostly relates to practices in developed countries. Literature has cautioned against the transportability of these practices across nations (Kaplan, 1983; Johnson and Kaplan, 1987; Bromwich and Bhimani, 1989; Wallace, 1990; Atkinson et al., 1997). (Bromwich and Bhimani, 1989) argue that only shifting new management accounting systems developed in foreign surroundings for coping with a changing business environment is not absolutely reasonable because of the divergent conditions under which different companies operate. They further argue that consideration should always be made of the political, economic, social and cultural environments that surround the firm. In the viewpoint of developing countries insights of the "imported" systems may be gained by commencing studies of the manner in which foreign companies establishing operations in developing countries adjust their management accounting systems to the context of the developing world (Wallace, 1990; Peasnell, 1993; Chow et al., 1994, 1999).

3. Methodology

A significant body of research has been published in the field of management accounting practices. For example, (Askarany, 2004; Burns and Scapens, 2000; Carvalho, Conde and Nunes, 2003; Waweru, Hoque and Uliana, 2004) etc. These studies report on the use of diverse management accounting techniques in different countries. The study builds on and is informed by the tradition and accumulated findings of such research, and that is why, it is based on only secondary data collection method.

¹ Including activity based costing, activity based budgeting and activity based management

² See, for example, Ittner and Larcker, 2001; Kaplan and Atkinson, 1998; Otley, 1995; Fullerton and McWatters, 2002; Hoque and Mia, 2001; and Haldma and Laats, 2002

4. Historical Overview of Introduction of Management Accounting Innovations

4.1. Introduction of Management Accounting Techniques Before 1950s

The (International Federation of Accountants, 1998) describes management accounting before 1950 as a technical activity required for the pursuit of organizational objectives. It was predominantly oriented towards the determination of product cost. Production technology was comparatively simple, with products going through a series of dissimilar processes. Labor and material costs were simply identifiable and the manufacturing processes were mainly governed by the alacrity of manual operations. Therefore, direct labor provided a natural basis for assigning overheads to individual products. The spotlight on product costs was supplemented by budgets and the financial control of production processes.

According to (Chandler, 1977), management accounting systems (MAS) first appeared in the United States during the nineteenth century. These MAS employed both simple and complicated accounting methods. Cost accounts were used to determine the direct labor and overhead costs of converting raw materials into goods. The use of sophisticated accounting procedures also dates back to the nineteenth century. As early as the first quarter of the nineteenth century, according to (Porter, 1980), some companies in the USA used sophisticated sets of cost accounts. New accounting systems were intended to control and record the disbursements of cash during this period, which provided management with timely and accurate reports on expenditures.

Cost accounting became more than just a utensil for evaluating internal conversion processes during the nineteenth century, according to (Johnson and Kaplan, 1987). It was also used as a means to evaluate the performance of subordinate managers. Besides, internal accounting systems for evaluating costs, throughput, and working capital were developed during the nineteenth century. New cost measurement techniques for analyzing productivity and relating profits to products were developed during the late nineteenth and early twentieth century (Askarany, 2004). On twentieth-century accounting practices, these techniques had a significant impact. Some of these techniques provided the foundation for the development of

standards to monitor labor and material efficiencies and costs. This was the time of the development of scientific management that concentrated on gathering accurate information vis-à-vis the efficiency of workers affianced in specified tasks. Moreover, the use of variance analysis of actual costs and standard costs for the purpose of controlling operations was also developed.

Scientific management experts, during the nineteenth century, also developed new cost accounting procedures to evaluate and control physical and financial efficiency of tasks and processes in complex machine-making firms and to assess the overall profitability of the enterprise (Johnson & Kaplan, 1987). More or less the 1900s managers started paying attention to the productivity and performance of capital. The design of Du Pont management accounting procedures during that period facilitated the evaluation of the performance of capital; these gave momentous attention to the application of return on investment. Such information helped managers in the allocation of new investments among contending economic activities and the financing of new capital requirements (Chandler & Salsbury, 1971). Before World War I, according to (Johnson and Kaplan, 1987), the Du Pont Company was using nearly all of the management accounting procedures for planning and controlling purposes, known until the 1980s. As they reported, most of the cost and management accounting procedures were developed during the nineteenth and first quarter of the twentieth century. They further stated that some organizations were trying to develop and use accurate cost accounting systems to trace costs exactly to dissimilar lines of products before World War I. This evidence supports that even the thought and logic behind activity based costing for designing an accurate costing method is not new (Askarany, 2004).

The application of non-accounting information (financial and non-financial) in management accounting is not new either, which has attracted considerable attention in the last two decades. According to (Johnson, 1992), as far back as the first half of nineteenth century, businesses owners and managers were using the non-financial information to control organizational operations. The idea of paying more attention to the working people and customers of organizations as a long-term source of profit also dates back to before the 1950s. However, the demand for management accounting information for the purpose of planning and control decisions is a much more

recent phenomenon although it might be argued that the logic behind most of the management accounting techniques dates back to the first half of nineteenth century (Cooper & Kleinchmidt, 1990; Johnson, 1992; Johnson & Kaplan, 1987; and Kaplan, 1984). Moreover, a comparison between today's management accounting procedures and those used before the 1950s would show a substantial number of innovations in this field (Askarany, 2004).

4.2 Introduction of Management Accounting Techniques from 1950s

4.2.1. Introduction of Management Accounting Techniques during 1950 to 1979s

The focus of management accounting shifted to the provision of information for planning and control purposes in the 1950s and 1960s. In this phase, management accounting is seen by (International Federation of Accountants, 1998) as a management activity, but in a staff role. It involved staff (management) support to line management through the use of such technologies as decision analysis and responsibility accounting. Rather than strategic and environmental considerations, management controls were oriented towards manufacturing and internal administration (Kader and Luthar, 2004).

Management accounting tended to be reactive, identifying problems and actions as part of a management control system only when deviations from the business plan took place (Ashton et al., 1995). Since the 1950s, more than 30 popular cost and management accounting techniques have been introduced. The majority of these innovations have been introduced during the last two decades. According to (Hagerty, 1997) and (Smith, 1999), the major developments in management accounting since 1950s can be explained as follows:

- Cost and management accounting innovations in 1950s can be identified as Discount cash flows, Total quality management, Cusum charts and Optimum transfer pricing.
- Cost and management accounting innovations in 1960s can be identified as Computer technology, Opportunity cost budgeting, Zero-base budgeting, Decision tree, Critical path scheduling, and Management by objectives.
- Cost and management accounting innovations in 1970s can be identified as Information economics and agency theory,

Just-in-time scheduling, Strategic business units, Experience curves, portfolio management, Materials resource planning, Diversification, Matrix organization and Product repositioning.

4.2.2. Introduction of Management Accounting Techniques during 1980 to 1989s

The increased global competition in the early 1980s and the world recession in the 1970s following the oil price shock threatened the Western established markets. Increased competition was accompanied and underpinned by rapid technological development which influenced many aspects of the industrial sector (Kader and Luther, 2004). For example, the use of robotics and computer-controlled processes improved quality and reduced costs in many cases. In addition, developments in computers, especially the emergence of personal computers, obviously changed the nature and amount of data which could be accessed by managers. Hence, the design, maintenance and interpretation of information systems became of considerable importance in effective management (Ashton et al., 1995).

The challenge of meeting global competition was met by introducing new management and production techniques, and at the same time controlling costs, often through reduction of waste in resources used in business processes (International Federation of Accountants, 1998). In many cases, this was supported by employee empowerment. In this environment, there is a need for management information, and decision-making, to be diffused throughout the organization. The challenge for management accountants, as the primary providers of this information, is to ensure through the use of process analysis and cost management technologies that appropriate information is available to support managers and employees at all levels (Kader and Luther, 2004). In brief, cost and management accounting innovations in 1980s can be identified as: Activity based costing, Target costing, Value-added management, Theory of constraints, Vertical integration, Private labels and Benchmarking (Hagerty, 1997) and (Smith, 1999).

4.2.3. Introduction of Management Accounting Techniques from 1990s

In the 1990s, worldwide industry continued to face considerable uncertainty and unprecedented advances in manufacturing and information-processing technologies (Ashton et al., 1995). For

example, the expansion of the worldwide web and allied technologies led to the appearance of E-commerce that further increased and emphasized the challenge of global competition. The focus of management accountants shifted to the generation or creation of value through the effective use of resources. This was to be achieved through the use of technologies which checkup the drivers of customer value, shareholder value, and organizational innovation (International Federation of Accountants, 1998). The characteristics of management accounting practices in four stages of evolution are shown in Appendix Table 1.

The four stages of the evolution of management accounting described by the (International Federation of Accountants, 1998) statement are illustrated in Figure 1. A significant difference between Stage 2 and Stages 3 and 4 is the transform in focus away from information provision and towards resource management, in the form of waste reduction (Stage 3) and value creation (Stage 4). However, the focus on information provision in Stage 2 is not missing but is refigured in Stages 3 and 4. Information becomes a resource, along with other organizational resources; there is a clearer focus on reducing waste and on leveraging resources for value creation. Consequently, management accounting is seen in Stages 3 and 4 as an essential part of the management process, as real-time information becomes accessible to management directly and as the distinction between staff and line management becomes indistinct. The use of resources to create value is a vital part of the management process in contemporary organizations (Kader and Luther, 2004).

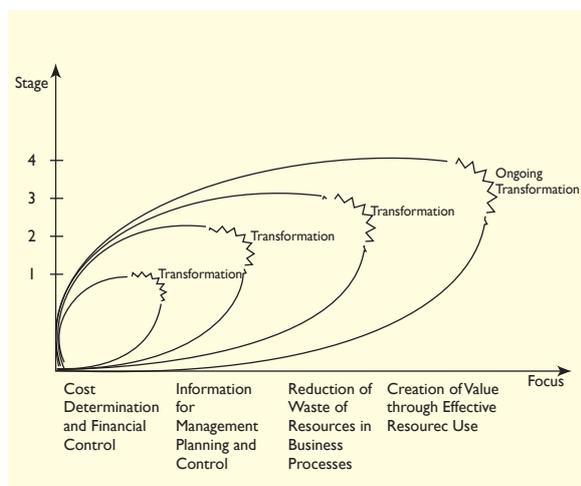


Figure 1: Evolution of Management Accounting
Source: (International Federation of Accountants, 1998)

According to (Hagerty, 1997) and (Smith, 1999), cost and management accounting innovations in 1990s can be identified as: Business process reengineering, Quality functional deployment, Outsourcing, Gain sharing, Core competencies, Time-based competition and Learning organization. Reviewing cost and management accounting innovations of the last two decades, (Björnenak & Olson, 1999, p.327) identify the major recently developed cost and management accounting techniques in the literature as- activity based costing (ABC); activity management (AM) and activity based management (ABM); local information system (LS); balanced scorecard (BS); life cycle costing (LCC) and target costing (TC); strategic management accounting (SMA). The evolution of management accounting practice is summarized as follows (see Figure 2):

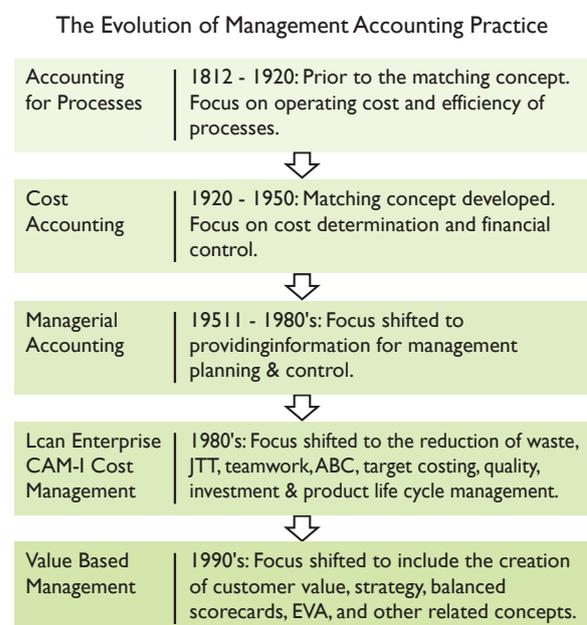


Figure 2: The Evolution of Management Accounting Practice
Source: (Martin, 2006)

5. Factors Determining Management Accounting Change

Different people mentioned various factors determining management accounting change, but perhaps the most frequently quoted were the competitive economic situation of the 1990s and particularly global competition. The degree to which the claims of increased competition are metaphorical does not in fact matter rather than actual economic effects. It is the perception of managers and accountants that is important, and how they perceive the economic climate in which they operate. If there is a perception of greater

competition, then an increased focus is likely to be given to markets and the customer. An added elementary change is the advance in information technology that has taken place in recent years. The momentum of technological change over the last 30 years or so has had a profound effect on organizational life. Predominantly significant over the last 5-10 years has been the extent of the dispersion of computers and computing capacity around the organization. The increased use of the computer has had major effects on the nature of work, especially clerical work, and on information flows around the organization (Burns and Scapens, 2000).

Besides, there have been other significant changes in organizational structure- although again whether they are generated by metaphorical or real economic factors is not apparent. Whereas in the UK in the 1970s, for example, there was a wave of acquisitions and mergers, with the creation of conglomerates, by the 1990s organizations were moving in the reverse direction. The trend was then for de-mergers, with companies focusing on core competencies, and outsourcing non-core activities (Burns and Scapens, 2000). These various changes - in competition, technology, and organizational structure - all have important connotations for the nature of management accounting - particularly the way in which conventional accounting techniques are now being used.

6. Management Accounting Around the World

6.1. Management Accounting in Some European & Latin American Countries

(Birkett, 1998) observes that the very thought of what constitutes "management accounting" varied between European countries. The scope of the use of Activity Based Costing (ABC), which seems to be referred to as an indicator of the pursuit of modern techniques, seems predominantly strong in the UK and Belgium and weak in Denmark and Germany. In UK, the cost reduction and cost control attractions of ABC have proved to be particularly popular. In Belgium, only 17 percent of the companies reported that they had a cost reduction motive. In France, ABC is not so much a costing tool. A strong majority support full costing in Sweden, France, Germany, and Greece. Variable costing is the common practice in Denmark and Finland and has a strong presence in Italy and

Spain. In Finland, the tax law requires a stock valuation to be on a variable costing basis. This has been significant in promoting variable costing in the management accounts.

In a survey of Spanish manufacturing companies, (Carmona and Alvarez, 1994) report that 63 percent reported major changes in their management accounting systems in response to the new business environment.

Being the Chartered Institute of Management Accountants (CIMA), only the United Kingdom has a professional body dedicated to management accounting...

6.2 Management Accounting Change in China

The transform in management accounting practices in China dates back to the late 1970s when the Chinese government undertook its economic reform program. The expansion and change of decision-making authority and level from the government to the enterprise has been the most crucial factor that has created the demand for practicing management accountants in China (Waweru, Hoque and Uliana, 2004). Progressively, the way was given to the use of benchmarking when Chinese enterprises started defining and referring cost elements to the best performance of the market. (Jones and Xiao, 1999) revealed that Zhoulu Fertilizer Ltd. in China has successfully implemented a 'responsibility cost management system.' The costs are fixed according to market competition and duties of various responsibility centers are then defined. (Adhikari and Wang, 1995) documented that of all the western management accounting techniques, the contribution margin (CM) and the cost-volume-profit (CVP) analyses have been the most popular techniques with Chinese enterprises. Both techniques have provided Chinese managers with simple but powerful tools to analyze the effect that different operational decisions will have on revenue and costs. The use of CVP analysis and the CM approach such as planning and control tools in Chinese enterprises is continuing to increase.

6.3 Management Accounting Change in Australia

A widespread literature review and a three-year survey of professional and practitioner journals, conferences and workshops exposed the most popular recently developed cost and management accounting innovations in Australia consistent with

(Barbera, Baxter, & Birkett, 1999; Björnenak & Olson, 1999; Chenhall & Langfield-Smith, 1998; Lukka & Shields, 1999), to be: performance measurement and balanced scorecard techniques, activity based costing, valued added concepts, total quality management, strategic management, risk management, benchmarking, re-engineering, economic value added and target costing. Most of the recently developed cost and management accounting practices have been introduced among Australian practitioners through professional journals, workshops and conferences (Askarany, 2004).

Nevertheless, despite witnessing frequent seminars, workshops, conferences and articles for introducing recently developed cost and management accounting techniques in Australia, the commence of these management accounting innovations is surprisingly low and the level of adoption of most of these new techniques lags relatively behind those of conventional ones (Askarany, 2004). For example, the ranking in terms of adoption of some of these new techniques in Australian firms are: activity based costing ranked (24), activity based management (21), product life cycle analysis (20), target costing (27). (Chenhall and Langfield-Smith, 1998) compare this ranking with some of conventional cost and management accounting techniques such as analysis for budgeting for planning financial position (1), capital budgeting (2), performance evaluation using return on investment (3). In a comparative analysis, they conclude that the rates of adoption of recently-developed techniques in other countries such as U.S.A., U.K., and mainland Europe are even lower than those applied in Australia. (Askarany and Smith, 2003), supporting this view, find that only 19 percent of organizations registered with CPA in Australia have implemented and accepted ABC by the end of year 2002. Prior to this study (Chenhall and Langfield-Smith, 1998) found that the adoption rate for ABC was generally below 14%. Other studies on the adoption of ABC also indicate that the adoption of ABC is following same pattern overseas. For example, (Innes and Mitchell, 1995) in the UK find that the adoption rate for ABC is generally below 14%.

7. Conclusion

Management accounting is in its infancy. Historically, it has played a secondary role to financial accounting, and in many organizations, it still is little more than a by-product of the financial reporting process. However, events of the last two decades have spurred the development of managerial accounting, and it is becoming widely recognized as a field of expertise separate from financial accounting (Ray, 1982). The number of cost and management accounting innovations during the last two decades is higher than those of two earlier decades (1960s and 1970s). This notifies that the lack of cost and management accounting innovations during the last two decades does not materialize to be an issue. Supporting this view, (Kaplan, 1994) emphasizes that the 1980s and 1990s have seen a revolution concerning the innovation in management accounting theory and procedures. (Björnenak & Olson, 1999, p.325) also echo this observation by suggesting that over the last two decades there has been a rich supply of management accounting innovations in the literature.

Over the last 50 years, there is actually been nothing much new in management accounting. Looking at the changes over the past 50 years, some of the functions have remained unchanged, but now they are professed as having moved from a functional responsibility to a professional one. The evolution really is about the professionalization of the management accounting function. In the last part of the 20th century, management styles changed significantly. What have changed are the issues, such as the environment or the speed of technology. The knack to make decisions promptly and be an effective partner also has changed radically. Management used to be a command and control structure where almost every decision was made at the top. More decentralized reporting and decision structure is developed. Organizations today face multitude options and challenges. They need management accountants to step in and work at any level as part of a team. 

"There is no poor country in the world but there are poorly managed countries."

- Peter Drucker

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Appendix

Table 1: Characteristics of Management Accounting Practices in Four Stages of Evolution

	Stage 1: Cost Determination and Financial Control	Stage 2: Provision of Information for Management Planning & Control	Stage 3: Reduction of Waste in Business Resources	Stage 4: Creation of Value Through Effective Resources Use
Representative period:	Prior to 1950	1950 - 1964	1965 - 1984	1985 to date
Where positioned in organization:	Similar to company secretarial.	A 'staff' management activity	Management accounting an integral part of management 'owned' by all managers as the distinction between 'staff' and 'line' management becomes blurred.	
Role:	A necessary technical activity in 'running' an organization.	Providing info to support 'line' management's operations.	Managing resources (including information) to 'directly' enhance profits by bearing down on inputs.	Directly enhance outputs and add value through the strategy of 'leveraging' resources (especially information).
Main Focus:	Cost determination & controlling expenditure.	Information for management planning, control and decision-making. Including basic model building.	Reduction of waste/loss in business resources through process analysis and cost management technologies.	Creation of value through using resources effectively to drive customer value, shareholder value, and innovation.