MANAGEMENT ACCOUNTING CHANGE: A REVIEW

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ABSTRACT
The objective of this study is to discuss the main aspects of management accounting change and the present stage of research in the area by conducting a literature review in this subject. Research in the field of management accounting change can be characterised by its methodological diversity which includes interpretive research, critical research and the traditional functionalist and positivist research. A variety of research methods have also been used, including surveys, fieldwork, case studies and ethnographic studies, as well as studies that have adopted a more conventional quantitative approach, such as contingency-type studies. In addition, researchers have drawn on a wide range of theories, including traditional positivistic theories, such as economic theory and contingency theory, and alternative theories, such as institutional theory, structuration theory, actor network theory, middle-range thinking, labour process theory, political economy, and Foucault's theory. Therefore, management accounting change is a heterogenic field of research with a non-dominant paradigm.

Key-words: management accounting; change; literature review; interpretive research.

Área temática: Controladoria e Contabilidade Gerencial.

1. INTRODUCTION

The objective of this study is to discuss the main aspects of management accounting change and the present stage of research in the area by conducting a literature review in this subject. Management accounting has become an important area of research because practitioners and scholars have started to recognise that the information it provides is essential for companies' survival in a competitive environment. Moreover, a well-designed management accounting system can provide competitive advantages to a company relative to its competitors (Langfield-Smith, 2006; Scapens, Robert W., 2006; Scapens, R. W., 2006).

Despite the importance of management accounting to organisations, a number of experts have argued that management accounting has changed much more slowly than necessary to fulfil the demand for information in the present organisational environment (Johnson e Kaplan, 1987; Burns, Ezzamel *et al.*, 1999; Scapens, Ezzamel *et al.*, 2003; Scapens, R. W., 2006; Sorensen, 2009). Taking this view into account many researchers have focused their attention on the process of management accounting change. This relatively new area of investigation is based upon a wide range of approaches and theories (Busco, 2006). These include different approaches to studying management accounting change, such as studies where the principal objective is to analyse organisational tensions, conflicts, and resistance toward change, and research where the main aim is to examine management accounting change as a process (Lukka, 2007).

This study is structured as follows. First, the definition of management accounting change and an overview of this area will be presented. The next section deals with the different approaches to conducting research in management accounting change. Finally, the closing comments of this study are presented.

2. MANAGEMENT ACCOUNTING CHANGE

The issues regarding the relevance, nature and roles of management accounting systems within organisations have been debated by researchers and management accountants over the past 25 years. This debate has intensified due to the major transformations in the organisational environment which have taken place in the last few decades (Marginson e Ogden, 2005). Nowadays, organisations face an uncertain business environment with increasing market competition. As a result, organisational resources and processes have to be organised and monitored to achieve organisational goals. In order to achieve this, management accounting systems play an essential role because they provide information for the decision-making process.

In the late 1980s, the discussion about the process of management accounting change within the broad organisational context became a popular topic of debate among management accounting researchers, in particular after '*Relevance Lost: the Rise and Fall of Management Accounting*' Johnson and Kaplan's book in 1987. As mentioned previously, Johnson and Kaplan (1987) questioned the relevance of contemporary management accounting practices. The main argument was that management accounting did not follow the fast development of the organisational environment. In other words, there has not been sufficient change in management accounting techniques to match the changes in the organisational environment, and to support the growing demand for information. Johnson and Kaplan (1987) stated that in general, companies opted for internal information systems which were mainly designed to meet the requirements of external financial reports. For this reason they called for the development and implementation of new 'advanced' management accounting techniques.

Since then, new 'advanced' techniques have been developed and introduced in the management field. The principal management accounting techniques introduced in 1990's were: activity-based costing (ABC); activity-based management (ABM); life cycle costing; target costing; quality costing; functional cost analysis; throughput accounting, strategic management accounting; shareholder value techniques; economic value added (EVA); the balanced scorecard (BSC); and supply chain management (SCM) (Ax e Bjornenak, 2007).

The debate over the changing nature of management accounting has been supported by a wide array of research, whose findings are not uniform and, sometimes, contradictory (Burns, Ezzamel *et al.*, 1999; Burns, Ezzamel *et al.*, 2003; Busco, 2006). On the one hand, management accounting change can be understood as the introduction of new management accounting techniques, such as ABC or the BSC. This particular view is largely supported by North American accounting scholars (Lukka, 2007). On the other hand, management accounting change can be understood as the process of change in the manner in which traditional and/or new techniques are actually being used. Therefore, management accounting change occurs with the creation and introduction of new techniques or with changes in the way managers use management accounting information generated by traditional systems.

On one hand, management accounting practices are shaped by the external, as well as by the internal organisational environment. On the other hand, management accounting can shape the external and internal environment of the organisation (Moll, 2003; Moll, Burns *et al.*, 2006). Therefore, management accounting change can be studied in these two ways, that is, the process of management accounting in itself and the impact of management accounting change on the organisational change.

In the same vein, studies regarding the origins and diffusion of management accounting innovations support the view that management accounting is shaped by the inter and intra organisational environment and management accounting plays an important role in the process of organisational change (Perera, Mckinnon *et al.*, 2003; Lapsley e Wright, 2004; Ax e Bjornenak, 2007). One such important study by Perera et al. (2003) investigated transfer pricing in a Government Trading Enterprise in Australia. They draw on the Rogers' (1995) diffusion of innovation theory to explain the introduction, abandonment and re-introduction of transfer pricing over a 10-year period. Perera et al. (2003) identify three aspects that can contribute to the study of accounting change which are: (1) the importance of inter-organisational pressures over the process of accounting change. In this Government Trading Enterprise, Perera et al. (2003) found that transfer pricing was introduced as a result of government pressure for the organisation to become more commercialised; (2) the importance of focusing on the subjective values, norms and past experiences of the organisation actors (intra-organisational factors); and (3) the empirical evidence of the paper supports the view that an accounting practice or mechanism can help an organisation shift from one organisational practice to another by generating changes in ways of thinking and behaving and in the climate and the culture of the organisation.

Regardless of the nature of management accounting change, it is widely accepted that management accounting practices are changing. As a consequence, change has been the subject of considerable research and debates in management accounting (Ribeiro e Scapens, 2006). According to Burns & Scapens (2000, p. 3) 'Whether management accounting has changed, has not changed, or should change, have all been discussed'.

Taking this popularity into account many researchers have sought to establish the causes of changes within organisations. For example, Senior (1997, p. 23) identifies three aspects of an organisation's environment that may cause an organisational change, including management accounting: first, the so-called temporal environment, which encompasses the longer-term historical influences, such as 'the changes from an agricultural economy to one based on machines'; second, the external environment which includes factors associated with political/legal, economic, technological and socio-cultural change; third, internal environment, which may include 'change in people (attitudes, beliefs, skills), scale of activities and organisational tasks, organisational strategy and structure, products or services, reward systems or use of technology'.

Many studies have been dedicated to the identification of the causes for change in management accounting. For instance, Innes & Mitchell (1990) carried out seven field studies in the electronics sector about management accounting change. This study identified the following factors: (a) a competitive and dynamic market environment; (b) organisational structure; (c) production technology; (d) product cost structure; (e) management influence; and (f) deteriorating financial performance. More recently, Scapens et al. (2003) carried out an investigation regarding the changing nature of management accounting among UK companies. This study presents four changes in the broader business environment that have had impact on management accounting in recent years: (1) globalisation and customer focus; (2) technological change; (3) changing organisational structures; and (4) fashion and other internal factors, such as 'a feeling at top-level management that change is necessary' and 'changing management information needs' (Scapens, Ezzamel *et al.*, 2003, p. 6).

Another study investigating change drivers was carried out by Yazdifar & Tsamenyi (2005). The aim of this paper was to understand the process of management accounting change and the changing roles of management accountants in dependent and independent companies. The findings of this investigation were supported by 279 questionnaires answered by professionally qualified management accountants within CIMA. Yazdifar & Tsamenyi (2005) present a ranking of change drivers in management accounting. This ranking in order of importance is the following: (1) information technology; (2) organisational restructuring; (3) customer-oriented initiatives; (4) e-commerce/electronic business; (5) new accounting software; (6) external reporting requirements; (7) new management styles; (8) core competency aims; (9) globalisation; (10) quality-oriented initiatives; (11) new accounting techniques; (12) take-over/merger; (13) external consultants' advice; and (14) production technologies.

From these studies it can be observed that organisational change, in particular management accounting change has many reasons or drivers for change. Change can occur as a response to external sources, such as market pressures, government laws, consumer expectations, technology, social and political change or internal pressures, such as a change in the power dynamics of the organisation, a change in dealing with a process or behaviour problem, or a change in the size and complexity of the organisation (Carruthers, 1995; Greenwood e Hinings, 1996). Changes can also be made in pursuit of organisational strategies to achieve efficiency (Lawrence e Sharma, 2002; Tsamenyi, Cullen *et al.*, 2006). This would suggest that organisations do not always wait for legitimacy to be given, but can make a conscious choice to be perceived as legitimate. Clearly, there are multiple pressures for change that may be interdependent (Dawson, 1994; Deegan, 2002). Dawson (1994, p. 14) gives an example that illustrates this last statement "a push for change in technology may result from competitive pressures or from the exposure of local engineering personnel of the benefits of new developments in capital equipment".

3. RESEARCH IN MANAGEMENT ACCOUNTING CHANGE

Research in management accounting change has been conducted using a wide variety of approaches and theories. However, Burns & Vaivio (2001, p. 392) state that 'there is still much to be learnt, developed and understood' in the management accounting change field. Taking this situation into consideration, their paper, which is an introduction of the special issue of the *Management Accounting Research* journal, presents a 'beginner's guide' for conducting research in management accounting change. This involves taking into account three perspectives regarding management accounting change: the epistemological nature of change; the logic of change; and the management of change.

(a) *The epistemological nature of change*:

This is related to the intrinsic concept of change. This perspective deals with the question: What can be considered as an organisational change? Burns & Vaivio (2001) highlight the importance of making a distinction between normative claims of change and change as an evidenced empirical phenomenon. Burns & Vaivio (2001) also point out that management accounting change is conceived a priori as a positive phenomenon. However, management accounting change can be progressive or regressive. The former implies that previously dominant values and practices are questioned and transformed with the aim of improving certain aspects of organisational life (instrumental change). In contrast, regressive change is predominantly ceremonial, preserving existing power structures and restricting institutional change (Modell, 2007).

The epistemology of change also includes the discussion about the dichotomy between change and stability (Granlund, 2001; Siti-Nabiha e Scapens, 2005; Lukka, 2007). Scapens (2006) highlights that in the process of change there are elements of stability within the process of change and stability and change cannot be understood as mutually exclusive phenomena. In the same direction, Siti-Nabiha & Scapens (2005) found in their case study in a South East Asian oil company that stability and change are not necessarily contradictory or opposing forces, but can be intertwined in an evolutionary process of change.

Another piece of work about the epistemological perspective on change was conducted by Quattrone & Hopper (2001). This paper is based upon Latour's sociology of translation and social constructivism. Quattrone & Hopper (2001) claim that the definition of what constitutes change is often taken for granted in research concerning organisational change and a debate about its meaning is avoided by researchers. Change is generally assumed to be a transition from one well-defined point (stage A) to another (stage B) (Andon, Baxter *et al.*, 2007). Quattrone & Hopper (2001, p. 403) suggest that 'a-centred organizations and drift should replace conventional definitions of organizations and change'. Drift resembles incomplete attempts at organising rather than a linear move from one point to another tangible, definable and reified point. As a result, drift makes the organisation a-centred: 'multiple centres and points of view attempts to order events, but each attempt is incomplete and unable to centre the organisation in itself' (Busco, 2006, p. 230).

(b) The logic of change:

This perspective is concerned with the reason and motivation for undertaking the process of change within a company. Burns & Vaivio (2001) categorise the logic of management accounting change as managed/formal or unmanaged/informal. In the former, change in management accounting is a consciously planned and rationally executed. In this view, the process of change becomes something that has been premeditated by organisational actors. In contrast, informal change is not consciously planned and rationally executed and the informal elements are presented in the process of change. The logic of management accounting can also be categorised as linear or nonlinear. The former can be understood as a systematic change with explicit objective, ordered stages and agreed procedures, while the latter is unsystematic and unpredictable with ambiguous goals, abrupt turns and unwanted phases of development.

Burns & Vaivio (2001) also point out that change in management accounting can be a revolutionary phenomenon that has devastating impacts within organisations, or an evolutionary phenomenon which is a more incremental process (Soin, Seal *et al.*, 2002). Revolutionary change refers to radical and fundamental disruption of rules and routines. Burns & Scapens (2000) state that revolutionary change involves radical change to existing routines and fundamentally challenges the prevailing institution. Such revolutionary change is likely to be possible as a result of external events, such as take-over, economic recession and privatisation. In contrast, evolutionary change is incremental and involves only minor and, sometimes, unconscious adjustment to the take-for-granted assumptions. In this type of change the process of change is shaped by a combination of random, systematic and inertial forces, which together create the context for the emergence of new practices (Burns e Scapens, 2000).

(c) *The management of change:*

This perspective emphasises the importance of studying how the process of management accounting change was conducted. Burns & Vaivio (2001) state that change can be a central effort, where the organisation's top management plays a key role. On the other hand, management accounting change can be seen as a fundamentally local concern. This perspective also deals with internal issues, such as relations of power, politics, and organisational culture, which may impact on the process of management accounting change. The management accounting literature shows that power, politics and organisational culture and its implications at various hierarchical levels of an organisation play an important role in the process of management accounting change (Burns, 2000; Yazdifar, Askarany *et al.*, 2005; Tsamenyi, Cullen *et al.*, 2006).

The *Management Accounting Research* journal published in 2007 its second special issue on management accounting change. In this special issue five papers about management accounting change are presented. Busco et al. (2007) introduce this special issue and suggest that research in management accounting change has proliferated in the past few years, but there are still some issues that should be considered by researchers in the area. Busco et al. (2007) propose that this reflection about the nature of management accounting change should be organised in four key dimensions: the agents and object of change; the forms and ratio of change; the space and time of change; and the interplay between change and stability.

(a) *The agents and object of change*:

This dimension deals with two questions: a) what and who makes change happen? and b) what and who is changing? The first question highlights the issue of what and who drives management accounting change. Busco et al. (2007) point out that in order to answer this question the issues of agency, structure and their interaction should be considered. In addition, Busco et al. (2007) identify that there are a wide range of different views about the drivers of change and the dichotomy of agency and structure. As a consequence, change factors have been identified in the actions of human actors, as well as in non-human actant. Some other studies have sought to identify these drive factors within broader contextual issues, such as institutional pressures, political decisions, and some combination of them. Busco et al. (2007) also emphasise the important contributions made by structuration theory and actor-network theory to the management accounting literature to overcome the dichotomy between agency and structure in the study of the process of management accounting change.

The second question of this dimension (what and who is changing?) deals with the epistemological and ontological problem of change. According to Busco et al. (2007) there are two main problems we encounter when trying to understand the concept of change. From the epistemological stance, the difficulty in understanding the nature of object (the process of change) can be attributed to the observer, that is, the object means different things to different people and constitutes a means to establish communication between different communities of practices (Law e Singleton, 2005). On the other hand, Busco et al. (2007) state that in the ontological view, objects (the process of change) are inherently complex, not only because people interpret them differently.

(b) The form and ratio of change:

This dimension seeks to discuss the question: How and why change happens? This dimension is concerned with the process through which new ideas and management accounting innovations are created and implemented. According to Busco et al. (2007, p. 127), there are some obscure questions in the management accounting literature regarding this issue, which are: “How are management accounting techniques able to spread and become practiced? How do they manage to engage practitioners who are driven by different and sometimes opposing agendas? How do they manage to instil hope (of solving a problem, be it at the personal level of the manager or at the institutional level of the organization) in the prospective user?”.

(c) The space and time of change:

This perspective deals with the question: When and where change happens? This is a controversial issue because the task of determining the starting point of a process of change in many cases is simply an exercise of speculation. This is because in many situations change does not happen on a linear timeline that the researcher can monitor, but in a network of relations that create multiple spaces and times which are very difficult to account for (Quattrone e Hopper, 2001; 2005). In addition, Busco et al. (2007) highlight the problem that researchers have to fully understand the process of management accounting change which involves a complex network of interactions. They conclude by saying “despite the length of time spent within the organizational context researchers need to confront the impossibility of fully representing and understanding the object of their enquiry as if it was out there, evolving in front of them along a linear pattern” (Busco, Quattrone *et al.*, 2007, p. 140).

(d) The interplay between change and stability:

This dimension discusses the dichotomy between change and stability in management accounting practices. Change and stability seem to be antagonistic definitions. However, management accounting practices are not a single, stable system at a point of time, and change and stability seem to co-exist within a company. As a consequence, Busco et al. (2007) stress the importance of understanding the interplay between change and stability in the context of the process of management accounting change.

From the first issue of the *Management Accounting Research* journal on management accounting change in 2001 to the second issue in 2007, the number of studies in management accounting change increased considerably and this topic has been consolidated as an important area of research in management accounting. These two issues on the *Management Accounting Research* journal have many similarities. First of all, both issues provide guidelines to help researchers conduct their studies taking into account polemic issues regarding the process of change in management accounting practices. In addition, the dimensions presented in both papers have many similarities. For instance, the perspective of ‘the epistemological nature of change’ proposed by Burns & Vaivio (2001) has the same concerns regarding the intrinsic concept of change as presented in ‘the agents and objects of change’ dimension in the Busco’s et al. (2007) paper. However, Busco et al. (2007) stress the ontological problem in the definition of change in the process of management accounting.

The main differences between these special issues on management accounting change can be summarised as follows. First, Burns & Vaivio (2001) stress the importance of the issues of power, politics and organisational culture in the study of management accounting change. Although Busco et al. (2007) mention the significance of these issues for management accounting change research, they pay less attention to these issues than the previous special issue. Second, Busco et al. (2007) pay great attention to the interplay between change and stability. For them, this is a key dimension to understand the process of management accounting change within an organisation. Burns & Vaivio (2001) also highlight the relationship between change and stability, but they did not give the same importance as Busco et al. (2007). Finally, Busco et al. (2007) present a discussion about research methods in management accounting change, while Burns & Vaivio (2001) did not discuss this issue. According to Busco et al. (2007), a longitudinal case study is portrayed by the literature in management accounting change as the most adequate research method to investigate the process of change in management accounting. However, Busco et al. (2007) emphasis that due to the complexity of the change phenomenon, research may not fully represent and understand the process of change. Table 1 provides a summary of the main similarities and differences between the first and the second issues on management accounting change.

Table 1:
Summary of the Comparison between the First and the Second Issues on Management Accounting Change

Overview	**1st Issue (Burns & Vaivio, 2001)**	**2nd Issue (Busco et al., 2007)**
Dimensions of analysis	(1) the epistemological nature of change; (2) the logic of change; and (3) the management of change.	(1) the agents and object of change; (2) the form and ratio of change; (3) the space and time of change; and (4) the interplay between change and stability.
Main Similarities	**1st Issue (Burns & Vaivio, 2001)**	**2nd Issue (Busco et al., 2007)**
The main aim	To provide a guideline to help researchers.	To provide a guideline to help researchers.
The intrinsic concept of change	This concept is analysed in 'the epistemological nature of change' dimension.	This concept is discussed in 'the agents and object of change' dimension.
Main Differences	**1st Issue (Burns & Vaivio, 2001)**	**2nd Issue (Busco et al., 2007)**
The issues of power, politics, and organisational culture in the process of management accounting change.	Burns & Vaivio (2001) stress the importance of these issues and they are discussed in great detail.	These issues are mentioned in the paper, but less attention is paid regarding these themes.
The interplay between change and stability	The paper mentions this interplay, but there is no further discussion regarding this issue.	These two concepts are analysed in great detail. In addition, Busco et al. (2007) stress the importance of this interplay in the process of management accounting change.
Discussion about research method	There is no discussion about research method.	The paper presents a discussion regarding this issue. Busco et al. (2007) also highlight that management accounting change is a complex phenomenon.

From these two special issues on management accounting change it seems clear that management accounting change is a topic in development with many obscure issues and questions waiting to be answered. It is undoubtedly an important topic of research because it can improve theories and studies in management accounting, as well as it can make a great contribution for practitioners. As Busco et al. (2007, p. 146) conclude "Management accounting change is a laboratory, a theoretical puzzle the solution of which is difficult because there will always be a missing piece which will allow the continuous work around the composition of the picture".

The management accounting literature is paying considerable attention to the process of change in management accounting. Some authors, such as Lukka (2007), consider the publication of the papers by Hopwood (Hopwood, 1983; 1987) as the starting point in the discussion about accounting change. Lukka (2007, p. 79) identified four clusters of literature on management accounting change. First, the 'consulting genre' cluster in which the main objective is to produce texts regarding new management accounting technologies and their successful implementation. This kind of research is common among the North American researchers (see Kaplan e Norton, 1996). The second cluster is formed by management accounting studies that seek to analyse organisational tensions, conflicts, and resistance toward change endeavours, or failures of change (see Scapens e Roberts, 1993; Granlund, 2001). The third cluster is based on the model proposed by Innes and Mitchell (1990) to understand the process of management accounting change. Finally, the fourth cluster seeks to study change as a process (see Burns, 2000; Burns e Scapens, 2000; Burns, Ezzamel *et al.*, 2003).

The emerging interest in management accounting change has contributed to the increase in the number of studies in this field. There have been various studies of management accounting change and the diffusion of new practices. Some research in this area has been guided by a broad range of social theories with some adopting a managerialist emphasis, while other studies have taken a wider view of the organisation and the various stakeholders who influence the change process. According to Modell (2007), research in management accounting can be broadly classified into two categories: factors studies and process-oriented approaches. Factor studies seek to identify the drivers and obstructions for a successful implementation of management accounting techniques. Process-orientated approaches however are concerned with the socio-political dynamics of new management accounting approaches implementation. In the next subsection, these two categories of research in management accounting change will be discussed and analysed.

3.1 Factor Studies

This stream of research in management accounting change seeks to explain and identify the factors that contribute and hamper management accounting change. Modell (2007) identified a series of studies concerning the implementation of ABC (Activity Based Costing) mainly relying on survey-based investigations. The main aim of these studies was to identify and explain the drivers of effective implementation of this cost management system (Shields, 1995; Foster e Swenson, 1997; Mcgowan e Klammer, 1997; Anderson e Young, 1999).

More generally, a number of studies have developed a theoretical understanding of what stimulates and hampers management accounting change. Based upon seven field studies in the Scottish electronics industry, Innes & Mitchell (1990) identified the drivers for changes in management accounting which can be divided into three categories: motivators, catalysts, and facilitators. Motivators are factors that influence change processes in a general manner. They provide decision makers the reasons and grounds to initiate and permit change. Therefore, motivator factors comprise general changes in the wider organisational environment, such as a competitive market, organisational structure, production technology, product cost structure and short product life cycle. Catalysts are directly associated with management accounting change. They include factors directly related to the timing of change, such as poor financial performance, loss of market share, launch of competing product, new accountants, and other organisational changes. Finally, facilitators comprise a set of factors conducive to change, such as staff and computing resources linked to the accounting function, organisational autonomy from the parent company, and the authority of accountants.

The motivator and catalyst factors interact positively to generate change in the sense that motivators provided the impetus for the emergence of catalysts, while facilitators paved the way for subsequent change initiatives. Motivators, catalysts, and facilitators do not need to be related to each other as they occur. However, change drivers become related to each other by the role each of these drivers plays in the change process. Innes and Mitchell (1990) paid particular attention to changes in costing practices and performance measurement. However, little attention was paid to the social and political process involved in the choice of specific management accounting techniques in the studied companies (Modell, 2007).

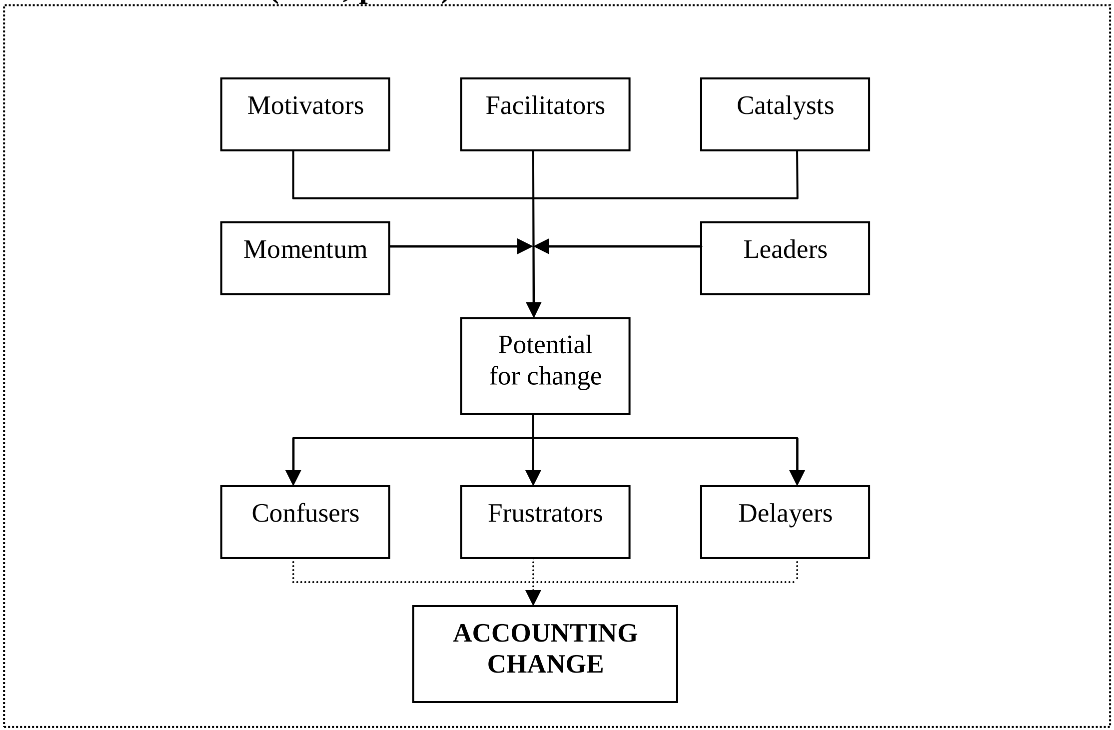
Cobb et al. (1995) conducted an in-depth longitudinal case study of a division which took place in a large multinational bank by studying changes in management accounting reports. They found that several of the change initiatives in management accounting failed or encountered severe implementation problems due to internal barriers, such as changing priorities during the change process, accounting staff turnover and resistant attitudes to change. Therefore, the influence of individuals as change agents was extremely important in this case. This result supported Cobb's et al. (1995) framework which expanded on the accounting change model proposed by Innes and Mitchell (1990) by including the conceptions of barriers to change, leaders and momentum for change. The barriers to change refer to the factors that hinder, delay or even prevent change, such as the changing priorities and staff attitudes. Moreover, the expectation of continuing change is referred to as momentum, and the role of individuals in management accounting change as leaders. Therefore, the interplay between these factors has a significant influence on whether change initiatives take place or not.

Finally, Kasurinen (2002) added a final refinement to the accounting change model proposed by Innes and Mitchell (1990) and Cobb et al. (1995) by specifying the types of barriers that may hinder, delay, or even prevent management accounting change in practice. Kasurinen (2002) conducted a longitudinal case study in a strategic business unit of a multinational Finnish based metal group, specifically investigating the barriers to Balanced Scorecard implementation. He concludes that the barriers to change can be divided into three categories: *confusers* which include individual level aspects, such as diverging goals of key individuals; *frustrators* which refer to wider organisational phenomena, such as organisational culture and existing reporting systems; and *delayers* which are related to technical and temporary issues, such as inadequate information systems. The final accounting change model can be seen in figure 1.

Many factor studies draw on the contingency theory as a framework to study management accounting change. The contingency theory is based upon the open system approach that studies the organisation and its subsystems by reference to its wider environment. As a consequence, contingency theory views management accounting change as an attempt to match organisational properties and arrangements with internal and external circumstances (Groot e Lukka, 2000). For example, Waweru et al. (2004) adopted contingency theory to understand the process of management accounting change and the drivers for change in four retail companies in South Africa. Haldma & Laats (2002) examined management accounting change in Estonian manufacturing companies from 1996 to 1999 and explored contingent factors that influenced it. They analysed 62 responses to a questionnaire survey and found that there were changes in cost and management accounting practices that were associated with shifts in the business and accounting environment as external contingences, and with those in technology and organisational aspects as internal contingences.

Other researchers have preferred to use more statistical tools and surveys. Laitinen (2006) carried out a survey among 145 manufacturing companies in Finland in order to identify the factors and motivations for the process of change in management accounting in these companies. Another example is Baines and Langfield-Smith's (2003) paper which is based upon a survey of manufacturing companies in Australia. This paper used structural equation modelling to examine the relationships between the changing competitive environment and organizational variables, such as strategy and organisational design, as antecedents to management accounting change.

Figure 1:
Management Accounting Change Model
Source: Kasurinen (2002, p. 338)



Factors studies made an important contribution to the development of management accounting change research by analysing the process of change in a broader organisational context. In so doing, this type of research demonstrates that management accounting change depends on both the nature of the implementation process and a broad range of contextual factors, which in many cases are beyond the control of the organisation.

However, the limitations of factor studies can largely be traced to their theoretical and methodological underpinnings. The limitations of this approach can be summarised as follows. First, factors studies ignore the socio-political aspects of organisational life and the way in which these affect management accounting practices. Second, little attention is paid to understanding conflicts of interests that might explain management accounting change. As a result, few insights are provided to explain the interplay between the relations of power inside the company and the process of management accounting change. Finally, the drivers for changes are normally attributed to economic or technical factors, such as market competition or the introduction of a new technology, while the wider social process involved in the diffusion of new management accounting techniques across organisations are not analysed in detail (Modell, 2007).

3.2 Process-Orientated Approaches

Many studies seeking to explain management accounting change have been informed by insights of social science theories. There has been a recent sharp increase in the number of studies that have adopted qualitative methods and social science theories. This kind of research is called ‘alternative’ management accounting research. In contrast to the mainstream approach adopted by factor studies, the process-orientated approaches share a concern with the wider social and political ramifications of change beyond merely managerial considerations. Therefore, the main distinction between process-orientated approaches and factors approaches is the fact that the former pays great attention to the intricate social and political dynamics of implementation of changes in management accounting, while the latter does not give the same importance to these issues with change generally attributed to economic or technical factors.

Studies based upon the process-orientated have drawn upon different alternative theories. However, institutional theory seems to be the most popular approach. According to Scapens (2006, p. 341), the theoretical basis of these studies ‘has tended to be in institutional theory, including both new and old institutional economics, and institutional sociology’. In fact, there are a considerable number of studies in management accounting change based upon institutional theories. Many of those draw on the old institutional economics (OIE), in particular the framework developed by Burns and Scapens (2000) (Burns, 2000; Scapens e Burns, 2000; Burns e Vaivio, 2001; Soin, Seal *et al.*, 2002; Guerreiro, Pereira *et al.*, 2006; Lukka, 2007). Other work on management accounting change has been based upon the new institutional sociology (NIS) (Powell e Dimaggio, 1991; Covaleski, Dirsmith *et al.*, 1993; Carruthers, 1995; Hussain e Gunasekaran, 2002; Modell, 2002; Covaleski, Dirsmith *et al.*, 2003; Major e Hopper, 2004; Yazdifar e Tsamenyi, 2005; Tsamenyi, Cullen *et al.*, 2006). More recently, some authors have tried to integrate the OIE and NIS to improve the understanding about the process of change in management accounting (Greenwood e Hinings, 1996; Yazdifar, 2003; Hassan, 2005; Siti-Nabiha e Scapens, 2005; Ribeiro e Scapens, 2006; Yazdifar, Zaman *et al.*, 2006).

Despite the relevant contribution of the institutional theories in management accounting change, this is a heterogenic area of research. There are a considerable number of papers which draw on other alternative approaches, such as structuration theory, critical theory (middle-range thinking), actor-network theory, and labour process theory (Baxter e Chua, 2003; Busco, 2006).

For instance, Conrad (2005) used structuration theory to investigate the consequences of regulation for management control and organisational change in the gas industry in the UK. Seal et al. (2004) also drew upon structuration theory to investigate a case of a supply chain initiative in UK electronics manufacturing. These authors conclude that structuration theory shows how inter-firm transactions and accounting can be analysed through the duality of structure.

Labour process theory was used by Major & Hopper (2005) to analyse the resistance and conflicts associated with the implementation of a new costing system (ABC) in a Portuguese telecommunication firm. Broadbent & Laughlin (2005) present an overview of management accounting change and suggestions for the future agenda research in this area. This paper advocates that middle-range thinking based on Habermas’ critical theory is the most adequate to investigate accounting and organisational change. Mouritsen (2005) adopted the actor-network theory to distinguish between design and mobilisation in the process of management accounting change. Mouritsen (2005, p. 111) conclude that “using the concepts design and mobilisation, it is possible to show how change and transformation are developed by all sorts of actors including accounting and management control systems themselves, and that the future is no predetermined project”.

Other researchers have used theoretical triangulation by combining two or more alternative approaches. They believe that theoretical triangulation enable studies to take advantage of the complementary nature of different theories and gain alternative interpretations of the management accounting phenomenon. For example, Gurd (2007) used theoretical triangulation based upon two theories, structuration and middle-range, to study accounting and organisational change at the Electricity Trust of South Australia. Dillard et al. (2004) proposed a framework to understand accounting change based upon structuration and institutional theories. Dillard et al. (2004, p. 506) conclude that "expanding the focus of the institutional theory based accounting research can facilitate a more comprehensive representation of accounting as the object of institutional practices as well as provide a better articulation of the role of accounting in the institutionalization process".

The main contribution of alternative approaches to management accounting change research is the view that the management accounting change process is influenced by a wide set of socio-organisational factors, such as; historical conditions, organisational culture, local meanings and values, local rationalities found in particular organisational settings, the individual habitudes of organisational participants, and the relations of power within the organisation. However, alternative approaches fail in explaining how socio-organisational factors and economic and/or technical factors interact in the process of contributing or hampering changes in management accounting. Therefore, as Modell (2007, p. 352) suggests "we still know very little about how economic, technical and institutional factors interact in the change process".

4. CLOSING COMMENTS

This study has discussed the main aspects of management accounting change and the present stage of research in the area. The book Relevance Lost by Johnson & Kaplan (1987) was identified as the starting point of the discussion about this subject. This book presented the issue of inappropriateness of management accounting which according to the authors offered little capacity for providing useful and timely information for better decisions and control in the areas of production costing and managerial performance.

Since this publication, the number of studies regarding management accounting change has proliferated and the issue of change has been consolidated as a popular area of research in the management accounting field. However, the concept of change is a controversial one. The meaning of change is problematic and its definition is also avoided (Quattrone e Hopper, 2001). For this study, management accounting change is considered to occur with the creation and introduction of new techniques or with changes in the way that managers use management accounting information generated by traditional systems.

Research in the field of management accounting change can be characterised by its methodological diversity which includes interpretive research, critical research and the traditional functionalist and positivist research. A variety of research methods have also been used, including surveys, fieldwork, case studies and ethnographic studies, as well as studies that have adopted a more conventional quantitative approach, such as contingency-type studies. In addition, researchers have drawn on a wide range of theories, including traditional positivistic theories, such as economic theory and contingency theory, and alternative theories, such as institutional theory, structuration theory, actor network theory, middle-range thinking, labour process theory, political economy, and Foucault's theory. Therefore, management accounting change is a heterogenic field of research with a non-dominant paradigm.

Despite this methodological diversity, management accounting change research can be classified into two major categories: factor studies and process-orientated approaches. The former aims to identify and explain the factors which contribute and limit changes in management accounting practices. However, this sort of research has been criticised because it ignores the socio-political aspects of organisational life and the way in which these affect management accounting practices. On the other hand, process-oriented approaches seek to explain the process of management accounting change by analysing the influence a wide set of socio-organisational factors, such as historical conditions and organisational culture.

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