

Recursive changes in healthcare management accounting and organizational implications.

Lesson learned from practices in a case study

Salvatore Russo^{*}, Lorenzo Dorigo[†]

Abstract.

The paper draws on consolidated theories that support the importance of management accounting within organizations and its ability to influence the organizational change. In particular, the analysis focuses on a case study built by a 3-years observation of an Italian Healthcare Regional Authority and its group of Healthcare Units and Hospitals in the construction and implementation phases of a standardized model of management accounting. The analysis shows the implications regarding technical criticism, controllers' involvement, and outcome.

Introduction

In the last thirty years, there has been growing interest in the issues concerning the relationship between accounting and organization change (Hopwood, 1983, 1990). In this path of research, attention has been paid to different accounting impacts, in its various dimensions, financial or management accounting (Burns and Vaivio, 2001; Burns and Scapens, 2003; Broadbent and Laughlin, 2005). The combination of theories used in this field of research is very mixed, as well as the heterogeneous nature of the principles, rational or technical, used in existing literature (Chenhall and Euske, 2006).

The study of the relationship between accounting and organizational change has also found a fertile field in the transformations that took place in the healthcare organizations, particularly in hospitals. As known, the reforms of the health systems in most industrialized countries have been dictated, primarily, by the end of promoting rules for a better economic rationality and the 'free market' (Aidemark, 2001:545).

This situation has obviously been a decisive factor in choices in the reform of accounting systems, by giving prevalence to the need to be able to measure more

^{*} Associate Professor, Department of Management, Ca' Foscari University, Venice (Italy)

[†] Researcher, Department of Management Ca' Foscari University, Venice (Italy),

quickly costs generated within organizations, so that they can monitor, control and, where appropriate, eliminate them.

This body of literature includes both theoretical and empirical analyses where changes in management accounting systems result from influences of internal (Broadbent, 1992; Jacobs, 1995; Fiore, 2008;) and external context (Broadbent, 1992; Laughlin et al. 1992, 1994; Greenwood et al. 1998; Chenhall, 2003; Kurunmaki et al. 2003; Broadbent and Laughlin, 2005).

These research threads share a common effort of understanding effective changes occurring in management accounting and organizations as the result of users' cultural changes in approaching and using these systems for improving their performance, thus allowing organizations to combine an effective integration of managerial logics with clinical logics. In general, the research findings highlight the significance of considering crucial issues when analysing the relationships between these two dimensions. Firstly, the assumption that the process of change is itself a fundamental element of change (Laughlin, 1991). Secondly, the importance of involving users of the accounting systems in the process of change by establishing collaborative relationships and interactive solutions with professional accountants (Cinquini and Campanale, 2010; Lecci and Morelli, 2011).

However, little empirical attention has been given so far to the study of accounting and change in healthcare organizations by the design and implementation of useful construction of new entities of management accounting.

For this reason, the paper aims to advance knowledge in the field of accounting and organization change from a case study of the managerial construction of a new cost accounting model in a regional area with acute public hospitals. To this end, the paper uses two analytical perspectives.

The first perspective aims at examining the rational motivations and mechanisms that drive change in the healthcare accounting systems. In this sense, the paper strives to frame, with an institutionalist approach, the key elements that chart the impact of accounting systems on the organization. Among these, they detect colonization phenomena, search for visibility and professional legitimacy by clinicians and health managers, in adopting management accounting systems.

The second perspective concerns the choice of accounting systems regarding advanced cost management. The paper investigates what current trends are in choosing the most appropriate accounting techniques and, despite the evolution in healthcare management accounting, points out more sophisticated techniques – i.e. activity-based costing (ABC), Time driven activity-based costing (TDABC), Target costing, Balanced Scorecard – the current trend seems to settle for the need for traditional forms of cost center accounting where the organizational control seems to prevail in absolute terms (Chan 1993; Kaplan et al., 2014). Consistent with the prospects for further analysis, the

paper illustrates a case study from the Italian context in which a region coordinated the gradual spread of homogeneous rules for the introduction of management control in the reference health organizations.

The specificity is because there has been a peripheral center interaction with the aim of building the guidelines to which it refers during the implementation, and this has generated a series of behaviours not always consistent with expectations. In the case study, management accounting is the considered the main tool by which to recapture standardized practices, and to give an impulse to management control and performance systems.

Theoretical background

Theories that support the application of managerial accounting in healthcare organizations are due to the need for rationalization in the use of resources, especially in hospitals. It can be asserted that the application of market logic in healthcare has led to changes both in organizational and accounting terms. Changes in healthcare accounting systems have been studied from an institutional perspective as phenomena often driven by external variables in healthcare systems and can provide motivation and exercise various kinds of pressure on them. However, little attention was paid to the development of cost-accounting systems as a consequence of reforms implemented within the same healthcare systems, and to the study of the motivations and pressures of various kinds that the healthcare actors themselves feed and exercise among them.

A breakthrough in the management accounting research was the work of Burns and Scapens (2000) who have outlined the different approaches and supported the institutional theory. The authors emphasize that a significant part of the research is concerned with management accounting as an outcome; on the contrary, few studies focus on management accounting as a process. Thus, the paper aims to fill this gap, starting from existing studies and considerations that over time have been linked to management accounting and organizational change.

Traditionally, management accounting is intended as providing information for management planning and control. It is based on the old institutional theory which recognizes, among other things, that "in many organizations, management accounting systems and practices form stable rules and routines." (Burns and Scapens 2000; Scapens 1994). This allows us to develop a framework for conceptualizing management accounting change, "which not only stresses the stability embodied in rule-based behaviour and routine organizational systems and practices but also recognizes that rules and routines can change.

The institutional theory drawn on the OIE offers a perspective on "organizational routines" and in their change. It also provides a way to address some of the difficulties

in using other theoretical frameworks as well as the Giddens' structuring theory (1984) in accounting research, and in particular, in research related to management accounting change (Burns and Scapens, 2000). In this way, the institutionalism allows us to give importance to the meaning of social practices. The “structuration” means rules and conditions leading the stability or “transformation of structures and social systems and indicates that the structure exists in a recursive relationship” (Busco, 2009:250; Giddens, 1984).

The starting point for the institutional framework is the recognition that management accounting practices can “both shape and be shaped” by the institutions which govern organizational activity. In this approach, the focus is on rules, habits, and routines that characterize the institution. In management accounting systems, however, rules and routines should be distinct, as the former comprise the formal principles on which management accounting systems are based, while routines are to be considered as the result of practices in use. In explaining how rules and routines interact, Burns and Scapens propose a representation of the process of institutionalization. In it, there are the realm of institutions and the realm of action in a series of interactions that explain the four possible manifestations. While institutions constrain and shape action synchronically (i.e. at a specific point in time), actions produce and reproduce institutions diachronically. Rules and routines will give rise to four different processes: encoding, enacting, reproduction and institutionalization.

The first is to encode institutional principles into rules and routines. In general, the existing routines will embody (i.e. encode) the prevailing institutional principles, and will form new rules, which will turn to the formation and reformation of the on-going routines.

The enacting process involves the actors enacting the routines (and rules) that encode the institutional principles. This process of enactment may involve conscious choice, but will usually result from reflexive monitoring. This enactment of rules and routines could result in resistance especially if rules and routines threaten existing values and established practices. And actors have sufficient resources to intervene in this process.

The third process takes place as repeated behaviour leads to a reproduction of the routines. This reproduction may involve either conscious or unconscious change as discussed above. Conscious change is likely to occur only if actors are able to assemble the resources and rationales necessary to collectively question the existing rules and routines.

The last process involves the institutionalization of rules and routines obtained through the behaviour of each actor. This involves dissociating the forms of behaviour from their original context, so that the rules and procedures assume a normative and factual quality that undermines their relationship with the interests of the different actors.

By observing the relationship between management accounting and organizational change, an extensive interpretation is also needed. Management accounting is also a component of the broader programming and control system, and therefore it is important to pay attention to the relationship between the use of management control system (MCS) and planned organizational change (Burns & Vaivio, 2001; Chenhall and Euske, 2007). MCS is seen to take an active part in the processes of organizational change. There are several streams of research in which we can place the effects generated by management control organizational change.

Chenhall and Euske (2007) identify different approaches: 1) History and external context; 2) Integrating change between central and operational sub-units; 3) Diffusing and integrating change across the organization; 4) Gaining employee's commitment to change.

the four possible manifestations. While institutions constrain and shape action synchronically (i.e. at a specific point in time), actions produce and reproduce institutions diachronically. Rules and routines will give rise to four different processes: encoding, enacting, reproduction and institutionalization.

The first is to encode institutional principles into rules and routines. In general, the existing routines will embody (i.e. encode) the prevailing institutional principles, and will form new rules, which will turn to the formation and reformation of the on-going routines.

The enacting process involves the actors enacting the routines (and rules) that encode the institutional principles. This process of enactment may involve conscious choice, but will usually result from reflexive monitoring. This enactment of rules and routines could result in resistance especially if rules and routines threaten existing values and established practices. And actors have sufficient resources to intervene in this process.

The third process takes place as repeated behaviour leads to a reproduction of the routines. This reproduction may involve either conscious or unconscious change as discussed above. Conscious change is likely to occur if actors can assemble the resources and rationales necessary to collectively question the existing rules and routines. The last process involves the institutionalization of rules and routines obtained through the behaviour of each actor. This involves dissociating the forms of behaviour from their original context, so that the rules and procedures assume a normative and factual quality that undermines their relationship with the interests of the different actors.

By observing the relationship between management accounting and organizational change, an extensive interpretation is also needed. Management accounting is also a component of the broader programming and control system, and therefore it is important to pay attention to the relationship between the use of management control system (MCS) and planned organizational change (Burns & Vaivio, 2001; Chenhall and

Euske, 2007). MCS is seen to take an active part in the processes of organizational change. There are several streams of research in which we can place the effects generated by management control organizational change.

Chenhall and Euske (2007) identify different approaches: 1) History and external context; 2) Integrating change between central and operational sub-units; 3) Diffusing and integrating change across the organization; 4) Gaining employee's commitment to change. Theories that support the application of managerial accounting in healthcare organizations are due to the need for rationalization in the use of resources, especially in hospitals. It can be asserted that the application of market logic in healthcare has led to changes both in organizational and accounting terms. Changes in healthcare accounting systems have been studied from an institutional perspective as phenomena often driven by external variables in healthcare systems and can provide motivation and exercise various kinds of pressure on them. However, little attention was paid to the development of cost-accounting systems as a consequence of reforms implemented within the same healthcare systems, and to the study of the motivations and pressures of various kinds that the healthcare actors themselves feed and exercise among them.

A major breakthrough in the management accounting research was the work of Burns and Scapens (2000) who have outlined the different approaches and supported the institutional theory. The authors emphasize that a significant part of the research is concerned with management accounting as an outcome; on the contrary, few studies focus on management accounting as a process. Thus, this paper aims to fill this gap, starting from existing studies and considerations that over time have been linked to management accounting and organizational change.

Traditionally, management accounting is intended as providing information for management planning and control. It is based on the old institutional theory which recognise, among other things, that "in many organizations, management accounting systems and practices form stable rules and routines". (Burns and Scapens 2000; Scapens 1994). This allows us to develop a framework for conceptualizing management accounting change, "which not only stresses the stability embodied in rule-based behaviour and routine organizational systems and practices, but also recognizes that rules and routines can change.

The institutional theory drawn on the OIE offers a perspective on "organizational routines" and in their change. It also provides a way to address some of the difficulties in using other theoretical frameworks as well as the Giddens' structuring theory (1984) in accounting research, and in particular, in research related to management accounting change (Burns and Scapens, 2000). In this way, the institutionalism allows us to give importance to the meaning of social practices. The "structuration" means rules and conditions leading the stability or "transformation of structures and social systems and indicates that the structure exists in a recursive relationship" (Busco, 2009:250; Giddens, 1984).

The starting point for the institutional framework is the recognition that management accounting practices can “both shape and be shaped” by the institutions which govern organizational activity. In this approach, the focus is on rules, habits and routines that characterize the institution. In management accounting systems, however, rules and routines should be distinct, as the former comprise the formal principles on which management accounting systems are based, while routines are to be considered as the result of practices in use. In explaining how rules and routines interact, Burns and Scapens propose a representation of the process of institutionalization. In it there are the realm of institutions and the realm of action in a series of interactions that explain the four possible manifestations. While institutions constrain and shape action synchronically (i.e. at a specific point in time), actions produce and reproduce institutions diachronically. Rules and routines will give rise to four different processes: encoding, enacting, reproduction and institutionalization.

The first is to encode institutional principles into rules and routines. In general, the existing routines will embody (i.e. encode) the prevailing institutional principles, and will form new rules, which will turn to the formation and / or reformation of the on-going routines.

The enacting process involves the actors enacting the routines (and rules) that encode the institutional principles. This process of enactment may involve conscious choice, but will usually result from reflexive monitoring. This enactment of rules and routines could result in resistance especially if rules and routines threaten existing values and established practices. And actors have sufficient resources to intervene in this process. The third process takes place as repeated behaviour leads to a reproduction of the routines. This reproduction may involve either conscious or unconscious change as discussed above. Conscious change is likely to occur only if actors are able to assemble the resources and rationales necessary to collectively question the existing rules and routines.

The last process involves the institutionalization of rules and routines obtained through the behaviour of each actor. This involves dissociating the forms of behaviour from their original context, so that the rules and procedures assume a normative and factual quality that undermines their relationship with the interests of the different actors.

Observing the relationship between management accounting and organizational change, an extensive interpretation is also needed. Management accounting is also a component of the broader programming and control system, and therefore it is important to pay attention to the relationship between the use of management control system (MCS) and planned organizational change (Burns & Vaivio, 2001; Chenhall and Euske, 2007). MCS are seen to take an active part in the processes of organizational change. There are several streams of research in which we can place the effects generated by management control organizational change.

Chenhall and Euske (2007) identify different approaches: 1) History and external context; 2) Integrating change between central and operational sub-units; 3) Diffusing and integrating change across the organization; 4) Gaining employee's commitment to change.

The research

Method

The research procedure adopted is the constructive approach applied to the practical field of management accounting (Kasanen et al. 1993), which means problem solving through the construction of accounting procedures or models. The work moves from the critical perspective that management accounting, in the end, is a practical field where theory without pragmatic implications is empty (Ahrens and Chapman, 2007).

The managerial construction has been investigated by using a case study analysis (Yin, 1994). By developing a construction, in fact, a new reality that profoundly differs from anything which existed before is created, with the aim of explicitly demonstrating the practical utility of the solution implemented. The research aims to investigate both motivations and underlying operating strategies that foster change processes, in cost management in health systems, in conjunction with the implementation of health system reforms.

More specifically, the process of change to be investigated concerns the implementation of clinical costing standards, in the healthcare organizations belonging to a given regional health system. The aspects of the change being analyzed relate to the modified logic of standards adoption, as a consequence of the changing system conditions and the motivations taken by the business controllers during their implementation in each healthcare structure of the regional system.

Two main reasons support the adoption of this methodology for developing managerial constructions. On the one hand, its wide diffusion within organizational and management science to investigate the foundational aspects influencing the processes of change (Pettigrew, 1990). On the other hand, its opportunities to combine descriptive and interpretative approaches to the qualitative analysis of complex phenomena (Yin, 1994; Eisenhardt, 1989, 2007). Specifically, the rationale of embedded case study (Scholz and Tietje, 2002) aims to achieve a holistic understanding of the case within its situational context considering different perspectives and units of analysis. The paradigm used to organize the problem solving formulation is explicitly systems thinking, in which a situational case is broken down into salient components, with each component analysed, and the results integrated to provide new insights.

The method is the case study (Yin, 1994) applied to cost accounting research (Otley and Berry, 1994). The field research in particular is a longitudinal case study (almost 3 years) about managerial construction of cost accounting and the definition of clinical costing standards. The researchers had contact with the organization from 2014 and mainly by way of the organizations' involvement in professional management accounting groups to which the researchers belonged. Most of the data for this study were collected over a two-year period between September 2014 and December 2016. Four types of data were gathered: interview, archival, public and official documents and observation of administrative processes. The research material and documentation comes in particular from the experience of direct engagement in the meetings of the supervisory board of the working groups, meeting minutes, material used by the working groups, cost accounting flows.

The actors involved include the Regional Board, the Working Groups with Healthcare Units and Regional Representatives, the Audit Committee. In particular, the Regional Board consisted of: Financial Healthcare Programming Director, two internal staff members, academic experts on cost accounting, two hospital hub controllers, and three hospitals spoke controllers. Specifically, the working groups consisted of controllers and the costing was regarding 'personal data' (9), 'coding system' (3), 'healthcare services consumption' (4), 'staff costs' (5), 'hotel services' (3), allocated overheads (3), income (4).

The Audit Committee was composed of RHS Finance Director, two RHS internal staff members, academic experts in cost accounting. The two main research questions concerned with;

1. Examining choices and contents made about the innovations to be implemented into the management accounting systems of the healthcare units;
2. Understanding the causes and factors behind the resistance exercised by hospital accountants in adopting standard costs within management accounting systems. The main issue addressed by the research is the motivation and the underlying logic that guided the behavior of corporate controllers in adopting clinical costing standards without actually following their implementation in corporate accounting systems. Specifically, we investigated changes in motivations and action logic that support the change in the initial convictions and beliefs of controllers, given the influence of environmental and regulatory factors that inspired the implementation of the HSR reform.

The first issue led the research team to study the regional mechanisms for designing and implementing a hospital cost accounting system aligned to the new horizontal models based on patient's clinical severity. In fact, pushes for change have initially been geared towards advanced management accounting able to combine ABC techniques (Chan, 1993; Ramsey, 1994) with those of intensity care costs. This trend seems to be in line with what has been, at international level, in recent years on the

adoption of innovative philosophies or techniques, borrowed from industry experience, for example, the implementation of business philosophies, techniques, and tools such as total Quality management (TQM), continuous improvement (CI), just-in-time techniques (JIT) (Yasin et. al. 2002). Moreover, the traditional management accounting approach has shown all its resilience, considering that the system has done a reverse course, alleging initial ambitions.

The model implementation as prior managerial tool to avoid resistance to change, thus supporting the transition from hierarchical structures, where specialist unit managers (clinicians) are responsible for both resource allocation and consumption into their patient settings, to patient-centered structures, where responsibilities are expected to be distinguished between clinicians and nurses in order to assure higher efficiency on resource allocation and consumption.

The second issue moved towards the investigation of reasons and factors to be categorized into two macro categories:

1. economic /rationalizing, resulting from cost-benefit calculations;
2. related to institutional pressures, therefore of social and political nature, generally related to issues such as visibility, professional legitimacy, and power.

The process of managerial construction that gave rise to the implementation of the analytical map of cost centers has shared the basic traits of the heuristic reasoning (Basel, 2012).

Overview of the organizational context

Preliminarily, it seems helpful to define the contexts in which research findings have been produced. As explained above, the main issue is concerned with the change of the cost accounting system in a network of acute public hospitals and was drawn to a recent strategic project carried out by the Regional Healthcare Authority (RHA) of an Italian Region.

Since the early '90s, in Italy, there have been some reforms of the healthcare system. Competition has been increased, so enabling citizens to choose their healthcare provider. Hospital payments have been standardized using a Diagnostic Related Group (DRG) system, and a small amount of copayment has been introduced. Under the governance perspective, the succeeding reforms have progressively led regions to consolidate their coordinating role in their respective healthcare systems within the agenda of the common national health policy. Thus, reforms were aimed at increasing planning at the regional level and increasing efficiency of all general managers within the Italian National Healthcare Service. Managers were placed on fixed contracts with regular performance reviews (Lo Scalzo et al., 2009). Local Healthcare Units are

managed by a general manager appointed by the governor of the region and deliver primary care, hospital care, outpatient specialist care, public health care, and health care related to social care.

Considering our case study, in the efforts of the Regional Authority, the project of defining and implementing clinical costing standards has been conceived as the driving force behind an institutional change process involving the traditional governance model of the Regional Healthcare System (RHS). The RHS essentially consist in nine HealthCare Units, two Autonomous Hospitals and one Special Institute for Cancer. The Healthcare Units have also hospitals directly depending on their administration.

Thus it aims to reform it in a perspective of growth of standards of efficiency, effectiveness, fairness, and appropriateness of care, in a context of scarce financial resources and growing citizens' expectations towards the quality of healthcare services.

The RHS's governance reform is developed along three lines of action on both healthcare and social healthcare system:

1. macro level: Reformulation of regional policies and strategies with consequent reorganization of the hospital services system with a view on the continuity of healthcare through the adoption of a “hub & spoke” governance model;
2. meso level: Rationalization of technical-administrative services for each local healthcare unit, throughout;
 - the merger of the local healthcare units on territorial basis for reducing the number of that one already existing ;
 - the creation of a unique technical-administrative Services Management Unit for the entire healthcare and social-health supply system;
3. micro level: reorganization of hospital care models, according to horizontal or “process” logic and adoption of lean management techniques.

The definition and implementation of appropriate tools for government and cost control of the RHS Healthcare Units, therefore, has a strategic importance for the effective implementation of the reform.

Within the actions identified for the enhancement of the instrument dashboard components, the RHS under observation included the standardization of the clinical costing system, among the priority actions supporting the entire regional programming and control cycle.

In the efforts of the Regional Authority, the structuring of a cost, activity and performance analysis is based on shared and uniform principles and rules for all healthcare organizations belonging to its group. It is considered a necessary tool to

meet the multiple information needs related to programming activity and operation system.

The Regional Authority's inception was the structuring of cost, activity and performance analysis and, in general, an analysis system based on shared and uniform principles and rules for all healthcare providers, offering a tool to respond to multiple information needs linked to programming and control activity.

In the management control function, the Regional Authority entrusted the task of monitoring the performance of individual healthcare, both regarding performance and cost-effectiveness. The cost-monitoring and control process thus outlined provides for the assignment of a set of goals to the healthcare organizations:

- to increase the level of efficiency of the regional healthcare system given the containment of health expenditure;
- to support benchmarking, to favor the gradual convergence of the healthcare firms towards the adoption of organizational models representative of the regional best practices.

Consequently, the implementation of a management accounting system is the reference accounting information tool to support the implementation of the overall programming and control cycle of the Regional Authority.

The use of the system to carry out timely and accurate surveys and analyses of the actual costs of healthcare organizations in the various areas of the Units management (area of activities, supply structure, level of assistance) would not only be of benefit to the Regulatory Authority facilitating the identification of best practices on which to set benchmark efficiency measures and benchmarks for the entire system, but also for all of the Healthcare Units, in order to improve its management and facilitate the alignment of their results with those of the best performers.

Implementations and main findings

The starting point was characterized by a certain heterogeneity in the design of the maps of the responsibility centres, burdened by the accounting practice of fragmenting the cost centres, according to multiple management needs. Specifically, there was an initial situation of excessive proliferation of centers and subcentres (stays, operating rooms, outpatient clinics) organized around individual clinical units (in turn structured in a variety of surgical and medical departments) and consequent pervasive diffusion of phenomena of cost-sharing in the organizational areas.

I step

The first step (1st year). Objectives: 1) project team building; 2) definition of working methodology; 3) creation of working groups; 3) production of a draft of clinical costing standards.

A first phase of the project has been designed to operate effectively on methods of harmonizing, integrating, allocating and detecting direct and indirect costs regarding healthcare services. The implementation of this phase was necessary to overcome the contingencies of ad hoc surveys in each healthcare Unit and to get an overall definition of a reference model shared by other Healthcare Units, albeit in a partial form and for an experimental application.

It started with an initial proposal of general objectives formulated by the regional board (project team) and shared with the Healthcare Units' controllers. An important goal was to extend the representation of the Regional Board to some hospital controllers, thus ensuring its "hub & spoke" representativeness. This has contributed to strengthening trust and confidence of the "recruited" controllers on the project's goals and to enhancing the spirit of participation of those people involved in sharing work methods and goals to achieve.

Healthcare Units' controllers mostly agreed about working together to develop solutions that improve their internal accounting system according to standardized rules and, above all, to be able to share a benchmarking tool that would allow a systematic comparison of the hospitals' performance in the regional network.

At this stage, cost/ benefit economic rationality and professional development (skills, peer-to-peer) have clearly dominated the controllers against the emergence of institutional pressures stemming from the prevalence of merely 'political' or image of the reform related to the development of the project.

A second step was the real cost-management process (Kasanen et al, 1993). This led to the creation of direct working groups from the regional board on specific issues, which resulted in the drafting of the first draft of regional clinical costing standards. The decentralization of decision-making to controllers has enabled them to gain greater awareness of added value of the personal contribution to building standards and the benefits/margins of improvement that this project could have on hospital's management control and their professional career.

At the same time, however, some controllers have begun to perceive some distrust about the real possibility of implementing new homogeneous standards, sometimes radically different from those normally used in businesses (eg staff costs, rollovers), and the degree of complexity and overload of work that this would have entailed within their own office.

From the regional standpoint, the ultimate expectations regarding the effective implementation of standards and the ability to achieve a high degree of homogenization of management accounting systems were growing, like the enthusiasm of the regional board members. This resulted in the Board's decision (autonomous without consulting the various Unit's controllers) to extend the project's objectives beyond the implementation of individual clinical costing standards in the Healthcare Units through:

- the production of new standards on the recognition of hospital activities and performance, and the identification of appropriate quantitative indicators (quantitative volume control);
- the construction and development of a regional data warehouse to allow individual companies to load business flows and to verify the correctness of technical procedures for activating coding and accounting (quality control over procedures).

Clinical Costing Standards have been adopted to allow Healthcare Units to undertake a gradual and monitored process of homogenization / alignment of their cost accounting systems, both for the structural component (cost centers plan) and the operating components (direct costing, Indirect and overhead costs).

Their implementation has supported the main goal of setting up all RHS Healthcare Units towards adopting a shared and practicable model of full cost pricing. This approach has been considered as the starting point for the development of a later and more ambitious transition pathway to patient-based costing systems, even considering the increasing computerization and integration of health information systems.

The key decision was to reform the design approach of existing cost center plans by discarding the alternative of resorting to substitute models based on activity-based systems and techniques because they were considered too risky and complex to implement in practice. Characterized by a strong resistance to change and still not sufficiently educated to adopt industrial / product accounting logic. To this end, a 'compromise' solution was designed, based on a reasonable level of aggregation of detection of the centers and on a dual optics of resource use, which would facilitate the inter-play between cost centers of healthcare units and regional accounting requirements. As a result of the articulation of the new standard plan, in fact, it was decided to distinguish the medical staff (clinical dimension) from the service / department (nursing and technical staff) and to associate the patient's consumption and the cost of the services to the only care dimension. In this way, the system wanted to get rid of the traditional hospital hierarchy of departments / clinical units. This choice was a direct implication of the approach of corporate accounting systems to modern hospital care logic, as by this new accounting approach the patient (and their consumption) is physically displaced only from mutated clinical-welfare needs. Rather than because of the specialty of the doctor taking care of it. In the Board's intentions, referring to these new basic logic, it would have been able to trace in detail the elementary level of

resource absorption and revenue allocation within a unified, clear and shared system of organizational coordinates

Consequences of this new approach to cost allocation criteria -> 1. use of direct costing techniques (cost drivers) for charging the costs of services in the care areas (health services and not); 2. Analytical redefinition of the criteria for the recognition of personnel costs, distinguishing according to the role (medical, health, technical, administrative) and qualification (executive, non-managerial); 3. Redefining the criteria for charging the costs of supportive health services (e.g., operating rooms, outpatient clinics) in the hospital areas (homogeneous multidisciplinary areas) and problems related to their subsequent overturn in the final centers.

Table 1 - Motivations of hospital accountants in the design phase of the clinical costing standards (CCS)

MOTIVATIONS	RATIONALE	
	ECONOMIC EFFICIENCY	INSTITUTIONAL PRESSURES
Strengthening of cost control and improvement of 'full cost pricing' (DRG-based pricing)	Main reason of the adoption of CCS	CCS are part of the reform of the Health Care System (coercive implementation)
Transition to patient-based full costing	CCS are seen as the first step of an institutional path towards the adoption of patient-based full costing	CCS do not imply the adoption of patient-based costing techniques
Contractual-based budgeting	High expectations to improve direct costing and diminishing of cost cross-subsidisation and cost drivers	No external pressures by clinical directorates and chief physicians
Investments in professional skills and competencies	High expectations for full clinical cost pricing	Hospital accountants are able to acquire professional dominance over cost accounting.
Visibility towards the general management	Main argumentation concerns the beneficial influence of accurate full cost prices, elimination of cross-subsidisation and cost drivers for the improvement of the financial measurement	Weak pressures to answer financial criticism
Visibility towards Health Care Authority (HCA)	CSS are also adopted in order to improve DRG-based pricing by the HCA	High pressures by the HCA to be involved in the CSS design and implementation
Carrier development	Benefits are almost expected to be related to corporate cost control and 'full cost pricing'	Weak and subordinate to the reach of economic efficiency
Impacts on corporate information systems and financial performance measurement	CSS are essential to improve the reliability and significance of data and measures on hospital activities and costs	High pressures by the HCA for the improvement of 'full cost pricing' (DRG-based pricing)
Impact on financial measurement of the Health Care Authority (HCA)	CSS are essential to improve the financial performance of the HCA	CSS implementation is the main argumentation to answer external criticism, and the credibility/legitimation of DRG-based pricing
Negotiation, exchange and sharing of cost information and	Financial disclosure and peer-to-peer are essential to improve	Hospital accountants have either internal resources or outside

accounting practices among professional peers	corporate cost control and 'full cost pricing' (DRG-based system)	consultants for supportive roles
-----------------------------------------------	-------------------------------------------------------------------	----------------------------------

Below, we argue pros and cons.

Pros. The prevailing motivations in favour of the definition of clinical costing standards were, as follows:

- Training and skills development;
- Interest in gaining visibility and professional legitimacy during the implementation period of the Regional Healthcare reform;
- Opportunities to improve the healthcare units' accounting system (adoption of more sophisticated costing techniques and procedures and in line with international clinical standards);
- Production of homogeneous, adaptive guidelines, decided by the working groups and shared with the regional board;
- Recognition of the contribution of the individual professional to the creation of regional standards (internal career progressions).

Cons. Similarly to "Pros", the prevailing reasons of "cons" affecting the definition of clinical costing standards were, as follows:

Poor interest in the implications of this project on the healthcare unit's management control and on its position;

Poor interest in gaining visibility and professional legitimacy during the implementation period of Regional healthcare reform;

Negative expectations about the future implementation of standards in the management accounting systems.

In the Tab. 1 we can observe a balance of motivations among the controllers.

II step

The second step (2nd year). Objectives: 1) implementation of clinical costing standards in the accounting systems; 2) standard definitions of activities and performance; 3) creation and implementation of the regional data warehouse and system of controls on accounting procedures.

The clinical costing standards have been implemented within the Healthcare Units without supervision or method co-shared by each controller and the regional board. As a consequence, this has resulted in noticeable slowdowns and situations of 'partial' implementation of new accounting policies and procedures within the Healthcare Units and Autonomous Hospitals. Therefore, a some issues occurred in the Healthcare Units (e.g. integration with corporate information systems, all staff; ways of revenue recognition from DRG in actual resignation stays; uniformity in indirect costs overruns and significant driver detection capability for “hotel” services) and tensions between internal staffs into the management control about the correct allocation of workloads, with frequent requests to the "general manager" for mediation of conflicts. Also, the same controllers and internal staffs have undergone internal pressures by the Healthcare unit's general manager (or Hospital's General manager) to adequately fulfill the terms of the various operational issues of the project since the clinical costing standards were among the objectives to be met by regional management for the general-director of the Healthcare Units or Autonomous Hospitals. Their failure or even partial achievement could have jeopardized the positive assessment of the Directors-General.

With regard to the Regional Board, the ongoing operational slowdowns and the continuous technical difficulties experienced in the implementation of procedures by the healthcare units have led to a strategic withdrawal of the overall vision of the project and the emergence of conflicts among the board members on “how to manage the project” (in particular, on the one hand among the regional components and, on the other hand, among the representative of the healthcare.) Each member attributed to the other, and vice versa, the responsibility for the lack of a "strong" cockpit for the definition of a supporting method for controlling the work implementation, as an adequate audit in the healthcare units for the implementation phase of clinical costing standards.

Also, the regional board was seriously questioning the feasibility of the results to be achieved during the II year while maintaining a collaborative and participative approach to the units' controllers inspired by operational decentralization and decision-sharing. All these pressures within the board have also added institutional burdens stemming from having to submit to the Regional General Director and the general managers of the healthcare Units results on hospital costs in companies for regional benchmarking.

In this situation, therefore, the board decided, with the help of external consultants, to independently pursue the achievement of Objectives 2 and 3 and present them to controllers as design outcomes that have already been acquired by having to be promptly implemented within the accounting systems of the hospitals.

This decision had significant implications for the change of the controller's logical reasons and logic about the feasibility and actual benefits of the project. Many controllers felt "crushed" by the regional board and considered to be just other

volunteers, another will than those who initially shaped the design phase and their own work methodology.

In this sense, rationality and behavior typed in the sphere of political and social assessments, typical of the isomorphism that incites the inertia to change of professional groups, began to be subordinated to controllers.

Among the main ones, we can point out: decoupling phenomena (achieving 'top-up' goals in the sole optic of performance, without paying attention to effectiveness, quality of change and personal investment in knowledge and innovation), implementation of resistances and mimetic phenomena of various kinds, professional misunderstanding perceptions.

Table 2 - Motivations of accountants in the implementation phase of CCS systems

MOTIVATIONS	RATIONALE	
	Economic efficiency	Institutional pressures
Strengthening of cost control and improvement of 'full cost pricing' (DRG-based pricing)	Moderate optimism about the efficacy of CCS	Implementation of CCS is a mandatory requirement for HCO
Transition to patient-based full costing	CCS are perceived as not related to it	Reform not explicitly refers to the adoption of patient-based full costing
Contractual-based budgeting	CCS are relevant to optimise the budgetary process	General management sees CCS also as a force of balance of the budgetary negotiations with clinical directorates and physicians
Investments in professional skills and competencies	Moderate expectations	Hospital accountants have professional dominance over CCS
Visibility towards the general management	High pressures to produce reliable and significant cost outputs	High pressures to answer financial criticism
Visibility towards Health Care Authority (HCA)	CCS are the main instrument to strengthen cost control and improving 'full cost pricing'	High expectations and pressures through audit
Carrier development	Weak	High expectation in terms of visibility towards the HCA
Impacts on corporate information systems and financial performance measurement	CCS implementation do not clearly impact on them	Outside pressure by consultants and software vendors
Impact on financial measurement of the Health Care Authority (HCA)	CCS are essential instruments to improve the financial performance of the HCA	CSS implementation is the main argumentation to answer external criticism, and the credibility/legitimation of DRG-based pricing
Negotiation, exchange and sharing of cost information and accounting practices among professional peers	Fundamental aspects of CCS implementation	Relevant to gain consensus among peers and put in practice organisational decoupling

These phenomena have thus been embodied in demonstrations and behaviors aimed at reducing the previously implied commitment, by problematizing the relationship with the board and its role in operational development of the project, by absorbing innovative practices and procedures foreseen in the clinical standards in routine practice by means of 'screen' or fake decisions and behaviors designed to mask a change that is only formally de facto not practically accomplished in the field of practical innovation. While the first year can be substantially characterized by spontaneous implementation processes and highly participated in defining the standards and reporting progress made by the working groups towards the project board, the second phase was marked by the emergence of operational difficulties and implementation techniques and integration of clinical standards at the local level.

Also, the decision-making abolition in the board has led to a substantial change in the work plan and methodology, modifying relationships with regulators on the most regulatory and executive level, in contrast to the trustee and participatory approach previously experienced with them.

Pre-empowering reasons for the implementation and integration of clinical costing standards in corporate accounting systems were:

- Visibility and professional legitimacy of the controller's work towards the RHS Directorate-General;
- Recognition of the individual professional's contribution to the creation of regional standards (internal career progression, counselling positions within the emerging RHS governance);
- Efficiency and accountability of the healthcare firms.

Table 3 - Timing of design phases (1) and implementation (2) of clinical costing standards (in months)

Phases of development and implementation of clinical costing standards	Records of cost centers	Coding	Direct costing: consumption	Direct costing: cpersonnel costing	Direct costing: Purchase healthcare services	Not healthcare services	Administrative and general services	Revenues: full pricing
1.1 Study and design	6	2	3	3	3	2	3	2
1.2 Definition of procedural criteria and rules	6	2	2	3	2	2	3	3
1.3 Standardization of the pilot model	3	2	2	2	1	1	2	2
2.1 Operational decentralization in the Healthcare Units' accounting systems	3	2	2	2	2	2	2	2

Prevalent reasons for the "cons" implementation and integration of clinical costing standards in the corporate accounting basics were:

- Technical and operational difficulties of various kinds (combination of cost standards and activities with company information systems);
- Persuasion and pessimism of staff on achieving the project's aims;
- Poor interest in the project's implications in corporate management control and its professional position;
- Poor interest in gaining visibility and professional legitimacy during the implementation period of RHS governance reform.

In the Tab. 2 we can observe a balance of motivations among the controllers.

In the Tab. 3 we can observe the Timing of design phases (1) and implementation (2) of clinical costing standards (in months)

III step

The third phase (3rd year). Objectives: surveys and audits on accounting data of 2014; Revisions on accounting policies and procedures in the Healthcare Firms and Autonomous Hospitals; surveys and audits on accounting data of 2015.

The third phase was conducted entirely by the RHS Control Committee, in order to test the reliability and significance of the healthcare Units surveys both on the quantitative and qualitative profile (procedural correctness) according to the adopted standards (cost and activity/performance), in addition to the overall processing and reporting capabilities developed by the regional data warehouse.

As a result, the degree of inhomogeneity and fragmentation of costing logic within corporate accounting systems has remained substantially unchanged, only partly contributing to the cost sharing phenomenon. Also, this way of doing has jeopardized the reliability of the accounting data.

The new regional model was only partially followed by the Healthcare Units, in view of the will and ability of hospital accountants to adapt their information systems (management systems of hospital activities) or through the implementation of numerous solutions, sometimes redundant and unreliable, to the accuracy and significance of accounting information (such as the distribution of the cost of nursing staff in the areas of care, overlapping costs of Health services in multidisciplinary stays).

Some hospital accountants, in particular those working in hospitals still organized for departments, are in a situation of obvious discrepancy between the reality of operation of treatment processes (operating rooms, outpatient clinics and clinic dedicated clinics) and a new map of standard cost centers, opted for 'conforming' to the new system, by effectively implementing an accounting model inadequate to regional information and accounting needs, characterized by unreliable or apparently inaccurate and incomplete surveys, complaining of professional distortions, Poor training and various difficulties of reconciling the commitment required with the resources available in your office.

Only healthcare organizations with organizational models close to the modern logistical and more well-equipped information systems and information systems integration (eg automated systems for the exhaustion of drug consumption costs and medical devices on the patient - electronic bracelet) are Were able to achieve partially satisfactory results in relation to the different components of the model that were subject to regional auditing.

The Committee, therefore, called for the detection of the annual flows of the penultimate year (Audits) and the last year (II audit) of the survey, by assigning comparative scores to each analyzed item. The two audits were interspersed with a series of written recommendations to the Healthcare Units and Autonomous Hospitals by reports and deviations analyzed in the audit results, followed by a scheduled meeting for “review” with the cost accounting manager of each hospital (see Table 4).

Table 4 - Regional Audit Surveys and Score 2015

Clinical Costing Standards	H- Unit A		H-Unit B		H-Unit C		H-Unit D		H-Unit E	
	H	S	H	S	H	S	H	S	H	S
Records of cost centers	3	3	3	2	3	2	3	2	4	3
coding	3	3	4	3	4	4	4	3	3	3
Direct costing: consumption	3	3	3	3	3	2	3	3	3	2
Direct costing: cpersonnel costing	3	3	4	3	4	3	3	2	2	2
Direct costing: Purchase healthcare services	4	3	3	3	4	3	3	3	2	3
Not healthcare services	3	4	3	2	3	3	3	2	3	2
Administrative and general services	2	3	3	3	2	3	2	1	2	2
Revenues: full pricing	3	2	2	2	2	2	2	2	2	2

Legend- Healthcare Units with 500,000 inhabitants; H = Hospital Hub; S = Hospital Spoke

1-Poor 2-Fair 3-Average 4-Good 5-Excellent

Audits were carried out in the flows laden by individual companies in the regional data warehouse, without involving controllers in the analysis and reporting stages, but interacting with them only for communicating comparative assessments (scores).

Discussion and consusions

Two different kinds of finding have to be considered. The former is about the procedural outcome; the latter is the technical solution for a new cost accounting embracing the entire RHS.

This result seems to be consistent with what has already been accurately affirmed in the literature, about the implementation of management control tools, and management accounting is precisely an essential component of Management Control System within organizations.

“Outcomes may be separated into issues related to the use or usefulness of the MCS, behavioral and organizational outcomes.”(Chenhall, 2003)

For the procedures, the regional organization is undoubtedly building a new organization by acting at different levels and assigning different roles. By creating a special Unit with the specific aim of coordinating and meeting the managerial needs of other Healthcare units, it also faces the need for standardization of operating systems, with the direct conveying of management and personnel already working in the facilities. The main node to solve was the search for a common map of cost centres, able to overcome the vertical and centralized articulation of traditional hospital care models. In this way, the design wanted to get closer to horizontal models in line with the modern organizational trends of multidisciplinary care processes, resource sharing, differentiated technology absorption, sharing of care facilities and production platforms. From this point of view, focusing on accounting consolidation and, in particular, on managerial accounting, demonstrates the strong responsibilities attributed to Managerial accounting and the operating units within the organizations .

This means that, through the managerial accounting, the regional authority is not only influencing the importance of having a uniform information system that promotes homogeneous data and is shared by everyone but is also pursuing a legitimization of the content of the organizational change to be implemented.

Regarding the content, the new model of cost accounting represents a hybrid solution in between the ‘cost per unit’ and ‘cost per patient’ systems. Albeit it belongs to the former type of system, its structural modeling hints at the technics of activity-based

costing (Lawson, 1994; Udpa, 1996; Hilton, 2005) to map clinical pathways and measure patient's costs.

The model works like a matrix where the rows indicate the hospital settings grouped by patient's levels of clinical severity, while the columns indicate the specialist units. Within each level of clinical severity, every specialist unit provides its treatments and clinical services, depending on the level of nursing care absorbed by the patient. Therefore, the managers of the specialist units are accountable for the costs of resources specifically related to patient's clinical treatments, such as high cost drugs and prostheses, while nurse managers are accountable for the supply and management of generic drugs and consumables into their hospital settings, which stand outside the sphere of influence of the specialist units.

The new model was founded on a simplified, but even more realistic, representation of the managerial responsibilities underlying the modern reality of medical and nursing practices than those formally depicted in vertical structures. By acting on the internal dynamics characterizing the managerial trends of patient-centred care models, such as multidisciplinary clinical treatments, shared management of beds by classes of patient's clinical severity, homogeneous levels of absorption of nursing care and technologies, the new cost accounting model was able to reduce significantly the fragmentation of the cost allocation process in hospital wards and operating theatres. The alignment of the cost accounting system to the ongoing process of organizational change, therefore, had the positive effect to curb the proliferation of distortive routines and ambiguous practices of costing for inpatients in vertical structures.

The logic underlying the new model was primarily focused on the satisfaction of patient care needs and the optimization of resource consumptions. Unlike the functioning of the previous vertical 'cost per unit' systems, the new model has been designed with the aim of clearly recognizing responsibilities of nurses and other professionals involved in managing resources in the hospital settings. These new responsibilities cut across clinical pathways and involved nurse managers for the optimal supply and consumption of generic drugs and consumables by classes of patient's clinical severity, depending on the level of nursing care absorbed by the patient. Besides, the new model had also the potentials to make accountable nurses or other professionals involved in the horizontal planning and managing of operations, logistics, and other non-clinical activities at the hospital and departmental level.

References

Agrizzi D. (2008). Assessing English hospitals: contradiction and conflict. *Journal of accounting & organizational change*, 4(3): 222-242.

- Ahrens C., Chapman C.S. (2007). Management accounting as practice. *Accounting, Organizations and Society*, 32 (1): 1-27.
- Aidemark, L. G. (2001). Managed health care perspectives: a study of management accounting reforms on managing financial difficulties in a health care organization. *European Accounting Review*, 10(3), 545-560.
- Ballantine, J., Brignall, S., & Modell, S. (1998). Performance measurement and management in public health services: a comparison of UK and Swedish practice. *Management Accounting Research*, 9(1), 71-94.
- Basel J. S. (2012). *Heuristic reasoning in management accounting: A mixed methods analysis*. Lohmar: Josef Eul Verlag GmbH.
- Baxter, J., & Chua, W. F. (2003). Alternative management accounting research—whence and whither. *Accounting, organizations and society*, 28(2), 97-126.
- Broadbent J. (1992). Change in organizations: a case study of the use of accounting information in the NHS. *British Accounting Review*, 24: 343-367.
- Broadbent J., Laughlin R. (2005). Organizational and accounting change: theoretical and empirical reflections and thoughts on a future research agenda. *Journal of Accounting and Organizational Change*, (1): 7-26.
- Burns, J., Scapens, R. W. (2000). Conceptualizing management accounting change: an institutional framework. *Management accounting research*, 11(1), 3-25.
- Burns, J. Vaivio J. (2001), Management accounting change. *Management Accounting Research*, 12 (4, pp. 389-402.
- Busco, C. (2009). Giddens' structuration theory and its implications for management accounting research. *Journal of Management & Governance*, 13(3), 249-260.
- Chenhall R.H. (2003). Management accounting systems design within its organizational context: findings from contingency based research and direction for the future. *Accounting organization and society*, 28(2/3):127-168.
- Chenhall, R. H., & Euske, K. J. (2007). The role of management control systems in planned organizational change: An analysis of two organizations. *Accounting, Organizations and Society*, 32(7), 601-637.
- Chan, YC. L. (1993). Improving hospital cost accounting with activity-based costing *Health Care Management Review*; Winter; 18, 1; ABI/INFORM Global pg. 71

- Eisenhardt K. M., Graebner M. E. (2007). Theory Building from Cases: Opportunities and Challenges. *Academy of Management Journal* 50(1): 25–32.
- Fiore B. (2008). L'intangibile in sanità: cultura, clima organizzativo e performance. *Mecosan*, 65: 7-31.
- Giddens, A. (1984). *The constitution of society*. Cambridge: Polity press.
- Greenwood R., Hinings C.R., Brown J. (1988). Organizational design types, tracks and the dynamics of strategic change, *Organization studies*, 9(3): 293-316.
- Hilton R. W. (2005). *Managerial Accounting: creating value in a dynamic business environment*. New York: McGraw Hill.
- Hopwood, A. G. (1990). Accounting and organisation change. *Accounting, Auditing & Accountability Journal*, 3(1).
- Jacobs K. (1995). Budget: a medium of organizational transformation. *Management accounting research*, 6: 59-75.
- Jones C. S., Dewing I. P. (1997). The attitude of NHS clinicians and medical managers towards changes in accounting control. *Financial accountability & Management*, 13: 261-280
- Kaplan, R. S., Witkowski, M., Abbott, M., Guzman, A. B., Higgins, L. D., Meara, J. G., ... & Wertheimer, S. (2014). Using Time-Driven Activity-Based Costing to Identify Value Improvement Opportunities in Healthcare. *Journal of Healthcare Management*, 59(6), 399-413.
- Kasanen E., Lukka K., Siltonen A. (1993). The constructive approach in management accounting research. *Journal of Management Accounting Research*, (5): 243-264.
- Kurunmaki L. (2004). A hybrid profession: the acquisition of management accounting expertise by medical professionals. *Accounting, organizations and society*, 29(3-4): 327-347.
- Larrinaga-Gonzalez, C., & Bebbington, J. (2001). Accounting change or institutional appropriation?—A case study of the implementation of environmental accounting. *Critical perspectives on accounting*, 12(3), 269-292.
- Laughlin R. (1991). Environmental disturbances and organizational transitions and transformation: some alternative model. *Organization studies*, 12(2): 209-232.

- Laughlin R., Broadbent J., Shearn D. (1992). Recent financial and accountability changes in general practice: an unhealthy intrusion into medical autonomy? *Financial accountability & management*, 8(2): 129-148.
- Lawson R. (2005). The use of activity based costing in the health care industry: 1994 vs 2004. *Research in Health Care and Financial Management*, 10 (1): 77- 94.
- Lecci F., Morelli M. (2011). Governo dei costi e cambiamento aziendale. La lunga strada verso l'integrazione. *Mecosan*, 80: 47-63.
- Lo Scalzo A, Donatini A, Orzella L, Cicchetti A, Profili S, Maresso A. (2009). *Italy: Health system review*. *Health Systems in Transition*,; 11(6)1-216
- Lowe, A. (2000). Accounting in health care: some evidence on the impact of casemix systems. *The British Accounting Review*, 32(2), 189-211.
- Macinati M. S., Giovanni R. M., Baldassarre I. (2012). Partecipazione, commitment e informazioni di budget. I risultati di una ricerca empirica. *Mecosan*, 82: 25-41.
- McGowan, A. S., Klammer T. P. (1997). Satisfaction with activity based management implementation. *Journal of Management Accounting Research* , 19: 217-237.
- Otley, D. T., & Berry, A. J. (1994). Case study research in management accounting and control. *Management accounting research*, 5(1), 45-65.
- Pettigrew A. M. (1990). Longitudinal field research on change: theory and practice. *Organizational Science*, 1(3): 267-292.
- Ramsey, R. H. (1994). Activity-based costing for hospitals. *Journal of Healthcare Management*, 39(3), 385.
- Scapens, R. W. (2006). Understanding management accounting practices: A personal journey. *The British Accounting Review*, 38(1), 1-30.
- Scholz R. W., Tietje O. (2002) *Embedded Case Study Methods: Integrating Quantitative and Qualitative Knowledge*. Thousand Oaks: Sage Publications
- Shields, M. D., Young S. M. (1989). A behavioural model for implementing cost management systems. *Journal of Cost Management* , Winter: 17-27.
- Soin, K., Seal, W., & Cullen, J. (2002). ABC and organizational change: an institutional perspective. *Management Accounting Research*, 13(2), 249-271.

- Tuomela T. S. (2005). The interplay of different levers of control: a case study of introducing a new performance measurement system. *Management Accounting Research*, 16: 293-319.
- Udpa S. (1996). Activity based costing for hospitals". *Health Care Management Review*, 21(3): 83-96.
- Vaivio, J. (1999). Exploring a “non-financial” management accounting change *Management Accounting Research* ,10: 409-437.
- Yasin, M. M., Zimmerer, L. W., Miller, P., & Zimmerer, T. W. (2002). An empirical investigation of the effectiveness of contemporary managerial philosophies in a hospital operational setting. *International Journal of Health Care Quality Assurance*, 15(6), 268-276.
- Yin, R. K. (1994). *Case study research: Design and methods* (2nd ed.). Newbury Park, CA: Sage Publications.
- Young, D. W. (2004). *Management accounting in health care organizations*. John Wiley & Sons.