THE CHANGING MAS: HANDLING DOMINANT PROFESSIONAL RESISTANCE IN AN ITALIAN HEALTHCARE ORGANIZATION

ABSTRACT

Purpose: The purpose of this paper is to identify *how* a change in the Management Accounting Systems (MAS) of complex organizations such as hospitals, becomes effective, and what the implications for practitioners and professionals involved in such a process are.
Design: The study employs a longitudinal case study (May 2009/December 2012) of the most representative University Hospital in the South of Italy, which has experienced a process of change in its MAS since 2007, and is informed by Habermas' theory as refined by Broadbent and Laughlin.
Findings: The study reveals that the change in the MAS of the healthcare organization examined has been effective thanks to the involvement of professionals in the on-going process of change. This involvement brought about a reduction in their natural tendency to resist, and increased the commitment of the various groups of professionals to the new business culture.
***Value*:** This paper potentially provides academics and practitioners involved in complex processes of change with useful suggestions concerning the relationships between supporters of change and dominant/resistant groups of professionals.

Keywords: Management Accounting Systems; organizational change; Habermas' theory; complexity; healthcare organizations.

1. INTRODUCTION

The issues relating to the implementation of Management Accounting Systems (MAS), intended as those parts of the formalized information system used by organizations to influence the behavior of their managers that leads to the attainment of organizational objectives (Horngren et al., 2002), have long represented an important field of study. Within such a field, this paper focuses on the still debated questions pertaining to the implementation and effectiveness of MAS in complex organizations characterized by professional dominance. Indeed, over the years, the literature has emphasized that in these organizations, the achievement of a set of rational and integrated goals and objectives is highly challenging (Argyris, 1973; March and Olsen, 1976; Weick, 1976) and that this might reasonably influence the effective implementation of the MAS (Anthony and Young, 1988; Hopwood, 1978). From this perspective, and given that the literature tends to share the view that the healthcare sector provides a number of examples of these kinds of organization (Jacobs et al., 2004), the purpose of this paper is to identify how the implementation of the MAS in healthcare organizations becomes effective, and what are the implications for practitioners and professionals involved in the process.

The subject of the healthcare sector for this research is justified for a number of reasons. It is well documented that over the last decades health expenditure has been growing significantly and a worldwide challenge for each healthcare system comes either from rising costs, the complexity and size of this sector in the current economy, and scientific, political and economic changes or ethical issues, and the demand for greater patient safety (Kullman et al., 2009). Consequently, in the wake of the New Public Management movement - which aimed to make the public sector more business-like (Jansen, 2008; Lapsley, 2008) – an increasing number of countries have introduced business administration tools and criteria within their healthcare sectors (Anessi Pessina, 2006). In this respect, the literature strongly emphasizes that the implementation of MAS in healthcare organizations is significant and still debated due to the existence of dominant groups of professionals (Abernethy and Stoelwinder, 1995), and the problematic dialectics between two conflicting logics: the management on the one hand and the professional on the other, that could render the implementation of MAS ineffective (Jacobs et al., 2004; Kurunmaki, 2004).

Especially, we investigate the concerns relating to the effective implementation of MAS by focussing on the Italian context. In Italy the still on-going reform process and the turbulent regulatory environment have led to a number of changes within the Italian healthcare organizations over the last 20 years, moving towards the creation of a business culture. This lays the foundations for considering the implementation of MAS in Italian healthcare organizations as transformational processes, and consequently our study is based on the redefinition of Habermas' theory of Society provided by Laughlin and Broadbent (1993, 1997, 2003, 2005). Indeed, this framework allows us to investigate the dynamics of change related to the implementation of MAS - by taking into account the above-mentioned elements of complexity and possible resistance - to understand if and how the MAS, as design archetypes of the healthcare organizations capable of assimilating influences from the external environment (changing regulation), have been able to effectively translate these influences into interpretative schemes, i.e., by developing a business culture.

In particular, we employ a longitudinal case study methodology, using semi-structured interviews with open-ended questions and all available secondary information regarding strategies and practices of the Azienda Ospedaliera Universitaria Asclepius[1] (henceforth, AOU Asclepius), which represent the most complex and developed University hospital in the South of Italy (as the Protocol of Agreement between the organization and the Region emphasize). AOU Asclepius has in fact experienced a three-steps process of change in MAS, forced by evolving regulations both at National and Regional level, towards greater transparency, efficiency, and accountability.

[1] This is a fantasy name, used to preserve privacy. In ancient Greece, Asclepius was venerated as the God of Medicine.

The remainder of the paper is organized as follows: the second section briefly describes the problems relating to MAS implementation in the healthcare context, and describes the theoretical framework of the research. The third section addresses the characteristics of the on-going reform process of the Italian Healthcare sector. The fourth section explains the research design. The fifth section elucidates the characteristics of AOU Asclepius and its Regional context. The sixth section illustrates the findings of the analysis. Finally, the seventh section discusses the findings in the light of the theoretical model presented in the second section, and the eighth section offers some concluding remarks.

Section 2 - ASSESSING PRIOR RESEARCH TOWARDS A USEFUL THEORETICAL FRAMEWORK

The issues related to designing and implementing management accounting systems within the healthcare sector have been the subject of increasing attention over the years (e.g., Abernethy and Chua, 1996; Jones, 1999; Modell, 2001; Kurunmaki, 2004; Lehtonen, 2007). In particular, the literature agrees that the healthcare sector provides a number of examples of complex organizations, characterized by problematic dialectics between two conflicting logics: the managerial on the one hand and the professional on the other (Jacobs et al., 2004). Accordingly, one of the central elements of complexity arises from the existence in healthcare organizations of dominant groups of professionals, such as physicians, used to performing their complex tasks independently (Abernethy and Stoelwinder, 1995). Clearly, possible role conflicts may emerge if healthcare professionals face control systems restricting their autonomy (Abernethy and Stoelwinder, 1995), designed in the wake of the New Public Management, which aims to make the public sector more business-like (Jansen, 2008; Lapsley, 2008).

Specifically, within the healthcare sector, cost containment efforts are increasing the pressure to implement MAS (Preston et al., 1992) and control over the behaviour of professionals, who have traditionally dominated decision-making (Chua and Degeling, 1993; Jones, 1999). However, an attempt to impose controls may instigate new endeavours among professionals to evade it, thus making the implementation of MAS ineffective (Jacobs et al., 2004; Kurunmaki, 2004). It is worth noting that the literature emphasizes that, even if in this sector significant resources are devoted to the development of MAS, several questions remain as to the effectiveness of these systems (Chua and Degeling, 1993; Lapsley, 1994; Abernethy e Stoelwinder, 1995; Jones, 1999; Pettersen, 2001). In fact, it has been argued that further concerns relating to MAS effectiveness are due to the possibility of measuring only some aspects of performance (Lapsley, 2008), the tendency of processes to be less transparent and more difficult to evaluate (Miller, 2002; Anthony and Young, 2005; Eeckloo et al., 2007), and uncertainty relating to the lack of commonly accepted indicators (Miller, 2002).

This study addresses the debate briefly reported above. In particular the research answers to the call for more field research (Scapens, 1990; Ahrens and Chapman, 2006) to enhancing the understanding of how accounting systems operate in practice. More specifically, the aim is to deepening the knowledge of factors leading to effective implementation of MAS in complex organizations, also accounting for the implications for practitioners and professionals involved in the processes of change. Indeed, these issues should be further investigated since, although MAS are designed to achieve efficiency and accountability, they are often developed with little concern for the unique aspects of the delivery of professional services, and thus incapable of positively affecting the performance of the organization, because of professionals' resistance (Jacobs et al., 2004). However, this research, differently from prior studies aims at gaining rich and detailed picture, through the observation of an on-going process of change, of the factors that possibly influence in a positive manner the effectiveness of a change in MAS in healthcare, with especial

regard to the possible strategies to render a change in MAS seductive also for resistant professionals'.

Furthermore, what should be noted is that the above-described complexity is an essential and unavoidable element for a correct understanding of the dynamics and the problems relating to implementing accounting and management accounting systems in the healthcare context. Indeed, such complexity is able to exert a certain influence on the process of change and on the results of the process itself (Broadbent and Laughlin, 2005). Thus, in this view, the Habermas theory (1987) as refined by Broadbent and Laughlin (1993, 1997, 2003, 2005) is well suited to the study. In fact, such a framework allows the investigation of the dynamics of change relating to the introduction of management accounting systems by also taking into account the above-mentioned complexity and possible resistance to the introduction of such management tools.

Habermas regards society as the combination of three elements: lifeworld (i.e. a symbolic dynamic space, a normative context within which culture, tradition and identity can be reproduced), systems (i.e. a functionally definable arrangement of operations, such as organizations, which represent the tangible expressions of the lifeworld), and steering media (i.e. mechanisms such as power, money, law that steer the interface and interaction between lifeworld and systems, and play a role in ensuring that the latter reflect the former). What should be noted, is that in the event of the increasing complexity of the systems, there is the likelihood of decoupling between them and the lifeworld. If this is the case, the steering media possibly follow the systems instead of the lifeworld, thus leading to a colonization of the lifeworld by those systems.

Broadbent and Laughlin's model has the merit of building analytical bridges between the social theoretical orientation of the theory, with all its philosophical underpinnings, and concrete forms of practice that according to Power and Laughlin (1996) were completely lacking in the original work by Habermas. Specifically, the model is based on the following refinements:

- ✓ Steering media are considered as "societal institutions" (e.g. government)
- ✓ Systems of actions are considered as "societal organizations" (e.g., corporations, local health authorities, schools and universities)
- ✓ Every societal organization has its own lifeworld, systems and steering media, which they regard as an interpretative scheme, subsystems and design archetypes respectively, where the design archetypes (such as management accounting systems) attempt to balance and make coherent the interpretative scheme and subsystems.

In view of such refinements, the model embraces the option that the internal colonization of the life-world/interpretative scheme arises not only at societal but also at organizational level. Accordingly, the examination of the MAS as design archetypes, capable of assimilating influences from the external environment and translating these influences to the interpretative scheme, becomes fundamental. It is worth emphasizing that an unavoidable aspect to take into account is related to the equilibrium of the whole organization resulting from the coherence between the elements of the organization and the external environment (Mintzberg, 1989). Indeed, it has been argued that when equilibrium is achieved, the organization tends to inertia, i.e. its internal arrangements tend to be stable and resistant to change (Laughlin, 1991, Miller and Friesen, 1984), and such inertia can be interrupted only by an environmental disturbance (Laughlin, 1991). Given these premises, it is possible to analyse how societal institutions try to influence societal organizations, by noticing that according to Smith (1982), Robb (1988), and Laughlin (1991), the following two different types of changes may occur:

- ✓ Morphostasis (first order change) occurs when the change neither really affects the heart of the organization, which is reluctant and tends towards the pre-existing conditions, nor the interpretative scheme. Especially, it can arise in two different ways. The Rebuttal, which implies that an environmental disturbance is tackled through changes in the design archetype, but afterwards the design archetype comes back to the original situation. Secondly,

Reorientation, that consists in environmental disturbances that also affect subsystems, and thus are internalized into the organization because they cannot be rebutted, but do not affect the interpretative scheme.

- ✓ Morphogenesis (second order change) is a change that influences the interpretative scheme because it profoundly permeates the essence of the organization, thus bringing lasting changes. These may alternatively occur as Colonization, such as a mandatory change, or as Evolution, i.e. a free and non-compulsory change.

In this regard, it is also worth highlighting that the literature generally argues that a number of features have the potential of influencing the nature of change. Brunsson (1985) contended that organizations with strong ideologies might be resistant to fundamental changes in the interpretative scheme, while those with weak ideologies are more open to manipulation and substantial changes. Grenwood and Hinings (1988) found that contingencies creating contradictions between circumstances/context and organization lead to greater change, which is possibly mitigated by commitment to previous schemes, favoured or hindered by the dominant coalition's interpretative scheme, and is potentially easier, the higher the level of the skills and the capabilities of the top management. In addition, Smith (1982), Dunphy and Doug (1988) highlight that morphogenetic changes benefit from collaborative approaches between individuals and shared values.

It is worth specifying that we draw on the aforementioned framework, by considering the healthcare organizations as Societal Organizations and the Government as a Societal Institution. Accordingly, the subject of our analysis is the examination of the MAS as design archetypes of the healthcare organizations, capable of assimilating influences from the external environment, and effectively translating these influences into the interpretative scheme of the organization.

3. INSTITUTIONAL BACKGROUND

Since 1978, in the wake of the international New Public Management movement, the Italian Health System has been characterised by a reform process aiming to pursue macroeconomic stabilization and microeconomic efficiency, by introducing managerialism, regionalisation and the quasi-market (Anessi Pessina, 2006). Due to these reforms, business administration criteria were progressively introduced in the healthcare sector to give public providers greater decision-making autonomy, to increase their accountability, and to encourage them to adopt private sector management techniques (Kurunmaki, 1999). An important aspect of the reform process has been the regionalization of the National Health Service. This is the natural consequence of the recognition of Regions, in 1948, as local and autonomous authorities, with their own power and functions. Thus, although the unitary nature of the State (and of the Health Service) is assured, a certain degree of autonomy is granted to the individual territorial components (the Regional Health Services).

Accordingly, under Italian law, the 21 Regional Governments play a central role within the Health Service, and have the autonomous power and responsibility to choose their models of governance, set objectives, plan activities and appoint or remove managers, given only some general national requirements. The natural consequence of such regionalization, and of the related high level of autonomy of each regional board, has been the transformation of the Italian Health Service in to a system of Regional Services characterized by different models of governance (Caldarelli et al., 2013). In this respect, the Formez report (2007) among others identified three different models of governance across the Italian Regions. However, apart from any categorization, a number of distinctive historical and geographical reasons, or cultural concerns, impact the goodness of the governance models of the Health Services, which is related to either the specific tools and resources available or political and managerial skills.

Further, it is worth noting that governance should be understood as a transformational process of tangible and intangible inputs in to outcomes for both the Population and the State, the main

stakeholders of the Regional Health Services. Thus, the quality of governance of the Italian Regional Health Services varies widely in relation to the number of tools efficiently implemented and available for managing the healthcare sector. This is particularly true if we look at the capacity of Regions to adopt effective measures to invest State funds and use taxation, the level of integration in terms of activities engaged in by the Department of Health, the ability to regulate the Health Service with a clear definition of roles and responsibilities, the presence of inter-organizational contracts, as well as the extent of the use of management accounting systems in healthcare organizations (Caldarelli et al., 2013). The availability, or the lack of such tools, respectively lead to good quality of conscious and proactive regional governance and increasing quality of service, or allow an authoritarian/punitive approach and a lower quality of service (Formez, 2007).

The reform process over the years has also granted a high degree of independence to each healthcare organization, which is autonomous in managing its activities, in accordance with Regional wishes. In particular, the most important strategic subject of the healthcare organization is the Direttore Generale (CEO), a single-organ selected by the Head of the Regional Council under fixed-term renewable contracts. All the CEOs are subject to an annual evaluation based on the results achieved, on the basis of the criteria that each region establishes. In fact, Italian healthcare organizations have no Board of Directors, hence, the supervising role and the annual evaluations are performed directly by the Regional Council, whose ownership is an expression of the general citizenry (Baroni, 2004). Interestingly, the decentralized nature of the Health system implies that there are no requirements at central level concerning which evaluation systems should be implemented, so Italian Regions autonomously define their evaluation processes and their targets and/or standards (Anessi Pessina and Cantù, 2006). Still, an assessment at the National level of the effectiveness of such systems has not yet been developed.

This context has favoured over time the prevalence of institutional factors and the logic of hierarchical decision-making process, rather than the elements and mechanisms of the market that the reforms have attempted to introduce. This dramatically increases the pressures on internal control mechanisms (Cantù and Carbone, 2007) and management accounting practices. The real question regarding the Italian healthcare context is whether private sector notions of performance measurement and accountability are applicable in the public sector where the managers seem to have a propensity to ally themselves with politically elected bodies also because of their dependence on the public purse (Brignall and Modell, 2000; Modell, 2004). Further, if the CEOs are appointed and removed by a political body, this clearly breeds some doubt as to whether deeply penetrating change in management accounting practices is feasible.

Besides, it is fundamental not to forget that despite several measures aimed at improving health system organization and the financing mechanism, the Italian Healthcare sector has been characterized by sustained expenditure growth and wide deficits. The reform process has not always been successful in improving the efficiency and in introducing mechanisms able to provide the right incentives for decision units. What should be emphasized is that in a number of circumstances of failure the normative pressures by central government have been tighter in some regions such as Sicily, Liguria and Campania, in order to reduce financial deficit. As a consequence, the attention of regional policy makers and managers focuses increasingly on costs efficiency indicators and the management accounting tools that strengthen the financial dimensions.

Thus, we examine the issues relating to the implementation of MAS in the case of the Azienda Ospedaliera Universitaria (AOU) Asclepius. This is the most complex and developed teaching hospital in the South of Italy, also regarded as one of the most specialized hospitals on the national territory, which over the last years has faced a lot of pressure to introduce management accounting systems, also in line with the recovery plan designed to reduce financial deficit in the region. Due to the transformational nature of this process, we adopt the theoretical framework of the Habermas'

theory (1987), advanced by Broadbent and Laughlin (1993, 1997, 2003, 2005), as has been described in the second section.

4. RESEARCH DESIGN

The approach chosen for this research is qualitative, thus the paper employees the single case study methodology (Yin, 2003; Ahrens and Chapman, 2006). Indeed, consistent with Siggelkow (2007) view a single case study can contribute to existing knowledge through the deepening or widening of the current understandings. The real potential of the case study for the purposes of this research is also due to the fact that it helps the researchers to deeply *understand* the social systems of reference by providing an holistic view of the social practices in a specific set of circumstances , 1990). Moreover, the single case-study approach has facilitated the use of in-depth longitudinal data, which is less feasible in multiple case-study designs.

The analysis of the case of AOU Asclepius has been carried out as follows. The data were collected over a three-year period (2009-2012). This has enabled a closer examination of the developments and changes in MAS at the hospital, as well as barriers, episodes of resistance, and accomplishments. At first, a relationship was established with the CEO. He was briefed about the research project and the authors asked to be introduced to the managerial group (which also comprises physicians). The authors personally interviewed the managers. The informal interviews, which were later transcribed, followed an agenda of topics to be covered rather than a structured set of questions. This approach allowed a full coverage of the issues involved and resulted in a detailed picture of the practices and issues involved in the management of the hospital, with specific regard to the on-going changes in MAS. Despite the multiple data sources employed, the research design focussed primarily on semi-structured interviews, which were our predominant data collection vehicle. The aim of the dialogues with the people involved in the project was to investigate the areas of interest to the researchers, by identifying emerging issues of significance also in relation to the theory being tested. In particular, these interviews aimed to build up a deeper picture of how the interviewees felt about their roles, what they thought about the hospital's role in the context of reference, the practices and management tools available within the hospital, and how they perceived the newly introduced MAS, and the impact of changes on their activities.

The interview strategy was mostly informed by a balanced consideration of the approach suggested by Scapens (1990), Yin (2003) and Ahrens and Chapman (2006). Each of the interviews lasted around 1 hour and 30 minutes and most of them took place with two of the researchers present (always the same two members of the team carried out the interviews). An important aspect to underline about the interview phase is that the two researchers adopted tactics (Marginson, 2004) to improve the clarity of the data collected and limit misunderstandings when interpreting the responses. A first tactic was to make it clear that that the researchers did not have a specific theory to prove or disprove, and thus interviewees were not meant to provide the 'right answers'. Also the researchers in several cases required respondents to illustrate the behaviour or issue s/he was describing ('that's interesting, could you provide an example or elaborate a little more?'), or in other cases asked permission to re-phrase with in their own words, in order to find out the importance and comprehension of emerging issues.

Over the study period interviews with 15 individuals, repeated for three times (in 2010, 2011 and 2012) over the period of reference for the case study, were held at the study site (see table 1 below), amounting to a total number of 55 interviews.

Table 1 – The interviews

Categories of individuals interviewed	Number of individuals interviewed	Total number of interviews per category	Follow-Up interviews per category
Top Management	3	9	2 (1 in 2010, 1 in 2012)
Physicians	6	18	5 (2 in 2011, 3 in 2012)
Nurses	2	6	2 (1n 2011, 1 in 2012)
Internal Control division	4	12	1 (2012)

These were digitally recorded and then transcribed for analysis soon after the event. Moreover, a telephone follow-up with the respondents was conducted when a few data were missing. Before the analysis of the data, the interviewees were asked to review the transcripts and to make any corrections. Where necessary, we made a second visit to confirm some of the information or to follow up on something which had arisen in another interview.

Once all the interviews were completed, the members of the research team discussed the main issues raised, and were thus able to develop the starting point for some of the lines of analysis. These data were supplemented by an examination of the accounting details, budget profiles, staffing levels and other documentation and policies for strategies and practices over the last 4 years (see table 2). This information was collected and triangulated with data drawn from the direct interviews in order to enhance research reliability. This approach resulted in the production of a comprehensive analysis of the processes of change in the MAS of the hospital.

Table 2 – The documents

Public Available Documents	Public Available Documents of AOU Asclepius	Internal Documents of AOU Asclepius
National Health Plan Years 2007-2010 and 2010-2013	Financial Reporting and Notes (2008, 2009, 2010, 2011)	Budgeting Procedures
Regional Health Plan 2007-2010 and 2010-2013	Charter of Value	Cost Accounting Plan
Regional decrees regulating the Health Service (No. 14/2009 and No. 60/2011)	Charter of Services	Internal Control Procedures
	Protocol of Agreement with the Region	Information Flows Procedures
	Organization Structure and Chart	Plan of the Centres of Responsibility
	Strategic Plan 2007-2010	Provision of Medicines Regulation
	Strategic Plan 2011-2013	Inpatient management
	Code of Ethics	
	Statute	
	Re-organizational Plan	

In summary, to guide the interpretations of the data gathered, several categories of relevant themes were identified to ease the analysis. Especially, the story of the change is addressed by focusing on its three main phases: the preparation, the implementation and the regime of MAS. For each phase we attempt to describe the tools, the implications for people, and the relationships established.

The researchers carried out discussions about the interviews trying to refer all the responses to such categories where possible. In agreement with Ahrens and Chapman (2004), the interview transcripts were organized chronologically and the areas of agreement between the interviewers regarding the categories of analysis were identified. Subsequently, any area of disagreement was reviewed and discussed also in the light of the documentary sources available. The developing issues or emerging problems were then the subject of separate discussion and used to better understand/explain the phenomena or to identify any unsolved/open question for further investigation.

5. SETTING THE CONTEXT: AN OVERVIEW OF THE CHARACTERISTICS OF THE AZIENDA OSPEDALIERA UNIVERSITARIA *ASCLEPIUS*

AOU Asclepius as an autonomous University Hospital: the agreement between the Region and the University

AOU Asclepius is known as one of the biggest, most qualified and specialized autonomous teaching hospitals on the whole Italian territory (yearly the hospital provides services in the Region of 34,539 in patient admissions, 52,410 day-hospital admissions, 280,000 outpatient services and 3,000 first aid obstetricians). Its statutory goals reside primarily in the continuous integration of research, education and hospital care, with a constant focus on care services characterised with a high level of expertise. AOU Asclepius delivers care based on a set of basic principles such as equality and impartiality: i.e., the rules regarding the relationships between the users and the organization are equal for all, and no distinction is allowed in respect to sex, race, language, religion, or political opinion.

The organization is also inspired by criteria of efficiency and effectiveness: it is engaged in a program of evaluation and monitoring of the services provided, from both a clinical-care and organizational management perspective. The results of this program are periodically evaluated during the Conference of Health Services and used to improve the tasks, and it is planning to implement groups of continuous quality improvement in all of the areas.

Moreover, AOU Asclepius attempts to encourage the participation of the citizens: bulwarks of this orientation are the chance for the user to request at any time a copy of all medical records relating to his person, in the possession of the hospital (under the current law), the right to give informed consent, and especially the possibility to produce documents, comments, suggestions for the improvement of the services, as well as the opportunity to make complaints and criticism. The commitment of the organization in collecting the feedback of users with a certain regularity aims to monitor and optimize performance levels in order to respond promptly to the needs expressed by users. Finally, AOU Asclepius is responsible for ensuring the continuity of care services provided, by adopting, in the event of a malfunction due to force majeure, all the measures necessary to cause the least possible discomfort to the patient.

In 2003, the Region and the University produced a Memorandum of Understanding for the integration of the University Hospital (autonomous from the organizational and management point of view) with the Regional Health Service. This protocol came about in an atmosphere of urgency, due to the need to adapt the relationships between the University and the Regional Health Service to the law, as quickly as possible.

The protocol emphasizes the importance of a strong commitment of both the University and the Region, to ensure timely compliance and fulfilment of their reciprocal obligations in relation to the

specific functions ascribed to their competence and responsibility. Furthermore, it is worth noting that the protocol recognizes and enhances the indivisible nature of the three fundamental functions of teaching, research and healthcare delivery, typical of universities. Thus, the first joint effort of the Region and the University is to pursue, with appropriate tools, high quality of care and efficiency as well as competitiveness of the service delivery, of course not forgetting the needs of teaching, training and researching.

The organization

With reference to the organizational structure of AOU Asclepius, it is worth noting that the managerial/strategic choices (and the related responsibilities) are the prerogatives of the CEO (Direttore Generale), appointed by the Regional Board in conjunction with the Rector. The CEO has the autonomous power/responsibility of managing the University hospital in order to ensure on the one hand, the efficacy and effectiveness of the care, a high level of teaching, a high quality of research, and on the other hand in order to assure efficiency and cost containment in compliance with the guidelines proposed by the Regional Health Plans. In carrying on his activities, the CEO is supported by a consultative body made up of physicians and experts in health planning (Organo di Indirizzo), and an audit committee with typical monitoring and information functions (Collegio Sindacale). Moreover, AOU Asclepius is divided into 24 departments and 2 autonomous services, which are in turn divided into approximately 190 functional areas. Each department has its own manager and is divided into different areas, each with its own responsible.

The relationships between the different hierarchical levels are informed by the principles established in two fundamental documents: the Statute (Atto Aziendale) and the Re-organizational Plan (Piano di Organizzazione e Funzionamento Aziendale). These documents clarify the driving values of AOU Asclepius, as well as the degree of power and responsibility for managers (whether they are physicians or not) and for professionals.

In particular, the Statute clarifies and regulates in general the following issues:

- ✓ The system of rules and communicative relationships that characterize the context of activities (the NHS and the RHS, the University, etc.)
- ✓ The criteria that guide the decisions of the CEO, the Health Manager (Direttore Sanitario) and the Administration Manager (Direttore Amministrativo), fully respecting institutional relations and hospital objectives
- ✓ The organizational model in accordance with the threefold nature of AOU Asclepius

On the other hand, the Re-organizational Plan sets out the organizational model in more detail, particularly with regard to the composition of simple and complex organizational units, and by focussing on the operating rules of the institutional bodies.

Joint analysis of the above-mentioned documents allows us to detect what the central issues for the management of the University Hospital are. First of all, the University Hospital seeks the centrality of the person: AOU Asclepius, in accordance with its threefold nature, directs its actions to the centrality of the patient/user as the recipient of the service, the professionals who work within it, as well as the students. The services provided to the patient/user are structured in such a way as to take account not only of the health needs, but also of the whole sphere of their needs (emotional, socio-cultural, psychological, etc.) from a broader perspective. To this end, actions are oriented towards the continuous assessment of the effectiveness and efficiency by citizens of the services offered (Statute). As for the professionals, it is useful to clarify that the centrality of their role is perceived as an important key success factor, thus the Hospital seeks to enhance the professionals' contribution as well as to create a favourable organizational climate to improve the processes of innovation, learning and socialization of knowledge. Furthermore, the organization is conceived and

designed in order to encourage the creation of the conditions essential for the professional and human development of the students (Charter of Values).

Another crucial distinguishing feature is the emphasis on clinical governance achieved through the construction of both clinical and organizational conditions to promote the surveillance and monitoring of care processes. This is possible by developing policies and tools to encourage the positive integration of research, teaching and care. In fact, the integration of scientific research, teaching and care is regarded not only an institutional goal, but rather as a driving value for the Hospital's activities. The reason is that such integration allows the development of synergies between innovation in medical science and the improvement of care pathways for the benefit of patients. Moreover, integration also enables AOU Asclepius to perform services appropriate to the needs of health and taking into account the evolution of the users' socio-cultural and psychological needs. The value produced by the integration of research, teaching and service represent a continuous incentive to improve the quality of services provided to users (Charter of Services).

From a stricter management perspective, AOU Asclepius devotes importance to the issues of economic and sustainable development: the dynamic equilibrium of the financial statements requires the continuous search for conditions of efficiency and effectiveness both in health care delivery and in administrative/managerial processes. These conditions can be achieved on the one hand by avoiding poor integration of organizational structures and by supporting multidisciplinary working methods within the organization, and on the other, by enhancing the inclination of professionals to adopt appropriate treatment practices, not only from the clinical, but also from the economic point of view (Charter of Value).

6. FINDINGS

The introduction of MAS in AOU Asclepius: the status quo before 2009

To support the process of 'modernization' (in terms of organizational structure and operational design) imposed by increasing regulatory changes, and in particular, to comply with the national and regional legislation in force, AOU Asclepius, begun some processes for the introduction of management accounting systems in 2007. Consequently, a great effort has been placed on redesigning the management and organizational models, to ensure that the results can be measured and assessed, as a prerequisite for the optimization of activities, also in the light of the constraints imposed by the Plan for Return from Debt envisaged by the Region in 2007.

Indeed, in 2007 the Region was experiencing a particularly critical financial and economic situation, both in relation to financial deficit, and with reference to the problems of organization and management of the Regional Health Service. Subsequently, in order to reduce and restructure health care expenditure, the Region issued a Plan for Return from Debt, mainly based on the introduction of constraints and spending targets for effective cost containment and to achieve simultaneous economic and managerial balance, both at the regional and at the organizational level.

The goals of the Plan led to the adoption of new management accounting tools and procedures by healthcare organizations. However, it is worth noting that although the Plan for Return from Debt stated the importance of management accounting systems for the healthcare organizations of the Region, it was still at an elementary level concerning the essential characteristics and design of the management accounting systems required (Strategic Plan 2007-2010). With reference to AOU Asclepius this resulted in the introduction of Cost Accounting and Budgeting processes. These were implemented by the CEO and administrative bodies, and were perceived by professionals and lower managerial levels as a 'formal' task exclusive to the higher organizational sphere. To clarify, we quote from the CEO (who one notes is a physician and former Dean of the Faculty of Medicine).

"Well… I was not the CEO at that time! When the Cost Accounting and Budgeting Process project was introduced in 2007, I was Dean of the Faculty of Medicine… so the booklet prepared by the Top Management turned up and I read a hundred pages of statements of wonderful objectives. I said to myself: 'this is great but how we can achieve these goals is a different question!' I was quite scared about the changes recommended because it was not clear at all how people at any level of the organization should behave to support the transition phase".

The problems with the introduction of MAS were mainly due to the fact that the pressure for the quick introduction of these systems created the premise for a number of misunderstandings, which led to regarding them as palliative measures *per se,* which did not need any precise logic or adaptations (Strategic Plan 2011-2013). To clarify, we quote from a physician:

"We received the new 'guidelines' (emphasis added)*, if you like to call them guidelines! I had chats with some colleagues and no one had any idea about the way we could support the introduction of the new systems. This is mainly because we did not know how these systems worked and so did not know what would be useful and how we should use them. And in the end we did practically nothing!".*

Moreover, the introduction of MAS, and in particular the Budget, led to a situation of conflict between the managers and the physicians, and the physicians and the nurses. We quote an example from a physician. In particular, with reference to the first of these conflicts a physician said:

"At that time I was head of my department and I had to fight with almost everyone above me or below me in the hierarchy! The point is that I could not rationalize why managers wanted to intervene in decisions for which they did not have the skills. So I resisted! The negotiation of the budget was a dreadful moment.... when I heard the managers talking about the cut to financial resources for medical treatment I run out of the room, slamming the door behind me. Clearly, I knew that a rational allocation of resources was crucial, but they had no idea of how to design it and they were doing it in the wrong way! In the end, everything remained the same because we all (emphasis added referring to his professional category) *strongly opposed these senseless changes that would jeopardize our professional ethics".*

Moreover, with regard to the conflict between physician and nurses the interviewee specified:

"I still have to admit that there was also something good in the proposed change. For example, I refer to the inventory management for medicines that was identified as an essential part of the process to be monitored in order to achieve more efficient results. So I tried to check with the staff what our procedures were and tried to adapt them in order to improve inventory management. After a great effort I only got a chilly response from one of the nurses: 'we are too busy to pay attention to this issue, which, by the way, is not under our responsibility according to the contract'. I was really disappointed but I could not do anything about it!

However, when the Region issued Decree No. 14/2009 and subsequent Decree 60/2011 "Implementation of proper accounting procedures and management, both at corporate and regional level", also AOU Asclepius experienced a renewed commitment to implementing managerial logic. In particular, the two decrees laid the ground for the introduction of significant instruments to support the activities of management accounting and management control, such as:

- ✓ Manuals defining the accounting principles and rules applicable by healthcare organizations for the preparation of financial statements uniform in content and form

- ✓ Regional Guidelines defining the essential elements of the internal regulations based on which each healthcare organization has to design its planning processes, documents, management, accounting and auditing
- ✓ Regional guidelines for the definition of the Cost Centres Plan and the Centres of Responsibility Plan, the Budgeting process and so on, setting out the principles for keeping analytical instruments to ensure the uniformity of the detection systems of individual organizations and the comparability of data at regional level.

In the wake of the new legal requirements, and in response to this greater level of detail, particularly aimed at creating a greater culture of control and sharing, a progressive change in MAS within AOU Asclepius has taken place. The process of change started in late 2009 and ended in the second half of 2012. Hence, the goal of the next sub-section is to show *how* the process of change in the MAS of AOU Asclepius has been carried out, by focussing in particular on the implications for practitioners and professionals. In order to make the data collected from the interviews and the documentary evidences available more comprehensible, the findings are organized in chronological order in the next sub-section. Therefore, we explain the history of the change through its three main phases: preparation, implementation, and the regime. We attempt to describe the tools, the implications for people and the relationships established for each phase.

The change in action: the preparatory phase 2009-2010

With reference to the activities carried out to prepare for the change in question, a central role has been taken by the top management in conjunction with the members of the Internal Control division. In fact, taking into account the experience of the 2007 failure, since the beginning, the management has tried to involve the employees at all levels, by using various tools. First a number of training courses and seminars were organized to engage and educate employees about the need to streamline the processes and the need to implement control systems. The Strategic Plan (2011-2013) clarifies that the aim of such activities was to develop a commitment for the changes in action and, more important, to eradicate the conception of the control systems as a means of punishment and coercion in favour of a new vision of control as an element to support the quality of healthcare. To elucidate this point we quote from from the CEO:

"The changes are not welcomed if the motivations and the goals that lead to the introduction of new logics are not understood. The failure of the 2007, so recent, was a tangible proof. Hence, we wanted to build consensus before proceeding, in such a way that people did not feel threatened but on the contrary were pervaded by a participatory and proactive spirit. So it was essential to clarify immediately that any type of instrument would be aimed at improving the results without any punitive or coercive intent"

During such meetings with the representatives of the employees the top management clarified that, in accordance with the new legal requirements, the two primary objectives were the implementation of effective systems of Cost Accounting and Budget. In this regard the top management asked for an active participation at any level, towards the definition of the Centres of Responsibility and the mapping of the activities. Thus, the head of each integrated department and of each unit within the departments have been involved in a survey to provide a more complete picture of activities, roles, responsibilities, and financial resources needs for the 190 functional areas which characterize AOU Asclepius. This initiative was welcomed by the participants that, contrary to what happened in 2007, showed greater acceptance, as evidenced by the following quote of one physician:

"I appreciate this kind of involvement as I am convinced that no one can identify the problems of a process and the possible solutions better than someone who is involved in the process every day. Of course I recognize that I cannot replace an expert, but I think that our contribution is crucial to make sure that everything will work, and this is certainly an opportunity for improvement that we cannot miss."

Moreover, the participants to the survey have generally set in motion a series of meetings with the employees, not only doctors, but also nurses and other health workers, to collect their instances and to elaborate real, composite and articulated proposals to bring to the attention of the management team. This has favoured the creation of a collaborative work environment, ready to accept the changes that had contributed to realize. In this sense, the involvement completely changed the perspective of people because they switched from being those who passively suffered the choices of top management to being active agents of that change. The following quotes from a physician and a nurse elucidate this issue better.

"Being involved in this preparatory stage made me feeling part of the challenge and prompted me to question my previous conceptual schemes. I realized that the subsequent actions, even if difficult to accept at first, would have been in our favour and not against us or our ethics. I finally became aware that a small effort by everyone would have favoured, above all, the quality of our healthcare service, and this is what we all must look at." (Physician).

"Our category is often not considered, but this was not the case. This motivates me to act for and not against the new measures that will be introduced because I contributed to this project." (Nurse).

At the end of the first phase the Top Management processed the reports received and elaborated two preliminary plans: the Plan of the Centres of Responsibility and the Plan for the Introduction of Cost Accounting and Budgeting. In particular, the Plan of the Centres of Responsibility identified what were the activities undertaken, who was responsible for them and who was supposed to exert control on these, and on the other hand if there was any overlap or lack in the processes, thus identifying areas of improvement. Moreover, the Plan for the Introduction of Cost Accounting and Budgeting suggests a strategy of gradual introduction of these systems in the organization. Both Plans were object of discussion in three meetings with the head of each integrated department, of each unit within the departments, and the representatives of nurses and other healthcare workers. With regard to the negotiation we quote from from a member of the Top Management:

"This time the negotiation was more productive and useful. It was of course difficult to reach an agreement, but people were more opened to discussion and at the end we got a satisfactory result that accomplishes the needs of the various subjects in an reasonable way."

In May 2010 an agreement was reach and the Top Management issued the following official documents:

- ✓ Plan of the Centres of Responsibility
- ✓ Budgeting Procedures
- ✓ Cost Accounting Plan

Furthermore, they all agreed to not force the times for adopting the new praxes and determined to complete the project by mid-2012.

However, despite the positive results achieved in this first phase what should be noted is that some difficult issues, especially with regard to the reluctance of some people to changes, have continued

to persist. This clearly emerged also during some of the interviews that highlighted two major problems. First, some of the physicians were firmly against the changes as they thought that the new measures would have irremediably compromised the quality of the service. Therefore, they also refused resolutely to participate to any meetings for supporting the on-going process of change. The following quotation from a member of Top Management exemplifies this situation by recalling the reaction of a resistant physician during one of the meetings.

" Despite our effort towards the creation of a diffused business culture at the beginning the process of change was difficult to manage in certain cases…I remember that during one of the meetings a physician invited to the discussion came to the room and told us: < I'm not interested in these meetings because I am convinced that we can not negotiate 'on the skin of our patients' > and then he simply left the room. This is only an example but some of the physicians were really difficult to persuade!"

Second, often the Top Management and the Internal Control division found difficult to manage the conflicts between the different categories of professionals (e.g. between physicians and nurses) involved in the negotiations. The following quotations from a member of the Top Management elucidate this situation with more detail.

"Some meetings have been postponed because of the disputes internal to the single departments ... We were there with our plans and our ideas, expecting difficult but productive discussion to reach an agreement, but the representatives of different categories of healthcare professionals sometimes began to debate on their roles and responsibilities, forgetting the original intent of the meeting"

"In order to not compromise the whole project with a ceremonial agreement devoid of substantial bases, in several cases we could simply tell them to go back and then fix another meeting, to give them time to discuss their ideas and to develop a shared and agreed course of action for the department."

The change in action: the implementation phase 2010-2012

Since the second half of 2010 AOU Asclepius has been involved in a complex process of change characterized by the introduction of budgeting, cost accounting and reporting. These tools were conceived within AOU Asclepius as elements of a complex and unitary management accounting system, aiming to improve the efficiency and effectiveness of the organization (Internal Control Procedures). However, for the purposes of clarity, the implementation of these tools is here addressed separately, yet bearing in mind their intrinsic interconnections.

The first objective of AOU Asclepius was to implement the Budget process that was mainly based on the collaborative participation of the Top Management and the departments. The latter were identified as Centres of Responsibility, taking into account the adjustments made in the preparatory phase, basically regarding the attribution of responsibility for the activities that were common to different departments, allocated according to a criterion of prevalence (Plan of the Centres of Responsibility). In the initial phase (mid-2010) of the budgeting implementation process, the Top Management focused on the definition of the objectives of AOU Asclepius for 2011 in terms of activities (e.g. improvement of case-mix, improvement of appropriateness, management of hospitalizations, etc.); resources (e.g. cost of medicines, management of inventories, cost of hospital treatment, management of medical devices, etc.), and the organization of work (e.g. management of

care processes, waiting lists, management of operating rooms, etc.); also recognizing possible levers of action and performance indicators (Strategic Plan 2011-2013).

Based on the defined objectives, the Top Management and the Internal Control division prepared a specific budget for each Centre of Responsibility (CDR), divided into three sections containing the following information (Budgeting Procedures):

- ✓ Structural data (Beds, clinics and spaces assigned to the department), staffing and equipment
- ✓ The Activities of the department and indicators on the appropriateness, the direct costs and the effectiveness of the processes
- ✓ The Income statement, showing the costs and revenues of the department.

The budget plans so structured were then sent to the CDRs before the negotiation to be operationalized as tools through which the CDRs agree/negotiate their objectives for the year of the budget. Moreover, to facilitate the sharing of objectives and the process itself, the Top Management activated an information point from which the departments could receive clarification on the data supplied. To clarify the usefulness of such an approach, we quote one physician:

"In my opinion the choice of sharing the course of action from the beginning has been really worthwhile. In particular, the choice of creating an information service has been useful because this has allowed us to come to the negotiating table well informed and prepared. We were aware of what the Top Management were talking about, and we could actively participate in decision-making for wiser measures that fit departments' needs better".

The negotiation consisted of about 50 rounds of meetings with 26 CDRs and 90% of the participants finally agreed on the objectives and jointly signed an accord supporting the decision taken. Hence, in December 2010 the Top Management issued the budget of AOU Asclepius for the year 2011, as a consolidation of the specific budgets developed in conjunction with the CDRs. In this regard, it is worth noting that all the people involved in the process, i.e. physicians, nurses and other workers as well as the managers, recognized that in line with this logic of cooperation and negotiation, the budget implemented by AOU Asclepius has not been set as a control-coercive tool, but as an opportunity for choral work towards the achievement of the objectives of the organization in terms of the high quality of the healthcare delivered. To clarify this point we show here several quotations.

"The budget that we have developed not only reflects the need for economic efficiency but also takes into account the specific characteristics and complexity of the healthcare processes. I believe that the participation of different subjects with different backgrounds, knowledge and skills, has been very helpful to ease the practical application of the new measures because they have been correctly understood and perceived, thus leading to a substantial implementation of the budget rather than a mere exercise of formal legitimation". (Member of the Internal Control Division).

"The budget presented reflects many of the problems that we have known well for a long time and that we used to accept with resignation. This represents a major challenge to pursue a better use of the available resources towards a tangible improvement of our service. It will be difficult to learn to manage our tasks in such a different way, but I regard the new budget as a rewarding incentive for us rather than a cage from which to escape". (Physician).

"This budget is an incentive to do well because it is not merely imposed but fully reflects the different needs expressed by all of us. We do not feel threatened and want to support this 'new form

of performing healthcare' trying to change the way we work to meet the measures introduced". (Nurse).

The implementation of the budget was necessarily complemented by the use of a quarterly reporting system, in order to quickly to verify whether the objectives established in the program had been achieved, to identify possible deviations and any solutions needing to be put in place. The quarterly reporting involves the presentation of the data collected and comparison with the same quarter of the previous year (2011 was the first year of adoption, hence no comparison with the previous year was provided). In addition, the report is published in the intranet of AOU Asclepius, allowing the head of each department - provided with a username and password - to gain access to the intranet from its workstation, to view the reports, thus stimulating constant information and participation (Strategic Plan 2011-2013).

Each report is divided into the following 4 areas: structure (e.g. number of beds available in the CDR); activities (e.g. no. of treatments); organization of work (e.g. no. of individuals employed by the University in comparison with no. of people employed only by AOU Asclepius); consumption (e.g. medicines and medical devices/equipment). The report also contains a set of indicators to measure the appropriateness, efficiency and quality of the health services provided, to ease the understanding of the problems and the positive aspects of corporate governance (Internal Control Procedures).

Data for each CDR flow within a single Data Warehouse, which receives information every day and updates the Database that it contains. Since the third quarter of 2011, the report is automatically generated by the Data Warehouse, thus providing reports in a timelier manner and with a significant reduction of errors in processing. In addition, the Data Warehouse not only allows access to reports, but also enables access to a number of flows (e.g. flows relating to inventories) for queries of different types (Information Flows Procedures).

The reporting activity, especially in its initial phase, has benefited from strong collaboration within the organization. The Internal Control division was responsible for the collection of data from the various offices and collaboration with these was crucial to ensure proper preparation of the Data Warehouse and its effective use. The preparation of the reports also included participation by the individual departments, with whom meetings had been held to disseminate knowledge of the report and the information platform. In addition, during these meetings, several departmental representatives were identified (currently 46), both in medical and administrative roles, to act as a link between the Top Management, the Internal Control Division, and the departments, and allowed data to be validated on the platform, and compared with those owned by individual departments.

In this regard, the interviewees highlighted several important aspects. First, the members of the Internal Control Division specified that one of their crucial strength in achieving the objectives is the central role attributed to their activities that have not been relegated to the Administrative-Accounting function, but have involved the development of an autonomous division under the supervision of the Top Management. We quote from one of the interviewees to clarify this point.

"The autonomy of our Division [Internal Control] *avoids a problem recurrent in realities similar to ours, in terms of the scarce legitimacy of the Division which performs the Internal Control. Indeed, this is particularly helpful in managing the risk of resistance by the actors involved"*.

Furthermore, the members of the Internal Control Division and Top Management have often recalled that in the initial phase of the changing process, the resistance of the actors involved was significant, mainly due to the lack of a real business culture (as the previous subsection emphasizes

in more details). Specifically, there was a tendency to perceive the new tools (i.e., the budget and related reporting system) as a threat and not as a stimulus towards greater efficiency. However, it is also highlighted that the new approach has improved (although not completely solved) the previous situation. We quote from a member of the Top Management on this issue.

"We still observe resistance to change, even by those who provide the data required for the reports. However, I must acknowledge that there is, in general, a greater openness and proactive behaviour by the various subjects involved. Clearly, the problems are far from over, but we are on the right track".

Also the other categories of individuals interviewed have highlighted the positive aspects relating to their involvement. In particular, they stressed that, in general, it was not too difficult to satisfy the request for information, mainly because thanks to the clarity of the request they were very sure about what they were supposed to from the beginning. However, they also noticed that several problems remained unanswered, leaving many areas for improvement, in particular concerning the indicators for the assessment of performance. For example one of the interviewees said:

"I can say that it was not too difficult for us to prepare the report, because we were part of the change from the beginning; we received clear instructions from the Top Management and constant support in the even of doubts from the Internal Control Division.
However, I cannot say that everything has been correctly understood or applied. In my opinion, this year is a kind of 'work in progress'. I mean… I see many areas for improvement, in particular in terms of indicators to assess appropriateness. I will surely collaborate with the management to improve the existing set of indicators".

They also noted that the introduction of reporting led them to pay attention to issues that had previously being underestimated or ignored and were, in effect, really important. To clarify, we quote a physician.

"… Moreover, during the preparation of this document, several issues which deserve greater attention came to light. For example, we realized that one of the levers on which we must necessarily act is the length of hospitalization, which other departments are able to optimize through more detailed clinical-history at the time of admission. On the contrary, we realized that we have a better capacity to efficiently manage the inventories, which could also be useful to other departments."

What should be noted is that, as Strategic Plan 2011-2013 clarifies, regarding the introduction of the budget and the reporting system, it is not possible to ignore the application of the cost accounting system. Indeed, AOU Asclepius has set up a system to improve the allocation of resources between the different structures, to reward the virtuous CDRs and reduce waste and inefficiency. The rational allocation of resources is a priority to support the organization and to verify whether the choices made are efficient.

Hence, in 2011 AOU Asclepius started experimenting with the application of cost accounting to verify the level of resources absorbed by each CDR, starting from a baseline of data for 2009. To clarify how this phase was carried out, we cite a member of the Top Management.

"To determine the costs absorbed by each CDR, the total costs for 2009 were distributed among the various CDRs. In particular, about 70% of these costs were allocated directly, while for the other costs it was necessary to identify a reversal criterion".

These data, in conjunction with the indicators contained in the quarterly reports of 2011, where crucial in identifying the inefficient CDRs where a cut in resources was possible, as well as the virtuous CDRs to be rewarded by allocating, in addition to the usual resources, the extra funding received from the RHS. In this regard, one of the physicians said in enthusiastic terms:

"At the beginning, I was scared of the cuts… For me cuts meant a worse service and I resisted the new measures… Then one of my colleagues brought me to a meeting with the Internal Control division and I had the chance to verify how they wanted to carry out the process.
And of course I appreciated the choice of allocating resources on the basis of merit, taking into account the ability to do more spending less, without the well-known political games that have created the high debt that we have to face now.
If we all try to reduce consumption at least minimally, we could invest more in research and advanced medical devices. In this sense I say with certainty that reducing the resources now means for me an increase in the resources available".

What should be noted is that despite the positive results achieved in terms of significant reduction of professional resistance to change and fast implementation of the new MAS thanks to the participative approach promoted, nevertheless, at the end of 2011 several concerns still persisted.

A major issue concerns the negotiating phase which leads to the formation of the Budget every year. Indeed, even though since 2009 there has been an increasing commitment within the organization to develop a common business culture, the negotiation of resources is still long and complicated. This is mainly because, as a member of the Internal Control division argued, some of the people involved in the process, although committed to increasing the efficiency of the internal processes under their responsibility, strongly oppose cuts in the resources available, *"sometimes also for a question of power, prominence and the image of their department"* (member of the Internal Control division).

A second concern is related to the reporting system, and especially refers to the need for further improvements. In particular, several physicians highlighted that the set of indicators should be integrated in order to take into account the specific characteristics of some of the departments and also to consider the problems of co-morbility for the assessment of appropriateness. Moreover, some of them called for making the information system more accessible and easy to use. Also the Top management and the Internal Control division recognized that the phase of implementation of the reporting system has been satisfactory but not yet completely successful. Indeed, they highlight that several departments still have to improve the timing and quality of the information provided, *"mainly because they have not fully overcome their fears related to the view of reporting as a threat and the desire to keep the exclusive ownership of the data"* (member of the Top Management).

Furthermore, the majority of the interviews emphasized that cost accounting is still at an embryonic stage (as is also stated in Strategic Plan 2011-2013) and needs to be better developed. Indeed, the management and the professionals agree on the need to redefine the allocation of resources, trying to implement different reversal criteria to show the specific needs of the different departments. In this regard, one of the physicians said:

"I am quite reluctant to accept the Cost Accounting as it looks now. I would feel more comfortable with a reallocation of resources that would take into consideration the peculiarities of the various activities that we carry out here. Otherwise, we risk switching from one wrong allocation to another".

The Regime

The interviews clarify that during the first half of 2012, the management and the departments have continued working together to consolidate the MAS. In particular, some small changes were made to correct some of the deficiencies outlined above. In this regard, it is worth noting that the management, in agreement with the majority of the representatives of the CDRs, selected several issues on which it would be possible to act in a timely manner, leaving to a later date the more substantial changes that would require a massive effort in the long term. Consequently, attention has been focused on the improvement of the information system to make it more user-friendly, also by providing departments with training courses (held in January) to educate the users on how to take advantage of the potential of the system. This has contributed to improving results in terms of timeliness and quality of information, as shown in the first quarterly report of 2012. We cite here a member of the Internal Control division discussing such enhancements.

" In the first report of 2012, we achieved certain improvements. Look…(showing us an internal document), the numbers speak for themselves! In statistical terms, there has been a reduction of 40% in the delays in updating the system; a reduction of 60% in terms of errors in the compilation of the same; and greater accuracy in terms of compliance of the data entered into the system with respect to the set of indicators."

Moreover, in February the Internal Control division started to work on a plan to revise the Cost Accounting system in terms of more specific reversal criteria, in collaboration with 4 departments that decided to join the initial trial. We quote from one of the physicians that stressed the relevance of this project in creating more confidence among professionals with reference to the Cost Accounting system.

"As I told you before, I was feeling uncomfortable with the incomplete Cost Accounting system implemented, thus, I fully agree with the choice of revising it because we absolutely need a system that is tailored to the peculiarities of our activities. This leads me to be more collaborative."

As a result, in March 2012, the Internal Control division and the representatives of the 4 departments began a mapping phase of the processes and the activities of the CDRs involved, to understand what could be the most appropriate criteria for the allocation of indirect costs and resources. The following quote from a member of the Internal Control division clarifies how the management has decided to proceed.

"This phase of testing is critical to understand what needs to be done and how to do it. We started with a small number of departments that are very diverse, in order to understand what the processes and activities that they carry out are. By the end of 2012 this recognition will allow us to develop a new plan for the Cost Accounting system that takes into account the specific characteristics that emerged. This model will be tested also in other departments in 2013 and then further enhanced. The whole revision will be completed by the first half of 2014."

Since June 2012, and taking into account that the project outlined above will be on-going until 2014, the implementation of the MAS in AOU Asclepius can be considered to have been essentially completed, and therefore the organization has entered the so-called regime phase.

In this phase, the reporting system showed constantly improving results,; there were fewer disputes between professionals and Internal Control division over the allocation of resources, possibly as hypothesized by the CEO '*due to the plan of revision of the cost accounting system, activated in recent months, which has calmed a potentially explosive situation*'. Moreover, there is a sufficient

improvement in terms of efficiency by 55% of the departments, and this is, as a member of the Internal Control division highlights, *'a sign of a substantial commitment and not just a formal implementation of the new measures'*. Indeed, from the organizational point of view, the implementation of the new MAS has led also to a process of integration between the medical-surgical and diagnostic departments, through the creation of joint therapeutic-diagnostic protocols, to improve efficiency and effectiveness, that has favoured a reduction in waste and an improved quality of the services provided. We quote a member of the Top Management.

"Several objectives agreed in the budget, especially those relating to consumption of resources (e.g., medicines, aids analysis requests, etc.) have gained greater attention from the personnel within the departments, that have adopted virtuous practices with an important economic impact".

Concluding, it is worth noting that by the end of 2012 the Top Management had a meeting with the members of the Internal Control division and with the representatives of the CDRs to summarize the progress to date. During this meeting, that we had the chance to attend and digitally record, several crucial issues arose.

First, the majority of the heads of departments expressed increasing interest in the MAS ad recognized their usefulness as a support for governing their CDRs. In particular, they expressed their appreciation to the Internal Control division for the method of consultation to develop shared objectives and courses of action, and also with reference to their practical support that continued also during 2012. On the other hand, the management recognized the efforts of each CDR to ensure a greater level of transparency in the processes that have been helpful in achieving more timely complete and accurate internal information flows. In this respect, they concluded by emphasizing that the introduction of the MAS has led a substantial reduction in the pre-existing incorrect behaviour, because everything is monitored, analysed and evaluated better thanks to the active participation of the majority of the healthcare professionals.

However, also some unsolved issues were highlighted. The particular reference was to the on-going perception of the MAS as a coercive constraint (diminished but not completely minimized during 2012), by some of the professionals who therefore tended to resist the change. In this regard, the Top Management expressed their hopefulness that the projects, already started or planned for future periods, with the aim to further improve the MAS implemented, could persuade the last sceptics people of their usefulness. For this purpose, they recalled the on-going project described above to restructure the cost accounting system, and also briefed the participants on their ideas of better developing in the foreseeable future the existing set of performance indicators, by adopting a Balanced Scorecard approach.

They concluded by highlighting that, although the MAS is now fully and effectively implemented as the positive results confirm, there is still much to do and to improve, and that this is only possible if everyone within the organization ensures his constant and active participation to achieve both the quality and economic goals.

7. DISCUSSION

The subject of this paper is the investigation of the matters concerning the implementation and effectiveness of management accounting systems in complex organizations, and especially hospitals. In this regard, it is worth noting that, as we show in the second section, the implementation of management accounting systems in healthcare organizations should be examined taking into account the difficult dialectics between two conflicting logics: the management and the professional.

Indeed, professionals dominate these organizations, and sometimes tend to resist changes, thus making the implementation of the MAS ineffective.

This research focuses especially on the Italian context that, as we elucidate in the third section, has been characterized, over the past thirty years, by a number of significant transformations related to the so-called 'process of corporatization' of healthcare organizations. Such a phenomenon aimed to introduce within the Health Service a management model no longer based on bureaucratic controls, but rather, on the improvement of effectiveness and efficiency (from a broader perspective), by using tools and methods (such as the competitive model) typical of private sector corporations. This has forced a number of changes within the organizations, in particular towards behaviour and organizational systems based on managerial logic centred on planning, scheduling and controlling results. Accordingly, the management accounting systems were introduced in the healthcare organizations with a very specific purpose: to orient the behaviour of operators towards achieving the objectives (management and care effectiveness), by consuming the available resources as well as possible (efficiency), through the adoption of methods and analysis able to combine the different dimensions of management typical of complex organizations, to produce information and making it available. In particular, to ensure the achievement of the objectives, the planning, programming and decision-making processes led to a greater need for timely information both in quantitative and qualitative terms.

It is worth highlighting that since the reform process allows us to understand the implementation of MAS in Italian healthcare organizations as a transformational process, the study is informed by the redefinition of Habermas' theory provided by Laughlin and Broadbent (1993, 1997, 2003, 2005), with the aim of understanding whether MAS as design archetypes of AOU Asclepius, were capable of assimilating influences from the external environment (the Region and the Italian Health Service), and whether they were able to effectively translate these influences into the interpretative scheme. Hence, this section discusses the results of the analysis in the light of the theoretical model, to understand which are the factors that possibly justify an effective change in MAS and what are the implications for practitioners and professionals involved in the process of change.

For purposes of clarity, it is important to briefly recall here the implications of the theoretical model addressed in the second section. In particular, we have previously highlighted that changes may occur as *Morphostasis* (first order change) when the change neither really affects the heart of the organization nor the interpretative scheme, or as *Morphogenesis* (second order change) when the change influences the interpretative scheme because it profoundly permeates the essence of the organization. Especially, the former can arise as *Rebuttal*, when an environmental disturbance is tackled through changes in the design archetype, but afterwards this latter returns to the original situation, or as *Reorientation*, when environmental disturbances are internalized because they also affect subsystems, but do not affect the interpretative scheme. On the other hand, *Morphogenesis* may alternatively occur as *Colonization*, such as a compulsory change, or as *Evolution*, when there is a free and non-compulsory change.

With specific regard to the findings of our research, it is possible to maintain that AOU Asclepius has experienced a successful process of change, i.e., an *Evolution* (*Morphogenesis* of the second order), because the MAS introduced in the wake of changing regulation, both at National and Regional level, have been effectively implemented within the organization. Indeed, the MAS introduced were able to translate the pressures for corporatization coming from the outside in terms of new legal requirements, to the interpretive schemes of AOU Asclepius, towards the creation of a shared and accepted business culture aiming to maximize the effective and efficient use of the resources, and the appropriateness and quality of the services provided.

What should be noted is that a crucial element to ensure such effectiveness has been the constant involvement of the various categories of professionals over the different phases of the changing process. Actually, one would expect that a healthcare organization such as AOU Asclepius, characterized by multiple strong (and sometimes conflicting) ideologies, due to its threefold nature, might be resistant to fundamental changes in the interpretative scheme. On the contrary, the effort of the management to continuously involve the healthcare professionals, constant attention to their needs, the negotiation of measures to be taken with the representatives of the various groups, rather than simply the coercive adoption of pre-packaged systems, has made the difference, by helping to create, if not entirely at least in large part, a corporate culture that did not exist before. This fully reflects the view of Dunphy and Doug (1988) who highpoint that *Morphogenetic* changes benefit from shared values collaborative approaches between individuals.

The importance of such a participative approach is further confirmed, if we consider the process of change which started in 2007, that can be categorized as *Reorientation* (*Morphostasis* first order change), because the normative pressures were internalized, affecting only the subsystems but not the interpretative scheme. Indeed, the process of change undertaken by the management in 2007 and mainly consisting in the introduction of pre-packaged measures, based on the mere formal application of the law, had miserably failed with these measures being rejected by the organization due to the strong opposition of the dominant professional groups.

Furthermore, it is worth remarking that at the very beginning, the introduction of the MAS shed light on the existence of problems in terms of lack of dialogue between the different categories of professionals in the organization. However, the need to sit at a negotiating table in a compact way to deal with the management led the various groups of professionals to put more effort into developing the dialogue among them. This not only resulted in a more rational mode of supplying healthcare services, but can be also identified as an additional element in the ultimate success of the process of change. In fact, the improvement in the services delivered that was possible thanks to the integration between the different departments and between the different categories of professionals, has made physicians (and other healthcare professionals) aware of the potential of the new measures. They were able to verify that the new tools were useful in achieving not only economic objectives but also greater quality of care, through the reduction of waste and the release of resources to invest to enhance the quality of the services, thus pushing them to proactively support the changes taking place.

That having been said, it is also worth highlighting that, even if the changes in the MAS have been effective and have helped to create a corporate culture oriented to fulfilling the objectives of efficiency and quality in the broadest sense, a number of issues, as the results of the analysis show, are still open and will need further work. The reference here is to the concerns relating to the persisting resistance of several professionals, which has been reduced but not completely set aside. Then, the tools currently available need to be refined, and more importantly effort needs to be made to eradicate the factors or conditions that may favour a political influence still potentially able to affect, at least to a minor degree, the budgeting process and the allocation of resources.

Therefore, it is possible to maintain that a proper understanding of the changes taking place requires a move beyond the oversimplified reference to the moment in which the tools implemented begin to be correctly used. From this perspective, the effort that the various subjects involved have made in terms of commitment towards the improvement of the MAS also for the future, is a further positive signal. In particular, this bears witness not only to the authentic evolution that is on-going within AOU Asclepius, but also emphasizes that the MAS has exceeded the objectives of strategic and operational planning, as well as of the control system for which it was initially conceived. Accordingly, the MAS of AOU Asclepius can be regarded as a means of change and mediation

between different and contrasting institutional subjects. From this perspective, the real potential of the MAS of AOU Asclepius has not yet been entirely revealed. The usefulness of the MAS lies here in its future ability to create a common language that will facilitate a productive exchange, and dialogue and discussion between the different subjects, helpful in superseding their previous inability to interact, due to a lack of comprehension that led to strong opposition or open conflicts among them. Indeed, a common language allows more relaxed relationships within the organization, based on understanding, and leads increased participation favouring improvement of organizational performance in terms of efficiency, effectiveness, and the quality of service.

8. CONCLUDING REMARKS

This research comes under the field of study that focuses on the issues relating to the implementation of MAS in complex organizations, and specifically refers to the healthcare sector. Especially, the aim of this paper was to broaden current knowledge on the factors that may contribute to bringing about an effective change in the MAS, also with regard to resistance by dominant groups of professionals, and to the practical effects of a change in MAS for both professionals and practitioners.

An important implication of this research is that it elucidates how an Italian healthcare organization has managed the process of change in the MAS forced by the introduction of new legal requirements at National and Regional level. It is worth highlighting that this case study has given us the chance to obtain a thorough idea of the way the process of change in the MAS was handled throughout its main phases. This provided us with a more complete picture of the actions undertaken, the problems faced, and the perceptions of the people within the organization. The analysis has shed light on a number of interesting aspects in relation to the factors that influence the effectiveness of change in the MAS positively, thus providing a noteworthy contribution to the existing literature in a twofold way. First, it complements the debate on MAS implementation in complex organizations, by providing an example of a suitable way of handling resistance by professionals. On the other hand, it contributes to theory by confirming its usefulness in interpreting changes in organizations characterized by high complexity, a turbulent regulatory and institutional environment, and a strong presence of dominant groups. Moreover, this paper has some practical potential in showing how to cope with problems that possibly arise when dominant groups of professionals are affected by the changes, helpful for practitioners involved in the processes of change, having difficulties in making it ‘attractive’ to such professionals. Also it makes it possible to identify possible strategies to make the changes effective, and to mitigate/eliminate/manage opposition and resistance to changes.

Indeed, this paper benefits from the evolutionary and rich view from the inside of a changing phenomenon, that can provide both academics and practitioners, often involved in complex processes of change, with useful suggestions concerning relationships with dominant/resistant groups of professionals. This case study will have an important impact, by providing useful practical suggestions for all the organizations involved in problematic processes of change, and specifically for healthcare organizations where the importance of MAS and their effectiveness cannot be underestimated due to worldwide turbulence within the sector. Additionally, this potential is not limited to the healthcare sector, but allows a more comprehensive understanding of the phenomenon of change and related concerns in all organizations characterized by high degrees of complexity.

However, before concluding, several caveats still need to be considered. In fact, despite the significant contribution of this research, both from a theoretical and practical point of view, some interesting aspects should be explored further. In particular, the reference is to the questions

pertaining to resistance by professionals, which could also be considered from a different perspective. Indeed, it would be interesting to discover whether factors such as social and cultural background, age, education and gender may have influenced the behaviour of the various individuals involved in the process of change. Moreover, it could be interesting to analyse this factors also taking onto account the relationships between people within and among the different groups, and the role played during the process of change to encourage or oppose it.

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