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*Full Length Research Paper*

# Management Accounting Change in the Portuguese Telecommunications Industry

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This paper sought to study the reasons that explain why has a telecommunications operator (called Marconi) changed its traditional management accounting systems (MAS) and replaced it with activity-based costing (ABC). The paper relied on qualitative data collected through a longitudinal and in-depth case study in the telecommunications sector. The investigation was informed by new institutional sociology (NIS) insights. The study evidenced that Marconi adopted ABC in order to fulfil its constituencies' expectations of efficiency created with the reorganisation of the Portuguese telecommunications sector and the introduction of competition in the market. Furthermore, the paper contests the managerial emphasis that ABC has been subject to and claims that social accounting theories, such as institutionalism, should be adopted by management accounting researchers in order to achieve a deeper understanding of the 'ABC phenomenon'.

**Keywords:** Management accounting change, Activity-Based Costing, Portuguese telecommunications liberalisation, New Institutional Sociology.

## INTRODUCTION

This paper reports a case study conducted in a Portuguese telecommunications company (called Marconi) providing long telecommunications services that has adopted an activity based approach. Especially since the publication of diverse case studies by Cooper and

Kaplan through the Harvard Business School in the 1980's, Activity Based Costing (ABC) began to attract a widespread interest both amongst researchers and practitioners. It is said that ABC emerged in response to the recognition that traditional management accounting system (henceforth designated by MAS) were generating misleading costing data and that were not providing useful information to support managers decision-making within the new business environment (Johnson and Kaplan, 1991; author, 2007). The relevance of ABC was particularly emphasised when in 1987, Johnson and Kaplan published "Relevance Lost – The Rise and Fall of Management Accounting", in which it was claimed that traditional MA (herein used to denominate management accounting) information is "too late, too aggregated, and too distorted to be relevant for managers' planning and

## Abbreviations

ABC: Activity-based Costing; EC: European Commission; EU: European Union; ICP: Portuguese Communications Institute; MA: Management Accounting; MAS: Management Accounting Systems; NIE: New Institutional Economics; NIS: New Institutional Sociology; OIE: Old Institutional Economics; TDP: Teledifusora de Portugal; TLP: Telefones de Lisboa e Porto; TP: Telecom Portugal.

control decisions" (1991, p. 1). After some years of enthusiasm towards this approach, several case studies of ABC implementation, documenting difficulty and failure have been reported (see for example, Malmi, 1997; Major and Hopper, 2005; Bhimani and Pigott, 1992; Cooper *et al.*, 1992; Anderson, 1995; Friedman and Lyne, 1999) and some reservations about its effective value have been pointed out by a certain number of management accounting researchers (Baird *et al.*, 2004; Armstrong, 2002; Hopper, 1994; Jones and Dugdale, 2002; Soin *et al.*, 2002). Those reservations concern basically three types of issues (Innes *et al.*, 2000; Major and Hopper, 2005): firstly, whether ABC is more than just a fad or fashion and whether it represents real technical enhancement rather than a bandwagon effect (Gosselin, 1997; Malmi, 1997; Jones and Dugdale, 2002); secondly, the recognition that ABC only generates relevant costing information in supporting decision making when applying certain restrictive conditions (Noreen, 1991; Datar and Gupta, 1994) and thirdly, that its implementation is costly and behavioural factors are determinant to its success (Shields, 1995; Englund and Gerdin, 2008; Shields and Young, 1989; author, 2007; Baird *et al.*, 2004). This paper contests the managerial emphasis that ABC has been subject to, which the researcher believes is too restrictive and insufficient to address effectively all the complexities of the 'ABC phenomenon'. Instead, the researcher claims that institutional theory might contribute to obtaining a more fundamental theoretical and concrete analysis than is being offered by mainstream accounting about ABC. Studies to date suggest that ABC in practice might differ from the way is portrayed in textbooks and that it is likely that after being implemented to threaten "existing managerial structures of power and control and possibly threaten managerial livelihoods" (Hopper, 1994, p. 487). Also, there has been a call for more intensive case study research, supported by the use of social theory accounting in order that ABC's contextual and intrinsic complexities may be addressed effectively (Hopper, 1994; Armstrong, 2002; Soin *et al.*, 2002; Lukka and Granlund, 2002; Baird *et al.*, 2004). This paper is an attempt to address such calls and aims to contribute to increase understanding of the motivations that drive companies to begin organisational change and in particular to adopt activity based techniques.

A discussion of the basic assumptions of new institutional sociology (NIS) follows, which is the branch of institutional theory adopted to explain why Marconi has adopted ABC. The main reservations towards ABC relevance will likewise be presented. The paper continues with the description of the research method followed in this investigation and with the presentation of the company. It then moves to the discussion of the case study conducted in Marconi informed by NIS perspective. The paper concludes with the presentation of conclusions.

## **New Institutional Sociology in Organisational Analysis and ABC**

Conventional accounting wisdom is grounded on the assumptions of the neoclassical economics theory of the firm, which assumes that firms seek to maximise their profit and that organisational actors operate with perfect knowledge of reality (Baxter and Chua, 2003; Wickramasinghe and Alawattage, 2007). For a long time, management accounting research was more concerned with what economically-rational managers should do, rather than what managers were observed to do (Scapens, 1994; Ryan *et al.*, 2002). This technical and prescriptive perspective of accounting had identified research before its actual emphasis on behavioural, social and political issues (Hopper and Major, 2007; Roberts and Scapens, 1985; Carruthers, 1995; Wickramasinghe and Alawattage, 2007). Nowadays, it is commonly accepted by researchers that accounting "is not a neutral device that merely documents and reports the 'facts' of economic activity" (Miller, 1994, p. 1). In opposition accounting has come to be considered as a social and institutional practice (Miller, 1994; Carruthers, 1995; Wickramasinghe and Alawattage, 2007) and, therefore, sociological / organisational theories are being used to help the researcher to make sense of management accounting practice (Baxter and Chua, 2003; Berry and Otley, 2004). Management accounting researchers have been adopting the institutional theory to explain and make sense of accounting practice, especially during the last three decades (Moll *et al.*, 2006). Different branches of institutional theory have been used in accounting research, namely the new institutional economics (NIE), new institutional sociology (NIS) and the old institutional economics (OIE) (Dillard *et al.*, 2004; Moll *et al.*, 2006). These approaches are substantially different both in their intellectual roots and methodological issues, and their choice should depend of the 'research purpose at hand' (Moll *et al.*, 2006).

NIS applied to organisational analysis is a relatively recent phenomenon. It was only in the 1970's that new conceptions focused on the cultural and social aspects of organisations and on their institutional environments emerged (Scott and Meyer, 1991; Scott, 2008; Greenwood *et al.*, 2008). Since then NIS has been used repeatedly in empirical investigations (see for instance, Galaskiewicz, 1991; Flingstein, 1991; Dacin and Dacin, 2008; Davis and Anderson, 2008). Neoinstitutionalists are unanimous in their belief that the structure and behaviour of an organisation depend on the characteristics of the environment in which it operates. Scott and Meyer (1991) pointed out that "organizations are embedded in larger systems of relations" (p. 120) that they denominated by 'societal sector'. They define societal sector as the group of organisations providing similar services, products or functions, including its major suppliers, customers,

owners, regulators, competitors, etc. This concept was termed by DiMaggio and Powell (1991b) as 'organizational field'. It is said that these systems are organised at broader and wider levels and that organisations are connected into nonlocal and vertical hierarchies. The way this sector is structured significantly affects organisational features (Scott and Meyer, 1991; Scott, 2008). In sum, NIS is based on the belief that organisational structures are shaped by their social environment and that environments made organisations in their own image. However, this similarity between the inside and outside of organisations denominated by 'isomorphism' is not determined by technical criteria. Instead, formal organisational structures arise as reflections of rationalised rules that function as myths and give legitimacy and stability to organisational projects (Meyer and Rowan, 1991). As Carruthers (1995) pointed out, the process of isomorphism "is a cultural and political one that concerns legitimacy and power much more than efficiency alone" (p. 315). This often means that political and cultural issues are hidden under a technical surface. Four types of isomorphism can be distinguished (DiMaggio and Powell, 1991b): competitive, coercive, mimetic and normative. Competitive isomorphism occurs when the forces of competition will eventually impose upon organizations one single best way of doing things (Carruthers, 1995). This type of isomorphism, according to DiMaggio and Powell (1991b) gives only a partial picture of the modern world of organisations and, hence, should be complemented by an institutional view of isomorphism. Coercive, mimetic and normative isomorphisms were developed under this institutional view and stress cultural and political issues as the drivers of change. The former type of institutional isomorphism is the result of organisational external pressure on dependent organisations and of general expectations developed in the environment in which organisations develop their activities. Scott (1991) suggested that two types of impositions should be distinguished under this category: imposition by means of authority and imposition by means of coercive power. Accordingly, changes imposed by authority are met with less resistance and faster than those imposed by force. Moreover, structural changes associated with authority are expected to achieve higher levels of compliance and stability since these changes are less superficial than change imposed using coercion. If coercive isomorphism derives from coercive authority, mimetic isomorphism on the other hand, is driven by uncertainty and imitation processes. Accordingly, uncertainty about organisational technologies, goals and environment's expectations often leads to the modelling of organisations on other kindred organisations. It seems that organisational fads and fashions are likely to spread through this particular type of isomorphism (Carruthers, 1995). Organisations tend to copy models of operation from successful companies and to be receptive to fashionable business techniques, as

might be the case with ABC, to protect them from uncertainty (Granlund and Lukka, 1998; Abrahamson, 1991, 1996). Finally, normative isomorphism is based on the recognition that professions play an important role in the diffusion of similar orientations and dispositions in shaping organisational behaviour. This process takes place through the legitimacy that formal education confers and through the development of professional networks that span organisations. Hence, organisational change in NIS occurs as result of the organisation's conformation to its institutional external environment in order to increase the organisations' chances of survival.

Scott and Meyer (1991) alleged that when occurring structural change is often very difficult to distinguish from technical and institutional drivers since those who formulate institutional rules strive to make them appear technical. To the extent that rules are considered proper, adequate and rational, organizations must incorporate them to avoid illegitimacy. As Carruthers (1995) claimed "being technically efficient is not the only path to organizational survival. Achieving legitimacy in the eyes of the world, state, powerful professions, or society at large, is another effective survival strategy" (p. 317). The incorporation of legitimised elements increases the commitment of internal participants and external constituents to organisational actions and protects organisations from having their conduct questioned. Nevertheless, because inadequacies often arise between organisational efficiency demands and prescriptions of generalised myths, formal organisational structures are decoupled from actual organisational practices and a logic of confidence and good faith is displayed, internally and externally (Meyer and Rowan, 1991). This organisational formal structure was described as "mythical and ceremonial, a kind of symbolic window-dressing" (Carruthers, 1995, p. 315).

In summing up, traditionally neoinstitutionalists affirm that organisations are a reflection of their environments and external institutional demands and that when organisations do not accommodate the environment's expectations they would not survive. This convergence between organisations and their environments emerged from the search for legitimacy. The constituents that exert such isomorphic pressure are vast and include such institutions as shareholders, regulator, state, public opinion and capital markets (Granlund and Lukka, 1998; Hopper and Major, 2007; Wickramasinghe and Alawattage, 2007). In this sense, the adoption of ABC or of any other managerial technique, which have gained the image of boosting organisational performance would legitimise organisations' activities within their operating environments (Soin *et al.*, 2002; Hopper and Major, 2007).

Although activity costing was earlier referred to by Staubus (1971) its popularity was due mainly to its application in a few US companies in mid 1980's and to the publicity of these experiences through the publication

of several cases studies by Cooper and Kaplan (Jones and Dugdale, 2002). ABC emerged as a result of the recognition that traditional MA was inappropriate in the current business environment and that often decision-makers were provided with inaccurate cost information (Johnson and Kaplan, 1991; author, 2007). It has been alleged that conventional MAS lagged behind manufacturing technology changes and that management accounting was no longer providing relevant information for supporting managers in their decision-making task (*ibid*). It was argued that the cost accounting systems in use had lost their former relevance by the 1980's (Johnson and Kaplan, 1991) and that management accounting should return to basics, "working closely with design and process engineers, operations managers, and product and business managers" (Johnson and Kaplan, 1991, p. 261). After that first stage of huge excitement towards the potential of the approach where success cases were widely publicised and emphasised, several case studies reporting ABC implementation difficulty and failure have begun to appear (Major and Hopper, 2005; Malmi, 1997; Anderson, 1995; Bhimani and Pigott, 1992; Soin *et al.*, 2002; Friedman and Lyne, 1999; Baird *et al.*, 2004). If ABC literature until two decades ago was replete with methodological and operational issues (Cooper, 1988a, 1988b, 1989a, 1989b, 1990) it is now concerned with the study of organisational and behavioural topics both associated with the process of ABC implementation and with its impact on organisations and individuals (Major and Hopper, 2007; Soin *et al.*, 2002; Baird *et al.*, 2004; Gosselin, 1997; Wickramasinghe and Alawattage, 2007; Armstrong, 2002; Lukka and Granlund, 2002; Englund and Gerdin, 2008).

ABC cannot be therefore understood as a panacea that solves all costing problems. Today, there is some evidence from empirical studies that ABC can generate dysfunctional consequences within organisations, perhaps because as Hopper argued (1994, p. 487) "systems perceived by managers to be potentially threatening can be rendered unworkable through managerial biasing and manipulation of data". Furthermore, some researchers have questioned whether ABC is anything more than a fashion or fad (Innes *et al.*, 2000; Jones and Dugdale, 2002; author, 2007). Often, the managerial techniques proposed by management fashion setters even if they look like innovations and improvements relative to the state of the art they are only old business practices reinvented ("old wine in new bottles"). This might be the case of ABC considering Johnson and Kaplan's (1991) historical account of MA development. They claimed that in the beginning of the twentieth century the engineers and managers of big US manufacturing companies were using similar managerial techniques to ABC to allocate costs to products. ABC rhetoric aims to convince fashion followers that they must pursue efficiency goals and that the right means to attain those goals is through the adoption of activity based

techniques (Wickramasinghe and Alawattage, 2007; Jones and Dugdale, 2002; author, 2007). Despite studies on ABC adoption in firms (e.g. Soin *et al.*, 2002; Major and Hopper, 2005; Baird *et al.*, 2004; Hopper and Major, 2007) further research is needed for researchers to comprehend whether ABC is merely a management fashion or if, on the contrary, it constitutes a true alternative to traditional costing systems offering real benefits to managers.

## RESEARCH METHODS

This paper is supported by a case study conducted over 12 months in a Portuguese telecommunications company, which has followed the six steps of case study design suggested by Ryan *et al.* (2002): preparation, collecting evidence, assessing evidence, identifying and explaining patterns, theory development and report writing. The case study here reported followed an explanatory research model since theory was used to help the researcher make sense of the observed accounting practices. Thus, was not intended through this case study generate theory. This research format seems to be the most appropriate when research questions are focused mainly on "why" questions, as is the situation in this particular case study (Yin, 2009; Berry and Otley, 2004). The research questions posed by the researcher were the following: firstly, why Marconi has changed its MAS and secondly, why ABC was adopted. Different sources of information were used, including interviews, observations and documentary analysis, in order to facilitate triangulation (Yin, 2009; Ryan *et al.*, 2002). Both in the pilot and main study a semi-structured format was adopted to conduct interviews. Nevertheless, every time the researcher felt that something not covered in the previous plan was worth exploring, alterations to the guide were made. Also, interviewees were encouraged to speak freely their feelings and thoughts about the changes that had occurred in both Marconi and the Portuguese telecommunications market. About 52 interviews (20 interviews in the pilot study plus 32 in the main study) were conducted over a 71 hour period. In-depth and face to face interviews were carried out with several managers from the operational departments of Marconi with different interests and involvements with its MAS. In total 20 of Marconi's managers and employees were interviewed. Also, the Portuguese telecommunications regulator, the consulting firm that was responsible for ABC implementation in both Marconi and its parent company, and some managers from Marconi's parent company were interviewed. Apart from the interviews conducted in these organisations, documentary evidence was collected, namely Portugal Telecom's and the Portuguese telecommunications regulator annual reports; Likewise several laws about telecommunications regulations were gathered. All the

interviews were tape recorded and then, fully transcribed, excluding the following ones: the two first in the pilot study where matters concerning access to data were discussed with Marconi's managers, and two interviews conducted in the main study on two of its engineers, who refused to be tape-recorded. Marconi's departments in which managers and employees were interviewed were the following: the two commercial divisions (Consumer Markets department and Carrier Services and Network Planning department), the production division (Telecommunications Infrastructure department), the Planning and Control department and the Finance and Administration department. Because the Telecommunications Infrastructure department has an important role in periodically feeding the ABC system, its operational centres of satellites (in Sintra), submarine cables (in Sesimbra), and Commutation (in Linda-a-Velha) all situated in the outskirts of Lisbon, were visited, and interviews were conducted with several of its employees and managers. In Marconi several documents were obtained, namely its annual reports from 1990 till its fully integration in Portugal Telecom in 2002, financial reports, telecommunications market analysis, dictionary of activities, notes from the consultants and other similar data. Besides this, the researcher gathered newspapers' interviews with the actual and previous board of directors from Marconi and Portugal Telecom and other articles about the telecommunications market both in Portugal and worldwide.

## Marconi

Marconi was a Portuguese telecommunications company operating in the long distance telecommunications business and founded in 1925. Until the end of the 1990s this company was operating in a monopoly regime and, hence, was not facing true market competition. This fact, associated with the nature of its business, has contributed to turn Marconi in one of the most healthy and profitable Portuguese companies. Also, Marconi has acquired an engineering prestigious image both in Portugal and overseas by the expertise of its activity. Until 1974 This was the year of the 'Revolution of April', which led to the end of the 13 year colonial war between Portugal and the African colonies and to the independence of those countries.

The activity of the company was mainly supported by the telecommunications traffic between the Portuguese ex-colonies in Africa, namely Angola, Mozambique, Guinea-Bissau, Cape Verde and S. Tome and the 'mainland'. After the revolution, Marconi's strategy was based on its internationalisation through the development of programmes worldwide, which was supported by its technological modernisation in satellite and submarine

cables. At the end of 1980's Marconi decided to move into new businesses, which encompassed not only telecommunications services but also the following new business areas: information systems; the electronics industry; financial services and property. At the same time, Marconi sought to enlarge its activities in the telecommunications business. Hence, inroads were made to new telecommunications areas, namely into the public telecommunications (both local and international) outside Portugal, maritime mobile services, telecommunications engineering, telephone and business directories, TV broadcasting, corporate communications, value added services and research and development. As result, Marconi became an important national economic group in the Portuguese economy at the end of 1980's and in the early years of 1990's.

From the beginning of the 1990's, the Portuguese government started a reorganisation programme of the whole telecommunications sector following the decision of the European Community to liberalise the telecommunications market in its member states. This decision was a result of the worldwide trend of fully deregulating telecommunications markets. The aims of the reorganisation of the Portuguese telecommunications sector were threefold: (1) First, it intended to create adequate conditions for the introduction of full competition; (2) Second, it sought to prepare the market to the installation of new operators; (3) Finally, it aimed to restructure the 'old' public operators. Until this reorganisation, the Portuguese telecommunications market comprised several public concessionaires of medium size with mixed capital, each of those companies focusing on a particular core business. These public concessionaires were the following: Telecom Portugal (TP), which was created in 1992 after having been separated from CTT (a company that was providing both mail and national telecommunications services); Telefones de Lisboa e Porto (TLP), whose business was to provide local and regional fixed telephone services in the areas of Lisbon and Oporto; Marconi, whose core business was the intercontinental telecommunications services; Telepac, whose business was switching data transmission and Teledifusora de Portugal (TDP), which was accountable for managing the network and broadcasting TV signals. These companies were under the jurisdiction of the Portuguese government, specifically the Ministry of Public Works, Transportation and Communication, and supervised by the Portuguese Communications Institute (ICP) These days the regulator is called 'ANACOM' Despite the fact that ICP's origins are traced to the 1980's, its role as a telecommunications regulator was mainly felt by operators after the Portuguese telecommunications sector was reorganised in the mid 1990's.

Throughout the 1990's several changes were

introduced in the Portuguese telecommunications market, which have drastically affected Marconi's business activity. Firstly, in 1994, Portugal Telecom (PT) was created as result of the merger between the public operators TP, TLP and TDP. Secondly, in 1995, Portugal Telecom was privatised (1<sup>st</sup> phase) with the aims of both restructuring the Portuguese telecommunications market, opening it up to private both national and international investors and of increasing its internationalisation and competitiveness. Thirdly, in 1995 Marconi was integrated in PT, which was constituted as an economic group encompassing several businesses all related with telecommunications services. In consequence of Marconi's integration in the Portugal Telecom Group, this company transferred all its non-core businesses and financial investments abroad to the parent company. On the other hand, PT transferred to Marconi the telecommunications traffic business with Europe and North Africa. Therefore, in this way Marconi became the single public provider of international telecommunications services, but 'in compensation' lost all its other businesses, including its physical and human resources to the parent company. The political idea underneath to the integration of Marconi in PT was that Portugal should be provided with a strong telecommunications group, in order to compete successfully with both internal and external telecommunications operators as happened in other European countries. Marconi kept its autonomy from PT, but its integration had affected its daily life in multiple ways. With the reorganisation of the Portuguese telecommunications sector, both PT and Marconi began a full programme of organisational change. External consultants were called in and several managerial projects were launched. In concrete, Marconi had implemented the following projects, which mainly affected its MA and informational systems: (1) Revision of its strategic plan; (2) Implementation of a new career evaluation system, including the preparation of a scheme to periodically assess employees' motivation and work satisfaction; (3) Adoption of strategic control benchmarks; (4) Development of programmes to create staff awareness about the competitiveness of the business environment surrounding Marconi; (5) Implementation of EIS – Executive Information System, which aimed to provide senior managers with a set of operational and strategic information; and (6) Adoption of ABC. From all the projects introduced in the company the adoption of ABC was the major one, not only judging by the human and financial resources allocated but also by the time and importance allocated by Marconi's top managers to this project. In 1997 Marconi, with the help of external consultants, began the implementation of ABC throughout the whole company and in March 1998 the first results were obtained and discussed amongst the managers. In mid 2000 ABC was fully implemented and data was being regularly provided to both Marconi's managers and Portugal Telecom.

### **Why has Marconi Changed its MAS?**

This section aims to explain the reasons that led Marconi to change its MAS supported by NIS theory. Neoinstitutionalists claim that organisations are shaped by their environments and that in order to survive they are forced to follow the expectations of their constituencies (DiMaggio and Powell, 1991a, 1991b; Scott and Meyer, 1991; Scott, 2008; Greenwood *et al.*, 2008). It is argued here that Marconi has changed its MAS in order to accommodate internal and external expectations about its role within the new business environment characterised by tough competition. Changing its MAS was one of the means that the company has found to legitimise its actions to its shareholders, managers, regulator, parent company and the public, and a means to guarantee its survival.

Yet competition was fully introduced in the Portuguese telecommunications market from 1<sup>st</sup> January 2000, according to EC decision of liberalising European telecommunications sector, until 2003. Already at the beginning of the 1990's deregulation was publicly discussed and operators were perfectly aware of the huge challenges that they were soon going to face. On the other hand, Marconi's managers were not satisfied with the MAS that the company had adopted in 1992, since the system was providing managers with costing data too late and in order to be feed overburdened them with informational demands. 1992's cost accounting system was adopted by the initiative of Marconi's finance general director in order to support managers in both pricing and cost control strategies. Marconi's top managers were aware that the company would soon be losing its monopoly and facing tough competition and that it could not continue charging such high prices as in the past. Hence, during 1992 the first rationalisation of activities and cost control occurred. A policy of reducing telecommunications prices was introduced by Marconi since 1992 in order to improve its competitiveness within the telecommunications market. Considerable reductions, in some cases of more than 50%, have occurred in the price of Marconi's calls. Therefore, it is contended here that the information demands of Marconi's managers were one of the drivers that led the company to change its previous MAS and to replace it with a more 'sophisticated system' in 1997. If Marconi did not change its MAS, managers would tend to withdraw their involvement and motivation from company's strategies, and would allege that without an adequate MAS they could not follow satisfactory pricing and cost control strategies, and hence, that they were not responsible for Marconi's failure within the new business context. In this sense, it can be argued that MAS may be seen more as a 'hygienic factor' than a source of strategic or competitive advantage (Granlund and Lukka, 1998).

However, besides managers there were other constituencies that led Marconi to change its MAS. One

of the most important constituencies that have pressed Marconi to change its MAS was the Portuguese telecommunications regulator, through Marconi's parent company (PT - Portugal Telecom). Because Marconi was integrated within Portugal Telecom it did not maintain a direct relationship with the regulator. As a PT manager explained:

"Marconi doesn't have direct relations with the Portuguese regulator. Marconi has signed with PT a sub-concession contract to explore the international telecommunications business. The concession contract is between the state and PT. This way, Marconi only has to send cost information to PT, which is consolidated with those of PT and then sent to the regulator..."

Therefore, Marconi's information systems needed to be integrated with those of PT, in order to allow PT to periodically send the regulator the costing data imposed by, as will be explained below, both its concession contract and PT's 'status' of operator with 'significant market power'. Those operators who hold a share equal to, or more than 25% of the market in relation to circuit leasing, fixed telephone service and fixed telephone networks.

The Portuguese telecommunications regulator acquired substantial importance during the process of introduction of competition into the market. Its functions encompassed a wide range of activities, which might be summarised in three major tasks: (1) government advisement, (2) market regulation, and (3) technical assignment. In order to create conditions for true competition between the new operators and the established operators, legislation was laid down, pertaining especially to the 'operators with significant market power', with specific information obligations. In general, this legislation followed European Community directives, laid down by the commission with the aim of creating the conditions for the establishment of real competition within the European telecommunications market. The law-decree 290-A/99 dated 30 July pointed out that operators considered to have significant market power were obliged to:

"a) Guarantee to all users, unrestricted access to the leased circuits, in conditions of equality, transparency and impartiality;

b) Provide information on the provision and utilisation of the leased circuits, whenever requested by ICP [the Portuguese telecommunications regulator];

(...)

d) Possess separate accounting for the activities of establishment or provision of public telecommunications networks, on one hand and the other activities on the other. The latter shall include the services provided to the body itself and those provided to other bodies;

e) Implement a system of cost accounting in accordance with the provisions in the present Regulation;

f) Observe the quality levels established for them by ICP."

Thus, the operators with significant market power, as is

the case of Portugal Telecom, were obliged amongst other requirements to implement a system of cost accounting appropriate to provide the information demands of the regulator. Moreover, law-decree 474/99 of 8 November fixed that the operators of fixed telephone networks, and fixed telephone services providers, which had significant market power, should implement an analytical cost accounting system. This served the application of the tariff principles of equality, transparency and non-discrimination. It was aimed that PT, which has been the concessionaire of public telecommunications services for 15 years, based its price system on the services provided, exclusively in the context of the concession, following the principles described in article 30 of law-decree 40/95 of 15 February, which were:

"a) Cost orientation for the service provision, duly justified by an analytical accounting system;

b) Non-discrimination in its application, ensuring that all users in equal circumstances are conferred an equal treatment;

c) Uniformity in the application of the tariff regime in force for the services object of concession."

In 1995, as result of all these regulations PT changed its previous cost model and adopted a more sophisticated cost accounting system, which would provided the regulator with more detailed and accurate cost data. The costing information demands of the regulator, mediated by its parent company determined Marconi's resolution to (1) change its MAS and (2) to replace its 'old' MAS with a similar system to that adopted by Portugal Telecom. In other words, coercive isomorphism, as result of Portugal Telecom and the Portuguese telecommunications regulator's pressure was one, of the most important reasons to explain why Marconi decided to change its MAS. However, this pressure, combined with Marconi's information demands and expectations of change associated with the reorganisation of the company, explained partially the reasons that motivated Marconi's top managers to adopt a new MAS. Pressures from other external constituencies, such as Marconi / PT's shareholders and the capital markets, have also contributed to cause such a change. Coercive isomorphism, in this case generated by the creation of expectations within public opinion towards the improvement of Marconi and Portugal Telecom's competitiveness in the telecommunications market, has induced Marconi / PT to alter their MAS. PT's privatisation and the necessity of creating good public image, especially to potential shareholders, of a successful and dynamic company might have also influenced its top managers to adopt new managerial tools, believed by constituencies as progressive, rational and leading to success. PT was privatised in five phases, which had occurred after 1995. The goal of this privatisation was to get the participation in PT's share capital of a global strategic partner, and of several other strategic partners within specific business areas, along

with the general objective of dispersing the company's capital amongst private investors. This 'public exposure', as a PT's manager called it, has pressured PT and Marconi to assure the public that they were making substantial efforts to become more 'modern' and efficient. Providing its shareholders with a better quality of information through the improvement of its informational systems was one of the means found to express such efforts of 'modernisation' and to attract new shareholders to the company. As Meyer and Rowan (1991) argued if managers do not seem to use techniques that conform to the norms of rationality it is likely that stakeholders' expectations that companies are being well managed will tend to be disappointed. As a consequence of their disappointment their support will tend to be withdrawn from organisations, augmenting the likelihood of organisational failure.

To conclude, with the deregulation and introduction of competition into Portuguese telecommunications market, Marconi was expected by its constituencies to improve its efficiency and performance. Additionally, the regulator in order to assure the market that true competition was introduced it was pressing those operators with 'significant market power' to provide it with detailed cost data and hence, to up date their MAS. Marconi's MAS changes were then the result of such pressures and expectations.

### **Why has Marconi Adopted ABC?**

As was previously pointed out, neo institutionalists assert that organisational constituencies expect managers to use the most efficient means to achieve important ends. Nevertheless, it is often ambiguous what constitutes the right ends to be achieved and the means considered most efficient (Abrahamson, 1991, 1996). It has been argued that in such situations of uncertainty managers legitimise their actions and decisions creating the appearance that they are conforming to norms of rationality (Meyer and Rowan, 1991; Scott, 2008; Greenwood *et al.*, 2008). Thus, frequently in such cases, organisations tend to create the appearance of rationality by adopting management techniques that are generally believed by organisational stakeholders and other constituencies to be rational and efficient means to enhance organisational goals. In this paper it is argued that Marconi / PT have adopted ABC in order to obtain legitimisation from its constituencies, namely from the regulator and shareholders. Since ABC has gained the image of being up-to-date and the reputation of being a strategic tool to any successful company (Granlund and Lukka, 1998; Jones and Dugdale, 2002; author, 2007) its adoption would guarantee its constituencies that Marconi / PT's goals were being pursued efficiently.

In July 1997 Marconi, together with external consultants began the ABC implementation process

throughout the company. As has been pointed out, the previous Marconi's MAS was not providing all the detailed and accurate cost data its managers and the regulator were demanding. Marconi's decision to adopt ABC was conditioned by PT's decision of choosing ABC as the cost model which could satisfy the Portuguese telecommunications regulator's cost information requirements. Therefore, to understand Marconi's adoption of ABC, we need to understand why PT had taken the decision of implementing ABC and hence, it is needed to move backwards to 1994 when PT was created. PT was the result of joining TDP, TLP and TP, companies that were descended from a clear 'state ownership mind set'. These companies did not have any proper cost systems, mostly because they were monopolistic companies that were not facing competition, and hence, did not felt pressured to use costing data to support investment decisions, to control costs and to follow pricing policies, amongst other decisions. Budgets were made annually, but with a ceremonial character, which means that they were not prepared to be used as a true management tool but to justify costs. Thus, when all these companies were merged, and PT was formed, top managers felt the need to develop more 'sophisticated' information systems, that would protect PT from being criticised either from its regulator, managers, competitors or other constituencies for not having a 'proper' MAS as all 'large and successful' companies have. A manager from the Portuguese telecommunications regulator assessed PT's (and TP's) information system in this way:

"Even though PT, and TP, were very profitable companies they had very weak informational systems. Probably because these companies were very wealthy, they did not need to be concerned with finding market segments which were profitable... (...) They were earning so much money that they did not need to control their costs..."

At the same time, as was discussed before, the regulator concerned in guarantee that the Portuguese telecommunications market become an arena of genuine competition, required that operators with significant market power should follow cost orientation in their pricing practices and that they should justify their costs, providing the regulator periodically with detailed cost data. PT, without any particular experience in cost issues, and considering the complexity of its business, decided to hire a specialised cost consultant by contacting one of the largest international consultant firms, which has had considerable experience in implementing ABC in US telecommunications companies. As has been argued, consultants have been contributing through mimetic processes to the diffusion of the same solutions for current managerial problems leading, to what Granlund and Lukka (1998) described as "a small world of management accounting practices" and "McDonaldism". As they contended (p. 167):

"Though the advice of consultants within the same



consulting firms may differ in different countries according to the operational context, they nevertheless seem to promote the same 'standard solutions' globally".

ABC was, therefore, the approach that these consultants advised PT's top managers to implement in order to get all the cost data required. A PT's manager explained how ABC was considered the right cost approach to provide the regulator and its managers with relevant cost data:

"I think that the people who decided to adopt ABC had a relatively consensual opinion of the appropriateness of this approach in supporting PT's informational needs. The problem it was facing was that ABC was a recent approach... PT's ABC implementation was the first one in Portugal... Because ABC is compatible with traditional information systems, we decided as a first stage to develop it autonomously and laterally with the systems we had here before"

Accordingly, ABC has been adopted by several other telecommunications operators in Europe, especially by incumbent operators, namely British Telecom in some of its areas. ABC seems to be 'institutionalised' as the appropriate cost approach to provide national regulators with cost data in the telecommunications sector through European Community legislation. In fact, the European Commission laid down a recommendation on 'Interconnection in a Liberalised Telecommunications Market' on the 15<sup>th</sup> October 1997. The preface pointed out the importance of operators following the cost oriented principle and hence, to implement separate cost accounting systems in order to adequately price telecommunications' interconnections:

"(...)Recognising the bottleneck nature of the incumbent's fixed network and the lack of incentive to provide efficient interconnection, the European Parliament and Council Directive on Interconnection in Telecommunications imposes cost-oriented interconnect pricing, together with requirements for appropriate accounting separation. (...)"

This recommendation alleged that the cost accounting systems which the operators need to adopt in order to satisfy the telecommunications regulators should be based 'on current costs and activity-based accounts', as is transcribed below:

"The Interconnection Directive requires that organisations with obligations for cost-oriented interconnection charges must implement cost accounting systems which are capable of demonstrating that interconnection charges do indeed follow the principles of cost orientation and transparency. (...) The commission is therefore recommending that NRAs [national regulatory authorities for telecommunications] should set deadlines for implementation by incumbent operators of new cost accounting systems based on current costs and activity-based accounts."

Thus, the European Commission clearly indicated that ABC is the approach to be used, especially by the

telecommunications incumbents, to allocate the joint and common costs to the cost objects. If at the beginning of such a trend telecommunications operators were experiencing uncertainty about the best MA they should adopt and were, hence, recurring often to consultants to support their decision, after 1997 with EC recommendation mimetic isomorphism was replaced by coercive isomorphic practices (DiMaggio and Powell, 1991b). Moreover, the researcher contends that EC and national regulatory entities have identified and recommended ABC combined with Long Run Incremental Cost (LRIC) as the best accounting practices to the operators with significant market power in the determination of interconnection pricing because they were expected to behave rationally in 'solving the problem' of guaranteeing operators that true competition was introduced into the market. However, this does not mean that operators in fact have fixed the right prices of interconnection services. Choosing ABC as the 'right' costing approach to support operators in their interconnection prices strategies was the means found by the regulator to legitimise its role in the sector as grantor of competition. As Meyer and Rowan (1991) suggested, the appearance of rationality is pursued through the use of management techniques that are believed and accepted by constituencies to be rational ways of pursuing goals in order to avoid constituencies' sanctions and to get their support. ABC fulfilled all these demands of rationality and progress within telecommunications industry constituencies (Hopper and Major, 2007).

## CONCLUSIONS

Since Harvard Business School published ABC case studies in the 1980's, Activity Based techniques have been propagated by business mass media, management gurus, consultants and business schools as a means to enhance organisational efficiency and as an alternative system to cover the limitations and pitfalls of conventional management accounting (Jones and Dugdale, 2002). ABC's advocates have been emphasising how traditional MAS are lagging behind the technological environment advances and how its cost information has been distorted to support their argument that ABC constitutes an efficient managerial tool to support managers' decisions within the new business environment (*ibid*). The line of reasoning that supports the alleged superiority of ABC over the traditional MAS is based on the following two prepositions: (1) firstly, that ABC enhances the accuracy of product costing through the use of non-volume related allocation basis; and (2) secondly, that it enables managers to have a better understanding of the drivers of costs. In a world marked by a strong emphasis on efficiency and technique ABC, has easily gained the status of superior management technique proper of 'dynamic and successful' organisations, even though until

recently not much was known about its practicalities. It may be argued that ABC incorporates institutional myths, namely the myth of rationality, and hence its adoption may be understood socially as providing legitimacy, resources and stability to organisations and hence, enhancing organisations' survival prospects (Meyer and Rowan, 1991; Scott, 2008). To this regard DiMaggio and Powell (1991b, p. 65) claimed that "as an innovation spreads, a threshold is reached beyond which adoption provides legitimacy rather than improves performance". Nonetheless, after the first phase of huge enthusiasm towards ABC, some reservations about its effective value in practice have been noted by some researchers. This resulted from accounts of ABC failure throughout the 1990's and 2000's (e.g. Major and Hopper, 2005; Baird *et al.*, 2004; Malmi, 1997; Friedman and Lyne, 1999). This paper is an attempt to address some of the claims pointed out by ABC's critics and to contribute to a better and more integrated comprehension of the role of ABC within the management accounting field. The managerial emphasis that ABC has been subject to has been shown and it has been argued that new institutional sociology might contribute substantially to understanding the causes that lead companies to adopt the activity based approach. Furthermore, the researcher argued that one needs to encompass more than technical issues to comprehend the reasons that motivate organisations to change their MAS and to replace them with activity based techniques. As has been pointed out the real drivers of organisational change are often political or cultural issues, which are covered by technical issues (Scott, 2008; DiMaggio and Powell, 1991a; Meyer and Rowan, 1991). Moreover, the incorporation of managerial techniques, which have become institutionalised within business audiences as bringing efficiency into organisations, as is the case of ABC, "quite apart from their possible efficiency (...) establish an organisation as appropriate, rational and modern" and "their use displays responsibility and avoids claims of negligence" (Meyer and Rowan, 1991, p. 53). These arguments were used in this paper to explain why Marconi and its parent company have substituted their previously MAS with an ABC model. Within the reorganisation of the Portuguese telecommunications sector these companies were expected to 'modernise' themselves in order to successfully face the challenges of liberalisation in both the Portuguese and European telecommunications markets. Such pressures of 'modernisation' came from several of their constituencies, such as telecommunications competitors, capital market and the Portuguese telecommunications regulator. In particular the pressure posed by the regulator was determinant in the change of Marconi and Portugal Telecom's MAS. The change imposed by the regulator was in consonance with the change expected by other constituencies, which have contributed to a faster replacement of Marconi and Portugal Telecom's 'old' MAS for a more 'up dated'

system.

Finally, the researcher suggests that as result of the regulator's coercive pressure, isomorphic MA practices might have spread among European telecommunications operators, especially those with 'significant market power' in which the determination of pricing interconnection was an important issue. Calls are also made for a further investigation into whether the European telecommunications MA practices have become isomorphic.

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