

MODES OF GOVERNANCE AND THE USE OF COST INFORMATION: A COMPARATIVE STUDY BETWEEN BRAZILIAN AND BRITISH HOSPITALS

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Abstract

Cost information can be considered an important tool to benchmarking, planning and control, improving the management of expenditures, mainly in a public institution that are known by having scarce resources. This study was carried out to investigate different modes of governance within Brazilian and British hospitals and the usefulness of cost information in terms of managerial planning and control. The research was conducted by cross cultural analysis, using several statistical methods for measuring organisation characteristics, seeking to gain a deeper understanding of the profile of both hospitals and respondents. This study showed the dominance of hierarchy and clan as being the most relevant modes of governance in Brazilian and British hospitals. This discussion is relevant considering the congruence level of goals and the ambiguity level of performance measurement. Also, it defines which form of governance is more predominant. The exploratory and quantitative survey methods were used to test the research questions. After conducting a survey using a structured questionnaire, semi-structured interviews with middle managers at chosen case study hospitals were undertaken. In the cases analyzed, it was possible to identify a significant difference between the use of cost information in hospitals, allowing inferences between different modes of governance. The lack of studies about the use of cost information in planning and control regarding public hospitals impedes any other comparison or assessment considering empirical data. One of the objectives of this paper was to generate initial material for future researchers. Besides, the knowledge about the current scenario of the usefulness of cost information mainly in planning and control is relevant when associated with modes of governance.

Keywords: Modes of Governance, Cost information usefulness, Healthcare system, Cross cultural study

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Introduction

The healthcare system decentralization has been enthusiastically embraced by many health reformers as a goal in itself, a concern to achieve the major goals of health reform, such as improved equity of access and coverage, gains in efficiency in the use of resources, improved quality, and sustained financial soundness (Collins et al., 2000). Specifically, due to being large and diversified organisations, hospitals management should be decentralised as well to achieve some kind of goal. Also, the circumstances have favoured the increase of non-programmed

decision-making and problem solving in planning and control. It is well known that a multidivisional structure with increasing non-programmed decision-making and problem solving demands more investment and skills of lower managers in planning and control, and consequently they are more vulnerable to opportunistic behaviour and bounded rationality.

To efficiently carry through the process of decentralization, the contingency theory justifies the use of an appropriate accounting system, which involves the organization's cost information, supporting and matching the structure, technology and

environment (Kim, 1988; Covaleski et al., 1993). Its focus is on an overall view of the organisation. Moreover, transaction costs are concerned with economic transactions being conducted accordingly to markets and hierarchies (see Getz, 2002). It focuses transactions between actors, exploring issues related to bounded rationality and opportunism. From this framework emerges the clan or corporation which will be approached as a mode of governance, given its importance in terms of the public sector and, particularly, hospitals (Lapsley, 1993, 1997; Osborne, 1997).

This study uses some slight assumptions of the theories of contingency and modes of governance to approach the use of cost information within public hospitals. Therefore, considering modes of governance, it sought to investigate and understand to which extent the available cost information supports the planning and control processes that occur within public hospitals in both countries. This study performs this through the 'use of cost information' from the middle management perspective. This is done through the comparison between two countries: Brazil and Great Britain.

The relationship of hospitals management and cost information is discussed, whereas, the environment and the reflex mirrored by hospitals management and structure will be shown. It is a complex and changing environment in both countries, which present, to some extent, no reasonable degree of certainty, stability and predictability. Some situation prompted the following research questions: Do managers use cost information when planning and controlling in terms of human resources, supplies and equipment? To what extent? Do they consider cost information as being useful for benchmarking and improving organizational functions? Is any rationality identifiable? To answer these questions, this study was carried out, in order to investigate the usefulness of cost information in hospital management according to modes of governance within Brazilian and British hospitals.

This study can be divided into four sections. In the first one the literature was chosen based on certain characteristics, quoting the main ideas of contingency theory and modes of governance. Firstly, a comparative study between two countries excludes approaches that could be applicable only to a specific country. Thus, the literature is presented at one level that embraces the core elements of the theory pertaining to environment, organisations and managers irrespective of country. Secondly, posterior data analysis compares occurrences in both countries considering that the social phenomenon is taking place under a common "theoretical umbrella" and not a specific one. The next section shows how this research was conducted followed by the data analysis. Finally, conclusions were drawn considering a common literature background and the effects of the

modes the governance in the usefulness of cost information.

Contingency Theory

It is acknowledged that the contingency theory has its roots in the work started in the early 1960s within the Industrial Administration Research Unit at Aston. The Aston Group conducted an empirical research involving 46 organisations both in the private and public sectors. The Group sought to study the relationships between: a) organisational structure and functioning; b) group composition and interaction, and, c) individual personality and behaviour (see Pugh et al., 1986, p. 38).

Summarising what emerged from this 'comparative study of organisations', it poses that "since all organisations have to develop means for channelling their activities towards the achievement of pre-specified aims, a pattern of regularities emerge over time" (Chia, 1997, p. 686). This pattern of regularities is called organisational structure. It is important to say that these authors perceive the activity of organisational analysis as being the continuous study and identification of similarities and differences among and into organisations, mainly the ones involving the structure and the variables that influence organisations, such as environment, technology, size, ownership, strategy, culture, location and others (see Emmanuel et al., 1993; Chia, 1997). Organisations can typically face multiple and possible conflicting contingencies (Child, 1977).

The Aston Studies, with contributions from other authors such as Chandler (1962), Woodward (1965), Lawrence and Lorsch (1967), and Williamson (1970) can be considered having an impact on the direction of organisation theory. Certainly, the most significant contribution of these earlier initiatives in organisational analysis was the development of a 'contingency' approach to the organisational design.

In terms of contingency theory of management accounting, Emmanuel et al. (1993) set out that "the contingency approach to management accounting is based on the premise that there is no universally appropriate accounting system applicable to all organisations in all circumstances." (p. 57). Therefore, the use of cost information is contingent on the circumstances faced by organisations (Drury, 2001). There are no restrictions defining the contingent circumstances that influence the accounting systems and, consequently, the cost information (Drury, 2001).

Contingency theory developed several aspects of uncertainty, including unpredictability of input-output relationship and others (Rayburn and Rayburn, 1991). "Uncertainty is a lack of information about future events so that alternatives and their outcomes are unpredictable" (Rayburn and Rayburn, 1991, p. 58). In the case in point, middle managers of

multidivisional organisations, such as hospitals, located in dynamic and complex environments should experience a large number of different factors and influences in the planning and control processes.

Brignall (1997, p. 326) suggested normative proposals to cost system design considering a wider management information system in services. He noted that “service organisations today compete on a range of dimensions and not just cost and price, so a good planning and control system cannot focus on the financial dimension alone. Consequently, service costing systems must be seen in their wider context, as part of a management information system which would also embrace non-financial information.” This author advocates the design of a management information system considering a series of relevant contingent variables such as environmental hostility, organisation’s mission and strategy and its service type (see also Fitzgerald et al., 1991).

The contingency approach emphasises that management styles and organisational structures are contingent to the organisation and that a unique universal set of management characteristics does not exist. In hospitals, the contingency fit between organisational context and the design of management accounting system has been measured by the user’s information satisfaction (Kim, 1988, Moore et al. 2009). Although little work has been done in Brazil, and only a very limited amount in public hospitals, these studies provide a useful base for this research.

Modes of Governance

The integration of theories relating to modes of governance and contingency theory aids understanding as to how integration enables hierarchical or structural authority to address individual opportunism. Both theories recognize that decision makers should be influenced by self-interest and yet, to some extent or by variable degree, both frameworks accept that organisational structure and design and the design of accounting systems are influenced by, and influence, the external environment.

Markets, hierarchies and clans are considered forms of organisations, i.e. “an organisation may be thought as any stable pattern of transactions between individuals or aggregations of individuals (see Ouchi, 1980, 140). Therefore, in this definition, “a market is as much an organisation as it is a hierarchy or clan” (op cit., p. 132). Despite the fact that these forms of organisation can be identified in the healthcare systems in a broader meaning in both countries, this paper emphasises their application in the traditional organisation setting, i.e. public hospitals (see Bourn and Ezzamel, 1986, Sigulen and Zucchi, 2009).

The arrangement that defines the mode of governance was built upon the conjugation of a certain group of characteristics described by Williamson (1975, 1978, 1991). He argues that the

opportunism and bounded rationality are the two postulated behavioural characteristics that can interfere with contracting and upon which the management style or structure might change. About organizational failures framework, transactions costs as well as the influence of opportunism and bounded rationality see Emmanuel et al (1993), Getz (2002), Macintosh (1994), Drury (2001), Carson et al. (2006) and Bourn and Ezzamel (1986).

As to modes of governance, Bourn and Ezzamel (1986) posed that in case of a high degree of goal incongruence and low degree of ambiguity in performance measurement, the market form emerges and is tolerated. In the opposite situation, i.e. low degree of goal incongruence and high degree of ambiguity in performance measurement, the clan emerges and is tolerated. The above mentioned authors said that the hierarchical form takes place and is tolerated in the case of medium or intermediate levels of goal incongruence and ambiguity in performance measurement. It is important to notice that Bourn and Ezzamel (1986) stated that in the case of high degree of goal incongruence and high degree of ambiguity in performance measurement, a form of organisation and managerial functions does not emerge. In those cases the controls, for example, are more ritualistic/symbolic.

A bureaucratic organisation involves a system of hierarchical surveillance, evaluation and direction. When the ambiguity in performance evaluation increases, the bureaucracies can fail. Also, “when tasks become highly unique, completely integrated, or ambiguous for other reasons, then even bureaucratic mechanisms fail” (Ouchi, 1980, p. 134f). In this case, i.e. “a form of mediation succeeds by minimising goal incongruence and tolerating high levels of ambiguity in performance evaluation”, which is the clan (Op. cit., 135). It is also called organic solidarity and organic relationships are considered as the key to coordination (Osborne, 1997). The organic solidarity, i.e. the clan, that exists in the medical profession is well known, particularly in Brazil.

In this case, the clan is composed of the clinicians (professionals) and the hierarchy is the professionalized bureaucracy. The goals of the clan and the hierarchy are not necessarily the same and neither clearly stated (see Bourn and Ezzamel, 1986), particularly in Brazil. These authors posed that “management and control in the National Health System (NHS)... is exercised through a corporate culture, or clan form. In specific terms, this may be described as the hegemony of the medical profession to undertake patient-care through the exercise of clinical freedom” (p. 210f).

The above mentioned authors have stated that one mode, market, hierarchy or clan, does not exclude another and even the three models can appear simultaneously (Ouchi, 1980; Bourn and Ezzamel, 1986; Osborne, 1997). Osborne set out that there should be one dominant type. Hospitals can be

considered organisations where more than one type will appear, mainly the hierarchy and clan. There are reasons to believe that the clan formed by the medical profession within hospitals (or sub-culture, see Bourn and Ezzamel, 1986) in Brazil are dominant or try to be dominant. Because traditions are implicit, rather than explicit rules that govern behaviour (see Ouchi, 1980), the clan which permeates the Brazilian hospitals are expected to be, due to the market tradition, motivated by self-interest and they tend to maximise their well-being or clan objectives. This can be conflicting with the hierarchical model. In Great Britain this situation can be different. Osborne (1997) studying public institutions admitted, in organisations within the clan, not vertically integrated and loosely coupled and the existence of explicit organisational missions of its own.

The concept of corporate or 'clan' pretends to be an answer to conceptual frailties (Ouchi, 1977, 1979, 1980; Ouchi and Price, 1978; Williamson and Ouchi, 1981). Where the clan concept does not fit the network or other forms arise (see Table 1). Thompson et al. (1991) proposed four approaches to modes of governance based on the unit organisational form (independent or hierarchical) and the approach to relationships (competitive or cooperative). The British health system has just moved between these 'extremes', i.e. from competition to cooperation or from the internal market to co-operative networks. In general terms, a network structure is proposed as being a more accurate form to characterise special kinds of alliances rather than joint ventures among hierarchical firms (Powell, 1990).

Table 1. Modes of governance

Unit Organisational Form	Independent Hierarchical	Approach to Relationships	
		Competitive Classic Market Bureaucracy	Cooperative Network Structure Clan

Source: Thompson et al., 1991, p. 244.

"The 'clan' control system relies on social controls rather than the legal or economic sanctions of the bureaucratic organisation" (Lapsley, 1993, p.385) or on reciprocal relationships (Osborne, 1997). The 'clan' or corporate culture has been used to explain governance modes within organisations. It means that the 'clan' mechanism emerges due to the frailties brought about by 'soft contracting' between parties and the opportunism as well. This mode of governance would have answers to illuminate obscure points present in incomplete contracts and an 'elaborate governance apparatus' (Williamson and Ouchi, 1981). In terms of health care and, consequently, hospitals, the presence of this mode of governance is discussed by authors such as Ouchi

(1977), Lapsley (1993), Ashmos et al. (1998) and Osborne, (1997). Stiglitz (1991) and Lapsley (1993) defend the shift from market to hierarchy. This shift is causing strong interest on changing boundaries between organisations and the market and, for instance, theories of behaviour within organisations.

It is important to understand and highlight how to apply and identify such modes of coordination. Osborne (1997) summarised and presented a group of valid characteristics under which it is possible to identify the main mode that governs entities within the health system (see Table 2). He defends the presence of more than one mode of governance but with one of them more pre-eminent.

Table 2. Characteristics of the modes of governance

Mode of Governance	Determinant Characteristics
Clan, Corporation	1. Clans are determined by reciprocal and ongoing relationships.
	2. Clans have as a key feature; the interdependence of their members contrasting with markets - interactions of independent organisations - and hierarchies - with some dependent ones.
	3. Clans do not have to be vertically integrated as a hierarchy. They "would rather be loosely coupled, which would allow them to retain their autonomy whilst sharing decision-making and risks." (Osborne, 1997, p. 324).
	4. Clans do not mean an egalitarian society. There would be differences determined by the scarcity of resources.
	5. Clan membership determines the acceptance of normative values and statements about the conduct of the clan members. They can be implicitly or explicitly stated.
Hierarchy	1. Hierarchy will promote the accountability of contracted service due to the fact that the lines of authority would be clearly specified and consequently known.
	2. There is a high degree of stated tasks and their specificity in terms of the desired product and the obtained one, providing that they were built around specialist expertise.
	3. Hierarchy threatens itself with its own excesses and lack of flexibility.

Hierarchy	4. Hierarchies have costs that can be compared to the transaction costs of the market: time taken for decision-making and slowness in responding to changes.
Market	<ol style="list-style-type: none">1. Price competition is the unique relevant mechanism present. Managers cannot exercise influence on it providing that it is a natural result from the operation of the forces of demand and offer.2. The market condition determines that all organisations or groups can participate. The contracting situation is free for all.3. Markets are not ever perfect; there would be failures to be dealt with, e.g. monopoly, monopsony or length³.4. Purchasers and service providers would need to deal with the transaction costs imposed by the market, e.g. the costs of the tendering and the performance-monitoring process.

Source: adapted from Osborne, 1997.

³ This is controversial. It is possible to have different interpretation of the same phenomenon according to different theories, i.e. monopoly is not a failure considering neo-Austrian position (Osborne, 1997).

Key points in analysing market and hierarchies in the context of health organisations, public general acute hospitals in particular, are: 1 – the ambiguity of the measurement of individual performance; and, 2 – the coherence of goals, of the individuals, the clan and hierarchy and of the organisation. Ouchi, Lapsley, Ellwood consider the former more challenging than the latter. Based on the exposed circumstances, every organisation has to work on the reduction of the ambiguity of the measurement of individual performance, in order to access an acceptable level of opportunism. The same thought can be applied to the coherence of goals between individuals and the organisation. Ouchi (1980) suggests that market relations are acceptable and efficient when there is a low level of ambiguity over performance evaluation, and bureaucratic relations will be efficient when both performance and goals are ambiguous and incoherent. In terms of tolerating high levels of ambiguity in performance evaluation and low levels of goal incoherence the clan form prevails (see Lubatkin et al. 2007).

To reduce transaction costs, to become more competitive or to survive, organisations have tended to reproduce or even ‘artificially’ create the market situation. This creates ‘independent’ internal areas, sectors or groups that simulate a market within the organisation (see Bourn and Ezzamel, 1987). Hospitals in Great Britain have lived this experience since Management Budgeting (Boyle, 2008). Brazilian hospitals have just started a process of hierarchy and decentralization with the SUS.

Therefore, according to the discussion above, hospitals internal environment is divided essentially into two areas of knowledge or management reflecting the hierarchy and the clan, administration and health group respectively. Such a combination, and its decision-making process, reinforces internal complexity for hospitals. This complexity is built upon multiple issues, sometimes conflicting ones, considered by managers. Planning and control within hospitals require the meeting of the two areas because the clinicians are those who have knowledge about the performance of their tasks (Weisbord, 1976; Freidson, 1985; Lapsley, 1993).

The clinical group, mainly doctors, is the major professional and informational supplier and is also the major influence on decision-making process. There is a lack of communication between managers and clinicians, and also there are different lines of actions adopted in similar circumstances. Ashmos et al., (1998) argues that these professionals essentially internalise models of problem solving and knowledge so that they can act more or less autonomously on the job, they control their own work, and they make decisions in accordance with their respective professions standards. This work is neither known nor understood by hospital managers with administrative background.

Therefore, contingency theory explains and supplements the study of healthcare structure and modes of governance within hospitals. However, it does not involve the explanation of transactions between organisational actors, opportunism and bounded rationality, which is fundamental to discussion of the presence of certain structures or modes of governance within hospitals such as the clan and the hierarchy. Therefore this part used modes of governance to cover this situation. It was also used to reach a position to discuss and justify the analysis of modes of governance as an agent that permeate and interferes with managerial action in public hospitals.

Methodological design and research phases

This is an exploratory study because it is defensible that little is known in terms of comparative hospital management, and much less is known when it is referring to the British and Brazilian hospitals middle management. Thus, this work is considered an exploratory research in essence even though some perspectives closer to the descriptive approach are going to be used.

As seen, this research was defined as eminently quantitative. However, it can be said that this research indicates the direction of a combined survey and case study, meaning that techniques that induce to a qualitative classification are used (Miller, 1991). The qualitative perspective is considered as illustrative and an enrichment of the results, i.e. a category of triangulation.

The use of quantitative or qualitative techniques is also linked to the research’s objective. Thus, this work uses quantitative survey methods to test the research questions but further understanding is gained through the use of case study interviews. The survey enables the research findings to be generalised but the interviews improve the internal validity and understanding of the findings. After conducting a survey using a structured questionnaire, semi-structured interviews with middle managers at chosen case study hospitals were undertaken.

The research was conducted in four main phases in Great Britain and Brazil. In the first phase the main survey was conducted using the structured questionnaire seeking to answer the working questions and test the hypotheses. Also, a documentary analysis took place to provide a wide view of hospitals. This phase was also responsible for elements of generalisation and external validity. In the second phase, two hospitals were chosen in each country, based on available official sources or judgement of experts, data processing, and indicators as being representative of best practice and/or high performance level. In the third, the qualitative approach was carried through to visits to these hospitals and using a semi-structured instrument to interview several managers involving decision making, planning and control processes. This phase

enhances internal validity. In the last phase, the discussion of the questions and the test of the hypotheses considering the data gathered in phases 1 and 3. Data were processed, analysed and interpreted. This phase consolidated the elements for generalization, reliability and validity.

Sampling in Great Britain and Brazil

The research was undertaken in hospitals of the West Midlands Region and Minas Gerais State. These organisations were considered public and also, possessed common and compatible characteristics with the intended results.

Seeking sample and data collection equivalence, public hospitals were determined using secondary data and general criteria to produce equivalent groups in both countries. As general criteria, the following were excluded from the study:

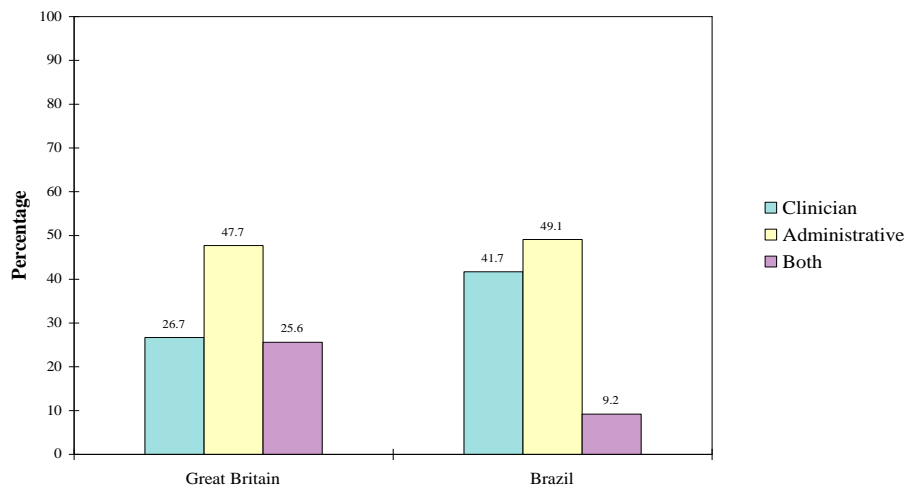
- specialised hospitals (i.e., geriatric, psychiatric, and rehabilitation).
- Hospitals with fewer than 100 beds.
- Hospitals without an available and official information (system) about costs.
- Hospitals with average length of stay of longer than 30 days.

Hence, 26 hospitals in Great Britain and 22 in Brazil were detected as eligible and 150 intermediate level managers were randomly selected as unit of research in each country. The process in Brazil started in January and finished in April. Following table gives a general view of the whole process.

This research has used several statistical measures of organisation characteristics seeking to gain a deeper understanding of the profile of both hospital and respondents.

	Great Britain	Brazil
Region	West Midlands Region	Minas Gerais State
Type of Organisation	Public	Public
Phase 1		
Number of Organisations	26 NHS trusts	22 Public Hospitals - SUS
Questionnaires sent out	150	150
Questionnaires returned	90	120
Phase 3		
Number of Interviews	10 middle managers	22 middle managers

Figure 1. Background of the respondents (Q1)



Examining the general profile of the public hospital managers, the first managerial factor corresponds to the respondent’s background. It is not enough but it can be considered as the main characteristic that defines the association of the respondent as a member of the organisation and is, consequently, linked with the mode of governance. As

shown in Figure 1, 47.7% of the British respondents had an ‘administrative’⁴ background, whereas 26.7%

⁴ Inverted commas are used to detach extracts from the questionnaire.

of the respondents were 'clinicians' and respondents with 'both' backgrounds presented 25.6%.

Brazil presented a similar distribution in terms of the administrative background and the other two categories. It is important to notice that the difference between the 'both' background categories is inherent to more clinicians receiving management training in Great Britain than in Brazil. This will favour future analysis in terms of a possible integration of both modes of governance, i.e. the clan and the hierarchy in British hospitals. It is not a surprise: British clinicians have been involved in management and being accountable for their administrative actions since the Management Budgeting in 1980s (see, for example, Llewellyn, 1999). Brazil presents a distribution of about 50% administrators and 50% clinician staff. There is a balanced distribution of respondents in terms of the different forms of organisation in hospitals in both countries.

General results and analysis

Hospital Structure Relation Specific Factors

Cost and resource information currently available in both countries for middle managers constitute the group of items or questions which represents the hospital structure relation specific factors. According to Table 3 the information currently available for managers can be considered as extensive. Any comparison in terms of content or similarity between this information is dangerous due to elements that could bring about enormous technical problems or differences involving mechanisms and techniques applied amid hospitals in both countries as well as among countries. This study is concerned with the use of cost information or its perceived usefulness in terms of planning and control. Therefore, this does not demand the judgement of the techniques involved or any technical mechanism employed to generate cost information. Budget or case-mix was used to illustrate the idea of cost information and as a referential for planning and control, when it was made necessary during the interviews, due to their considerable diffusion among middle managers of both countries. See Table 3.

Table 3. Information currently available for hospital managers: Great Britain

Cost information			
Great Britain	%	Brazil	%
Case-mix costing system	64.4	Monthly costing spreadsheet – case-mix	65.0
Budget statements – integrated with patient activity data	67.8	Budgeting directives – monthly	46.7
Budget statements	88.9	Budgeting directives – annual	30.0
HRG (reference) costs	55.6	-	-
HRG prospective cost/price	35.6	-	-
Staff costs	95.6	Staff costs	50.0
Drug costs	87.8	Drug costs	55.0
Laboratory costing system	44.4	Laboratory cost	39.2
Radiology cost	54.4	Radiology cost	35.8
Theatre cost	54.4	Theatre cost	18.3
Resource information (uncosted)			
Case-mix systems	31.1		
Nursing dependency	33.3	Storeroom supplies level	63.3
Pharmacy issues	57.8	Pharmacy supplies level	58.3
Theatre usage	53.3		
Pathology relative value system	34.4	Quantity of pathological exams	42.5
Radiology relative value system	32.2	Quantity of radiological exams	40.8

It is possible to note that British managers have accessed considerably more cost information than their counterparts in Brazil. Figures presented in Table 3 show that the information currently available for hospital managers in Great Britain is expressive and reaches the majority of hospital managers. 'Staff costs' and 'Drug cost' seem to reach every manager within hospitals, 95.6% and 87.8% respectively. One can highlight 'Budget statements', 'Budget statements integrated with patient activity data' and 'Case-mix cost system', being accessed for more than 60% of the managers. 'Budget statements' is reached by almost 90%. It is a fact that British hospitals have greater budgetary control since the Management Budgeting in the 1980s. This may explain this high figure.

DRG and case-mix accounting are both used as control mechanisms of environmental bodies and as a balance of power between administrators and physicians (see, for example, Covaleski et al., 1993). Case-mix accounting lost importance for contracting in Great Britain (see, for example, Ellwood, 2000), this may be related with the lack of effort within the clan to give away the power. Case-mix allows external comprehension and auditing of the 'transformation' processes or 'product' lines involved in hospitals (Covaleski et al., 1993).

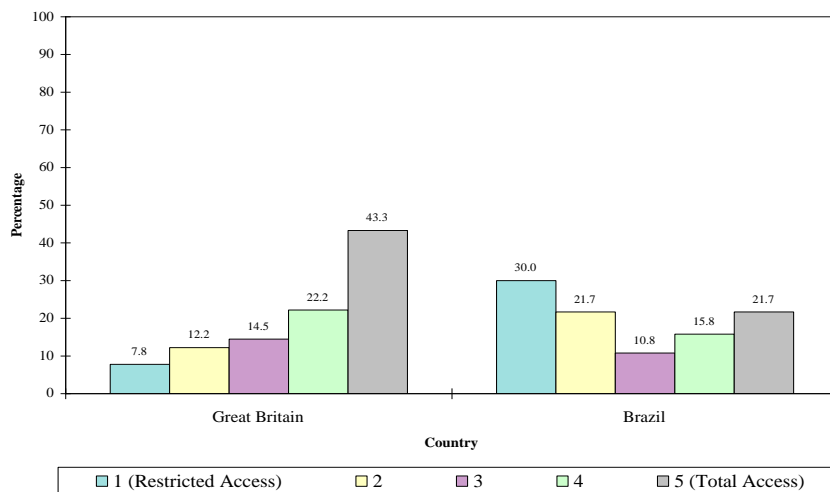
In Brazil, 65% of managers stated access to 'Monthly costing spreadsheet – case-mix', which represents the highest figure. In this case, managers perhaps see the opportunity for gaining certain power

within Brazilian hospitals. This managerial instrument is something new, and it raises a mixture of curiosity and interest among middle managers. The curiosity is due to the fact that middle managers were not usually informed about costs of treatments. The interest is raised because managers have seen this situation as an opportunity to identify and negotiate certain issues with clinicians that were not possible before, e.g. drugs used in certain treatments. It was also observed around 50% of access of ‘Drug costs’ and ‘Staff costs’, see Table 3.

The profile of both samples showed a certain balance between respondents within and between countries; however, the information available and the access ration present considerable difference in favour of British managers.

According to Figure 2, more than 65% of British managers have a considerable level of access to information about cost. In terms of Brazilian managers the percentage is considerably lower, 37.5%. Taken together with the data contained in Table 3 it is possible to assert that British managers have superior access to cost information than their Brazilian counterparts. Cost information should reduce uncertainty (Choo, 1996). Extensive cost information availability associated with high accessibility improves the decision-making process. Therefore, British managers enjoy a privileged position to reduce or eliminate opportunism and to encourage the programmed decision-making and structured problem solving.

Figure 2. Access to information about cost and resource consumption (Q9)



Note: $p < 0,001$ and Cramer's $V = 0,341$

Cost Information Perceived Usefulness and Attitudes

In terms of ‘involvement of cost information in decision-making/problem solving process’ one can note that British managers tend to be more concrete users than their counterparts in Brazil, see Figure 2. The percentage of British managers using cost information with reasonable frequency in decision-making and problem solving processes are about 70% whereas the figures in Brazil are just 50.8%. This supports the fact that British managers are more

concerned about cost information and the role it plays in decision-making and problem solving. The use of cost information means uncertainty reduction and supports resource allocation. It is important to observe that 15% of Brazilian managers use cost information ‘very rarely’ in the decision-making/problem solving processes. Table 4 shows means of involvement of cost information in decision-making assigned by managers of both countries. Means can be considered high in both countries.

Table 4. Cost Information perceived usefulness: Decision-making/problem solving

Items	Means		Chi-Square	p
	Great Britain	Brazil		
Q13 In decision making/problem solving process	3.99	3.88	8.647	0.00

When testing the usefulness of cost information in terms of certain managerial dimensions, both countries assumed the same order regarding the applicability of cost information. ‘Planning’ is posed

first and it is followed by ‘control’ with highest scores, see Table 5. It is not surprising that planning and control were ranked first. According to the literature, the multidivisional structure in a complex

environment demands investment in both managerial dimensions (see, for example, Ouchi, 1980; Emmanuel et al., 1993; Otley, 1994). In British organisations this can be explained by the market mechanisms involved. Hospitals have experienced a scenario that suggests the divisional structure since

management budgeting. Ranked in third and fourth place in both countries with high means were prediction and surveillance. This is a surprise due to the fact that prediction should be closer to planning given the close relationship between them.

Table 5. Cost Information perceived usefulness: Managerial dimensions

Items	Means		Chi-Square	p
	Great Britain	Brazil		
Surveillance	3.80 (4 th)	4.68 (4 th)	58.082	0.00
Prediction	3.90 (3 rd)	4.71 (3 rd)	63.917	0.00
Control	4.00 (2 nd)	4.76 (2 nd)	58.554	0.00
Planning	4.01 (1 st)	4.88 (1 st)	81.386	0.00

The extent to which cost information facilitates optimal managerial procedures was investigated (Table 6). British managers presented the facilitation of 'resource control' as the highest mean, i.e. 3.93. Placed second was that assured cost information facilitates 'adequate or optimal decisions', with a mean of 3.84. They were followed by 'adequate planning' with a mean of 3.70, problem solving with a mean of 3.50, and 'uncertainty reduction' with a mean of 3.19. The variable 'uncertainty reduction' that establishes a connection between organization and environment was ranked in last place in this country (see, for example, Mak, 1989). This could suggest a weak link between the use of cost information for planning and control and the environment (internal and external). Mak (1989) related perceived environmental uncertainty and internal systems of

planning and control in manufacturing companies. He expected that the higher the environmental uncertainty the higher the sophistication of top control processes and therefore the perceived usefulness of information would be higher. In this case usefulness of information did not interfere, as expected, with the environmental uncertainty. The same thing happened in hospitals. Hospitals, mainly the Brazilian ones, are inserted in a highly complex environment and demand an elevated degree of sophistication in control processes, therefore, it would be expected a higher mean for cost information usefulness in terms of uncertainty reduction. This did not happen for both countries. Resource control was well positioned, reinforcing the presence of objective rationalism in planning and control.

Table 6. Cost Information perceived usefulness: Managerial procedures

Items	Means		Chi-Square	p
	Great Britain	Brazil		
Adequate decisions	3.84 (2 nd)	4.63 (3 rd)	54.577	0.00
Adequate planning	3.70 (3 rd)	4.74 (1 st)	73.558	0.00
Problem solving	3.50 (4 th)	4.33 (5 th)	35.281	0.00
Resource control	3.93 (1 st)	4.68 (2 nd)	47.817	0.00
Uncertainty reduction	3.19 (5 th)	4.49 (4 th)	74.229	0.00

Brazilian managers also presented high means, see Table 6. Placed first is that cost information 'facilitates adequate planning' with a mean of 4.74. This is followed by 'resource control' with a mean of

4.68. Ranking next is that cost information facilitates 'adequate or optimal decisions' with a mean of 4.63, 'uncertainty reduction' with a mean of 4.49, and finally 'problem solving' with a mean of 4.33.

Table 7. Cost Information perceived usefulness: Control

Items	Means		Chi-Square	P
	Great Britain	Brazil		
Resource consumption	3.76 (1 st)	4.59 (1 st)	51.56	0.00
Clinical activity	3.10 (3 rd)	4.46 (3 rd)	71.276	0.00
Administrative activity	3.22 (2 nd)	4.55 (2 nd)	86.866	0.00

When asked about the usefulness of cost information for control/surveillance, British and Brazilian managers gave the same order of importance, see Table 7. Placed first was the usefulness 'for control on resource consumption' with a mean of 3.76 and 4.59 for British and Brazilian managers respectively. Placed second was its usefulness for control/surveillance of 'administrative activity' with mean of 3.22 for British managers and 4.55 for Brazilian managers. In third place came 'control on clinical activity' with mean of 3.22 for British managers and 4.55 for Brazilian managers. These means favour a positive analysis of the usefulness of cost information for control. In this case the control of 'clinical activity', which, as discussed earlier, involves clan members, is ranked third in both countries. The form of knowledge involved with this activity can be considered, to some extent, responsible

for this result (see, for example, Lapsley, 1993; Tsoukas, 1995; Cabrezio et al., 2009). Tsoukas (1995), for example, supports that the knowledge involved in clinical activities has a narrative part due to practice, for example. This means that part of the knowledge is descriptive, as an experience, and the situations are shared and dispersed within the group or community, which is able to understand its meaning or content. However, the knowledge involved in managerial activities is more propositional, i.e. documented and systematised. Therefore, it sounds adequate that planning and control of clinical activity are the last placed, given the above characteristics. British hospitals have involved clan members with the hierarchy, as this mitigates barriers posed by the narrative form of knowledge, for example.

Table 8. Cost Information perceived usefulness: Benchmarking

Items	Means		Chi-Square	P
	Great Britain	Brazil		
Resource consumption	3.61 (1 st)	4.43 (1 st)	37.07	0.00
Clinical activity	3.06 (3 rd)	4.40 (3 rd)	64.113	0.00
Administrative activity	3.11 (2 nd)	4.42 (2 nd)	68.057	0.00

The same phenomenon occurred in terms of the consideration of the usefulness of cost information for benchmarking. British and Brazilian managers established the same order, i.e. 'benchmarking on resource consumption' was ranked first in both countries, with a mean of 3.61 and 4.43 for British and Brazilian managers respectively (Table 8). 'Benchmarking administrative activity' was placed in second, with the mean of 3.11 for British managers and 4.42 for Brazilian managers. Finally, 'benchmarking clinical activity' was placed in third, with mean of 3.06 and 4.40 for British and Brazilian managers naturally. This reinforces the preceding analysis and gives some empirical evidence to the influence of differences in knowledge pressuring planning and control, therefore, this is not a surprise. The hierarchy, due to the presence of more propositional knowledge, can be tested more and have its degree of ambiguity in performance measurement reduced. The same does not occur in terms of benchmarking of clinical activities because the fraction based on narrative knowledge is considered so that only clan members are able to understand it. Therefore, unless the clan members get involved with the hierarchical organisation and, consequently, the line of command, the middle management mediation role involving clinical activities should be considered irrelevant or unproductive.

Table 9 presents managerial perception about the use of cost information for items related to organizational objectives. Some of these objectives are environmental expectations for control cost and encourage planning as posed by Covaleski et al., 1993. It is possible to identify more clearly the presence of rationality and complex rationality to reach some of these objectives as well. The use of cost information for managerial activities such as 'cost reduction' or to 'reduce resource consumption' involves standardised and structured forms of control, such as routine and expert (Hofstede, 1981). This is due to the presence of objectives/goals congruence, completeness of knowledge about the 'transformation' process and a smaller degree of change of the predictive model. In this case, more programmed decision-making and objective rationality take place and, consequently, opportunistic behaviour is strongly restrained. However, a more complex and less deterministic model is demanded, for example, in terms of the benchmarking of clinical activities or the provision of clinical activity progress. These activities involve some narrative knowledge and, consequently, the clan members. Therefore, a complex rationality (more individual, subjective or collectivist) can be detected in this case.

Table 9. Cost Information perceived usefulness: Planning and control objectives

Items	Means		Chi-Square	p
	Great Britain	Brazil		
Benchmarking of clinical activities	4.00 (1 st)	4.45 (3 rd)	17.682	0.00
Clinical activity progress	3.71 (4 th)	4.36 (6 th)	25.249	0.00
Improve clinical treatments	3.42 (6 th)	4.45 (4 th)	50.353	0.00
Reduce resource consumption	3.88 (3 rd)	4.51 (2 nd)	39.814	0.00
Cost reduction	3.92 (2 nd)	4.64 (1 st)	56.6	0.00
Provide training clinic professionals	3.22 (7 th)	4.34 (7 th)	49.103	0.00
Provide training administrative professionals	3.52 (5 th)	4.43 (5 th)	47.927	0.00

Table 9 shows that British managers assigned the highest score to the item which presents the use of cost information in planning and control capable of providing 'benchmarking of clinical activities'. This supports the non-programmed decision-making British managers are involved in. It can be observed that the Labour policy has introduced a competition based on comparison of costs between hospitals and a benchmarking process. Therefore, cost information has served and has been contingent on external variables. This current position reflects this. This suggests that the message from the British Government has been understood and is borne in mind by managers. This emerged from the imposed managerialism. It can be said that there is evidence that the British Government has obtained what it has intended to and, at the same time, has kept a respectful coherence with hospital managers thought and practices. Going further, it is possible to understand and identify that clan members are getting involved with the bureaucratic planning and control processes.

According to Table 9, British managers scored 'cost reduction' as the second highest item and ranked 'reduce resource consumption' third, which means that pure programmed decision-making and objective rationality came second. Brazilian managers, in contrast, ranked 'cost reduction' as the first highest item and 'reduce resource consumption' as second. Despite being commonsensical use of cost information, 'cost reduction' and 'reduce resource consumption' can be considered as mechanical and functionalist supporting an objective rationalist point of view. Brazilian managers ranked 'benchmarking of clinical activities' third. It cannot be considered a complete surprise because Brazilian managers present high means for the use of cost information in general circumstances.

Because of the degree of complexity involved, one can assert that benchmarking is an evolved way

of using cost information. Regarding this research, it can be said that British managers have an enriched perspective about the use of cost information because 'benchmarking' was ranked first. External and internal benchmarking can be considered a more complex managerial technology. Literature (see, for example, Emmanuel et al., 1993) has explained that, due to the growing environmental complexity, organisational systems should gain complexity as well and this is supported by this research.

The other two items 'clinical activity progress' and 'improve clinical treatments' were presented with alternating scores in Great Britain and Brazil. British managers ranked 'clinical activity progress' fourth and 'improve clinical treatments' sixth; Brazilian managers vice-versa. It is important and coherent to note that, to some extent, cost information can contribute to clinical treatments. This can curb opportunistic behaviour and decrease the degree of ambiguity in performance measurement, what favours the hierarchical form of organisation. This is the expectation of the British Government. In Brazil, it can be said that managers are aware of this by other means, because there is no governmental policy emphasising the use of cost information in association with clinical activities. Also, according to the discussed findings, the forms of organisation in Brazilian hospitals are not integrated and, consequently, opportunistic behaviour thrives.

Table 9 shows that managers of both countries ranked fifth and seventh, therefore at the bottom, 'training administrative professionals' and 'training clinic professionals' respectively. The importance given to those items is lower than the importance given to the others reflecting certain incoherence with the increase of complexity of internal systems. An explanation for such incoherence can be that, even though ranked lowest, they still have high means, i.e. over three in both countries.

Table 10. Managerial Planning characteristics: Influences and similarity of goals when planning

Items	Means		Chi-Square	p
	Great Britain	Brazil		
(Influencing capacity) of background when planning	3.98 (4 th)	3.58 (5 th)	7.515	0.01
(Influencing capacity) of organizational objective when planning	4.28 (1 st)	3.95 (3 rd)	4.561	0.03
(Influencing capacity) of public objectives when planning	3.70 (5 th)	4.09 (2 nd)	8.752	0.00
(Influencing capacity) of objective of the area/sector when planning	4.03 (3 rd)	4.27 (1 st)	4.734	0.03
(Influencing capacity) of clinical objective when planning	4.19 (2 nd)	3.69 (4 th)	7.005	0.01

Table 10, shows the scores of the items' influence in the planning process. It is possible to see that British managers have the 'organisational objective' as the prime influencing item. In turn, their Brazilian counterparts rated 'objective of the area/sector' as the highest. It is not surprising that British managers make a vision of the whole when planning because, as discussed before, they presented elements to consider that they are more coherent in terms of complex rationality (objective, subjective, individual or collectivist) involvement in processes than their Brazilian counterparts. This characteristic supports the fact that British managers have general directives and a more organizational perspective. This is coherent in the case of clan or hierarchical form of organisation, i.e. an intermediary (medium) degree of goal incongruence. In this case non-programmed decision-making follows the general idea of behaviour congruence. General goals or ends will drive the process involving complex rationality (objective, subjective, individual or collectivist). Therefore, the modes of governance within British hospitals share congruent organisational objective/goals. The clan form should negotiate a decrease on the degree of ambiguity in performance measurement, which makes it get closer to the hierarchy (see Ouchi, 1980).

Brazilian managers, when assigning the 'objective of the area/sector' as the first one, showed coherence with some other contingent characteristics already described. They are less involved with scientific rationalism and they are involved in a mutable environment with internal clan dominance. Table 10 provides evidence of a fragmented structure with strong local force and particular interests. Sectors assume their own identity on behalf of themselves superseding the organisation and appear to be stronger than the modes of governance. However, the resultant fragmentation seems to be convenient and the opportunism, which emerges in the Brazilian context, is much more evident than in Great Britain. In this situation non-programmed decision-making does not follow any objective or behaviour congruence. Due to opportunism and environmental complexities the ambiguity of performance measurement is kept high, which is a characteristic of the clan form of organisation. It is important to notice

that high degree of goal incongruence is a characteristic of the market form of organisations. Therefore, considering the analysis and discussions so far, Brazilian hospitals present a mosaic in terms of modes of governance. Surely, this keeps the internal environment highly vulnerable to opportunistic behaviour.

It is important to recognise that the managers' 'background' was scored as one of the last items to be considered in terms of influencing planning, i.e. fourth in Great Britain and fifth in Brazil. It was suggested by the theory that background would be expected to exert stronger influence in managerial planning. Thus, evidence shows that, rules posed by managerialism or collectivism should restrain opportunism at the structure level.

The characteristic 'public objectives' assumes an almost opposite degree of importance in both countries, i.e. fifth in Great Britain and second in Brazil. There is no apparent reason for this. What can be said is inferred from the preceding discussion with regards to rationalism and complex rationalism. British managers should see or be more involved with individuals. Brazilian managers should treat the public as an entity rather than individuals. British managers assigned clinical objective in second. It can be said that this is coherent with what has been discussed in terms of behavioural congruence related to complex rationality and non-programmed decision-making.

Conclusion

This study showed the dominance of the hierarchy and clan as the most relevant modes of governance in Brazil. This discussion is relevant because the level of goals congruence and the level of ambiguity of performance measurement defines which form of governance is more predominant. In the cases analyzed, it was possible to identify a significant difference between the use of cost information in hospitals, allowing important inferences between modes of governance.

In this case it was possible to identify that the use of cost information is important for hospital management in both countries. The information currently available for managers is extensive and this

study was focused on their perceived usefulness in terms of planning and control.

It is important to understand the way in which cost information is used. In the British case it was identified that cost information is used to the achievement of organizational goals, while in Brazil it was felt that there was a concern for sector ones. This showed that in the Brazilian case there is a predominance of the clan, i.e. the hegemony of the physicians (clinicians). Which, in defending its own interests, make it difficult for information to be passed on to managers. This creates incongruence between the goals, as well as a difficulty to measure performance by the managers, which raises the scenario of uncertainty and opportunism.

Cost information should reduce uncertainty and extensive cost information availability associated with high accessibility improves the decision-making process. Therefore, British managers enjoy a privileged position to reduce or eliminate opportunism and to encourage the programmed decision-making and structured problem solving.

In terms of the 'involvement of cost information in decision-making/problem solving process' one can note that British managers tend to be more concrete users than their counterparts in Brazil. When testing the usefulness of cost information in terms of certain managerial dimensions, both countries assumed the same order regarding the applicability of cost information. 'Planning' is posed first and it is followed by 'control' with highest scores.

The lack of studies about the use of cost information in planning and control with respect to public hospitals impedes any other comparison or assessment considering empirical data. One of the objectives of this paper was to generate initial material for future researchers. Besides, the knowledge about the current scenario of the usefulness of cost information mainly in planning and control is relevant when associated with modes of governance. The hospitals manager should avoid situations which increase opportunism in decision-making process by using cost information to control clan activities. Cost information could be an important starting point for benchmarking, planning and control, improving the management of consumed resources.

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