The usefulness of cost information: a cross cultural study between Brazilian and British hospitals

Márcio Augusto Gonçalves (UFMG) - marciouk@yahoo.com

Márcia Mascarenhas Alemão (FHEMIG) - marcia.alemao@yahoo.com.br

Lucas Maia dos Santos (UFMG) - admlucasmaia@hotmail.com

Resumo:

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 plannig 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.

Palavras-chave: *Modes of governance. Cost information. Public Hospitals*

Área temática: *Gestão de Custos no Setor Governamental*

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Abstract
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Key Words: Modes of Governance. Cost information. Public Hospitals.

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1 - 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.

This study uses some slight assumptions of the theories of 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.

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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 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.

2 - Modes of Governance

The integration of theories relating to modes of governance ideas 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).

Table 1 – Modes of governance

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

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

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 theses '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 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. 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	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 length[1]. 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.

"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.

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[1] 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).

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.

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; 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.

3 - 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.

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-

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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 (Table 3).

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

Tabela 3 – Phases of research

	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

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

Table 4 - Background of the respondents

	Great Britain	Brasil
Clinicians	26,7%	41,7%
Administration	47,7%	49,1%
Both	25,6%	9,2%

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 Table 4, 47.7% of the British respondents had an 'administrative'[2] background, whereas 26.7% of the respondents were 'clinicians' and respondents with 'both' backgrounds presented 25.6%.

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[2] Inverted commas are used to detach extracts from the questionnaire.

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.

4 - General results and analysis

4.1 -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 5 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 5.

Table 5 – 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 5 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 5.

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 1, 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.
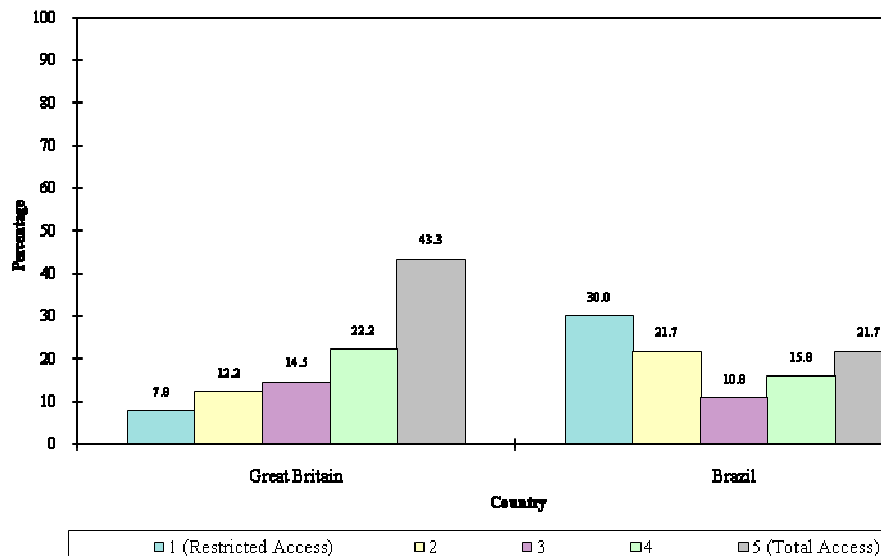
Figure 1 – Access to information about cost and resource consumption (Q9)
Note: p < 0,001 and Cramer's V = 0,341

4.2 - 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 1. 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 6 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 6 – Cost Information perceived usefulness: Decision-making/problem solving

		Means			
	Items	Great Britain	Brazil	Chi-Square	p
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 7. 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

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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 7 – Cost Information perceived usefulness: Managerial dimensions

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

The extent to which cost information facilitates optimal managerial procedures was investigated (Table 7). 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 8 – Cost Information perceived usefulness: Managerial procedures

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

Brazilian managers also presented high means, see Table 8. 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.

When asked about the usefulness of cost information for control/surveillance, British and Brazilian managers gave the same order of importance, see Table 9. Placed first was the usefulness 'for control on resource consumption' with a mean of 3.76 and 4.59 for British and

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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.

Table 9 – Cost Information perceived usefulness: Control

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

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 10 – Cost Information perceived usefulness: Benchmarking

Items	Means		Chi-Square	P
	Great Britain	Brazil		
Resource consumption	3.61 (1st)	4.43 (1st)	37.07	0.00
Clinical activity	3.06 (3rd)	4.40 (3rd)	64.113	0.00
Administrative activity	3.11 (2nd)	4.42 (2nd)	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 10). '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.

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Table 10 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 11 – Cost Information perceived usefulness: Planning and control objectives

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

Table 11 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.

11

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 11 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.

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.

5 - 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.

6 - References

ASHMOS, D.; HUONKER, J.; MCDANIEL, R. JR. Participation as a complicating mechanism: the effect of clinical professional and middle manager participation on hospital performance, **Health Care Management Review**, Gaithersburg, Fall, v.23, n.4, pp. 7-20, 1998.

BOURN, M.; EZZAMEL, M. Organizational culture in hospitals in the National Health Service. **Financial Accountability and Management**, v.2, n.3, Autumn, pp. 203-225, 1986.

BOURN, M.; EZZAMEL, M. Budgetary devolution in the NHS and universities in the United Kingdom. **Financial Accountability and Management**, v.3, n.1, pp. 29-45, 1987.

BOYLE, S. The Health System in England. **Eurohealth**, v.14, n.1, p. 1-2, 2008.

CARSON, S. J., MADHOK, A., WU, T. Uncertainty, opportunism and governance: The effects of volatility and ambiguity on formal and relational contracting. **Academy of Management Journal**, v.49, n.5, pp. 1058-1077, 2006.

CHOO, C. The knowing organization: how organizations use information to construct meaning, create knowledge and make decisions. **International Journal of Information Management**, v. 16, n.5, pp. 329-340, 1996.

COLLINS, C.; ARAUJO, J.; BARBOSA, B. Decentralising the health sector: issues in Brazil. **Health Policy**, v.52, n.2, June, pp. 113-127, 2000.

COVALESKI, M.; DIRSMITH, M.; MICHELMAN, J. An institutional theory perspective on the DRG framework case-mix accounting systems and health-care organizations. **Accounting, Organizations and Society**, v.1, n.8, Oxford, January, pp. 65-80, 1993.

DRURY, C. **Management and cost accounting**. 5th ed. London: Thomson Learning, 2001.

ELLWOOD, S. The NHS financial manager in 2010. **Public Money & Management**, January-March, pp.23-30, 2000.

EMMANUEL, C.; OTLEY, D.; MERCHANT, K. **Accounting for management control**. 2nd ed. London: Chapman & Hall, 1993.

FREIDSON, E. The reorganization of the medical profession. **Medical Care Review**, v.42, n. 1, pp. 11-35, 1985.

GETZ, K. Public affairs and political strategy: theoretical foundations. **Journal of Public Affairs**. London, v.1/2, n. 4/1, pp. 1-21, 2002.

HOFSTEDE, G. Management control of public and not-for-profit activities. **Accounting, Organisations and Society**, v.6, n.3, pp. 193-211, 1981.

LAPSLEY, I. Market mechanisms and the management of health care: the UK model and experience. **Journal of Management in Medicine**, v.11, n.5, pp. 318-328, 1997.

LAPSLEY. I. Markets, hierarchies and the regulation of the National Health Service, **Accounting and Business Research**; v.23, n. 91, London, pp. 384-394, 1993.

LLEWELLYN, S. **"Two way windows": clinicians as managers in medical organizations**. Paper originally presented at the BAA Scottish Conference, The University of Edinburg, September, 1997. Paper for presentation at Aston University, February, 1999.

MACINTOSH, N. B. **Management accounting and control systems**. Chichester: Wiley, 1994.

MAK, Y. Contingency fit, internal consistency and financial performance. **Journal of Business Finance & Accounting**, v.16,n.2, Spring, pp. 273-300, 1989.

MILLER, D. **Handbook of research design and social measurement**. London: Sage Publications, 1991.

MOORE, K. M., EDGAR, B.L., MCGUINNESS, D. Implementation of an automated, real-time public health surveillance system linking emergency departments and health units: rationale and methodology. **CJEM**, v.10, n.2, p.114-119, 2009.

OSBORNE, S. Managing the coordination of social service in the mixed economy of welfare: competition, cooperation or common cause? **British Journal of Management**, v.8, n.1, pp. 317-328, 1997.

OTLEY, D. Management control in contemporary organisations: towards a wider framework. **Management Accounting Research**, v.5, n.1, pp. 289-299, 1994.

OUCHI, W. The relationship between organisational structure and organisational control. **Administrative Science Quarterly**, 22, March, pp. 95-113, 1977.

OUCHI, W. A conceptual framework for design of organizational control mechanisms, **Management Science**, v.25, n.9, September, pp. 833-848, 1979.

OUCHI, W. and Price, R. Hierarchies, clans and theory Z: a new perspective of organisation development. **Organizational Dynamics**, Autumn, pp. 25-44, 1978.

OUCHI, W. G. Markets, bureaucracies and clans, **Administrative Science Quarterly**, v.25, n.1, March, pp. 129-141, 1980.

POWELL, W. Neither market nor hierarchy: network forms of organization, **Research in Organizational Behaviour**, 12, pp. 295-336, 1990.

SIGULEM, F., ZUCCHI, P. E-procurement in the Brazilian healthcare system: the impact of joint drug purchases by a hospital network. **Pan American Journal of Public Health**, v. 25, n. 5, p.429-434, 2009.

STIGLITZ, J. Symposium on organizations and markets. **Journal of Economic Perspectives**. V.5, n.2, Spring, pp. 15-24, 1991.

TSOUKAS H. Forms of knowledge and forms of life in organisational contexts, **Warwick Business School Papers**, n. 171, 1995.

WEISBORD, M. Why organizational development hasn't worked (so far) in medical centers. **Health Care Management Review**, n.1, pp. 17-28, 1976.

WILLIAMSON, O. **Corporate control and business behaviour**. Englewood Cliffs: Prentice Hall, 1970.

WILLIAMSON, O. **Markets and Hierarchies**, New York: Free Press, 1975.

WILLIAMSON, O. The modern corporation: origins, evolution and attributes. **Journal of Economic Literature**, n.19, December, pp. 1537-1568, 1978.

WILLIAMSON, O. **The Economic Institutions of Capitalism**, New York: Free Press, 1985.

WILLIAMSON, O. **The logic of economic organizations in Williamson**. In: Winter, S. G. (eds), The Nature of the Firm: Origins, Evolution and Development. Oxford: Oxford University Press, pp. 90-116, 1991

WILLIAMSON, O. AND OUCHI, W. The market and hierarchies and visible hands perspectives in Van de Ven, A. and Joyce, W. F. (eds), **Perspectives on Organizational Design and Behaviour**, New York: Wiley, pp. 347-370, 1981.