Bureaucracy and the balanced scorecard in health care settings

ABSTRACT

Purpose – We explore the relationship between the Balanced Scorecard (BSC) and neo-bureaucracy by investigating whether the operationalization of the BSC incorporates 'neo-bureaucratic' ideas; and whether the BSC implemented in a Portuguese Local Health Unit (LHU) evidences a neo-bureaucratic approach.

Design/methodology/approach – We conduct semi-structured interviews with LHU staff and analyse documents to assess whether features of bureaucratic organization were evident in the use of a BSC by the LHU.

Findings – We found nine bureaucratic features evident in the LHU's BSC. These were systematization, rationality, authority, jurisdiction, professional qualification, knowledge, discipline, transparency, and accountability. The BSC used at the LHU evidenced a neo-bureaucratic approach.

Originality/value – Our study helps to demystify bureaucracy and overcome prevailing prejudices regarding some of its principles. Health care managers should recognize and endorse neo-bureaucratic principles in developing a BSC. They should recognize the BSC as involving a neo-bureaucratic approach. The BSC is a valuable management tool that hospital managers should find useful fostering flexibility, collaboration, innovation and adaptation – all of which should help lead to improved health care outcomes.

Keywords Balanced scorecard, Bureaucracy, Health care management, Management accounting, Organizations, Portugal

Paper type Research paper

Introduction

This paper provides a nuanced understanding of the features and characteristics of a management tool that is widely used to facilitate the management of health care facilities: the Balance Scorecard (BSC). A review we conduct of studies that report the use of the BSC in health care settings reveals evidence of bureaucratic principles. We also study whether the BSC used in a Portuguese Local Health Unit (LHU) evidences adoption of bureaucratic principles.

The present study is the first to explore the bureaucratic implications of the BSC in a health care context. Our intent is to promote awareness of the characteristics of the BSC when it is used in health care settings. In particular, we explore whether the BSC evinces any, or all, of nine neo-bureaucratic traits in those settings. This exploration is not conducted merely for reasons of curiosity or simply to rehabilitate the (usually) odious reputation of 'bureaucracy.' Rather, the intent is to promote deeper insights into the presence of neo-bureaucratic traits and to thereby assist with the use of the BSC in operational management of health care facilities.

Health care organizations have a reputation for being rigid and difficult to manage (Chang et al., 2017). This is often attributed to the conflicting interests of doctors, nurses, administrators, and community members. One way of addressing the intrinsic problems of coordination and collaboration in health care management is to develop a strong and appropriate culture in which the particular interests of various parties are reconciled with collective needs (Glouberman and Mintzberg, 2001). However, a persistent difficulty is to ensure that management of health care facilities adapts to an environment characterized by continuous technological evolution and increasing financial and social demands.

Good management support systems are required to address this issue of adaption. The BSC has been adopted widely as a management tool to implement and reinforce good management control (Koumpouros, 2013). A BSC approach can be beneficial to the management of hospitals by helping to evaluate performance, implement policies, facilitate control, aid

accountability, and assist with strategy development (Gao et al., 2018; Aidemark and Funck, 2009).

In response to ever-changing technological, demographic and cultural factors, government-sponsored hospitals have instituted control systems that exhibit traits of a bureaucratic order — perhaps in response to demands of government bureaucracy (Lega and Pietro, 2005). Nonetheless, management accounting systems in health care organizations struggle to adapt to cultural challenges. Often, they inadequately prepare hospitals to deal with social, environmental and political issues. The BSC offers a potential solution to this because it encourages collaboration and cooperation, and promotes an integrated culture (Kaplan and Norton, 1996).

The next section of this paper reviews empirical studies of the use of the BSC in a hospital environment, highlighting the bureaucratic features of a BSC. We then outline the research method and main findings of the Portuguese case study we conduct, before engaging in discussion.

The balanced scorecard and the health care environment

Although the BSC was initially developed for private sector business organizations, its use has quickly extended to the public sector, including health care facilities. The BSC is claimed to lead to better management because it enhances control, reduces uncertainty, and helps organizations achieve their objectives (Aidemark, 2001). The BSC has been adopted widely to evaluate health care performance. Nonetheless, in some countries, such as Portugal, the BSC is under development (Gonzalez-Sanchez et al., 2018). As its name suggests, the BSC provides a ‘balanced’ information system. The aim of the BSC is to yield a more acute and apolitical assessment of hospital performance — and one that will help to optimize efficiency and effectiveness in providing hospital services (Cleven et al., 2016).

The BSC identifies four crucial perspectives that affect an entity's activity and outcomes. These are *employee learning and growth → internal processes → financial → customers* (Kaplan and Norton, 1996). When properly adapted to the management of hospitals, the BSC can help achieve self-set goals and goals that are externally imposed by law or government regulation. In hospital settings, the four perspectives of the BSC have been adapted to focus on patients specifically, and to engender a patient-centeredness in strategic decision-making (Lin et al., 2013). The BSC has been claimed to encourage effective clinical teamwork, clarify processes and outcome indicators, and improve leadership (Jones and Filip, 2000). The BSC can be adapted to meet the particularities of hospitals (Catuogno et al., 2017)

In the health care sector, advances in information and communication technologies have led to a proliferation of potential performance indicators. These rely on data that are often in scattered, and non-integrated, systems. A potential benefit of the BSC is its capacity to provide a platform for the selection of performance indicators that will help achieve desired outcomes and facilitate complex changes (Al-Katheeri et al., 2018).

The BSC is well-suited to the analysis of performance in large and complex hospitals (Yap et al., 2005). The BSC relies on quantitative transparency induced by feedback so that employees are aware of how their performance is measured. Such transparency is crucial in sustaining the reward mechanisms that encourage employees to perform better (Gibbs et al., 2004). This is important because of the reliance by the health care industry on performance incentives and measures that incorporate responsibility and integrity (Nur and Ramli, 2015).

The BSC stresses the importance of continuous learning in driving organizational performance and in sustaining innovation and continuous improvement (Kaplan and Norton, 1996). However, in Brazil, Correa, Prochnik, Ferreira, and Vianna (2014) found that a hospital's BSC inhibited innovation and creativity, promoted immobility, and discouraged activities that pushed performance ahead after the original targets achieving. Two other studies

have reported that a bureaucratic culture has impeded initial implementation of a BSC (Türkeli and Erçek, 2010; Rabbani et al., 2010).

Nonetheless, the potential value and relevance of the BSC in addressing the distinctive challenges faced by hospital managements is well-supported in other studies: for example, those of Gurd and Gao (2007), Emami and Doolen (2015), Trotta, Cardamone, Cavallaro, and Mauro (2013) and Niemiec (2016). The British National Health System has implemented the BSC (Radnor and Lovell, 2003). In Italy, the strategic use of management accounting tools, such as the BSC, has improved health care processes (Demartini and Trucco, 2017). In China, health system reforms aimed at solving operational inefficiencies, have led to the gradual implementation of the BSC (Lin et al., 2014): for example, the BSC is used to evaluate operating room performance in a Shanghai hospital (Lin et al., 2013).

Bureaucracy and the BSC in the health care environment

Concepts of bureaucracy in the BSC

Many organizations have adopted the following principles of classical bureaucracy: rational organization, objectivity, and legal authority (Weber, 1922). A classical bureaucracy embraces guidelines that are legal (e.g., impartiality), economic (e.g., efficient task execution), social (e.g., minimization of conflict) and ethical (e.g., dignity). Nonetheless, classical bureaucracy has proven inadequate in coping with the pace of change in contemporary society and the wide range of specialized professionals found in modern health systems (Lega and Pietro, 2005). The broader concept of bureaucracy has not been discarded in those settings. Instead, the premises of bureaucracy have been adjusted. This has led to what is now termed 'neo-bureaucracy' (Farrell and Morris, 2003).

Neo-bureaucracy maintains the classic bureaucratic concepts of *systematization, rationality, authority, jurisdiction, professional qualification, knowledge, discipline,*

transparency, and *accountability* (Oliveira et al., 2019). However, as outlined below, it does so in a different way.

Overviewing the concepts of bureaucracy:

- *systematization:* strict and systematic discipline and operational control;
- *rationality:* absence of personal interests, objectives, and arbitrariness. Guidance is provided by pre-defined rules and regulations;
- *authority:* administrative organization is formally defined with a clear hierarchy of departments;
- *jurisdiction:* each department has its sphere of competence defined clearly and legally;
- *professional qualification and knowledge:* selection of all staff is based on technical qualifications;
- *discipline:* a form of behavioural control emerging from an organization's control system, instruments of power, and means of administration;
- *transparency:* people in an organization can perceive the reasons for their orders and the consequences of their behaviour; and
- *accountability:* keeping records and establishing a hierarchy of responsibilities (Weber, 1922; Styhre, 2007).

Classic bureaucracy differs from *neo*-bureaucracy mainly in understanding the concept of *discipline*. With neo-bureaucracy, *discipline* arises from adaptive collaboration. In contrast, in classical bureaucracy, *discipline* is imposed. This conceptual difference affects how *authority* is perceived and exerted; and how other bureaucratic concepts (mainly *systematization*, *accountability* and *jurisdiction*) are manifest. Thus, neo-bureaucracy 'softens' hierarchical authority. Decisions are not taken rigidly from top to bottom in the organizational hierarchy. Rather, rules are negotiated, and flexibility in individual circumstances is respected. Neo-bureaucracy is more enabling than coercive (Adler and Borys, 1996). Because of this, it is

conducive to helping organizations deal with innovative, but sometimes disturbing, processes (Craig, 1995). The neo-bureaucracy approach in cutting-edge technology companies helps to create innovative records, improve security, and promote labour transparency (Styhre, 2007).

The use of a BSC implies initiating, continuing or adapting the bureaucratic order in an organization. This often evinces the presence of neo-bureaucratic concepts (Oliveira et al., 2019).

A BSC is based on the *systematization* and monitoring of organizational activity. The design of the BSC reflects a *rationality* that is translated into a strategic management map. In the BSC, employees have their obligations clearly defined and framed into action plans and targets. In implementing a BSC, there is an *authority* that is not externally emphasized but which is nevertheless prominent. The BSC outlines an internal *jurisdiction* and a *discipline* that regulates labour relations and confers a degree of security to employees. The discipline in the BSC emerges from a collaborative culture in which several rational interests are aligned (Glouberman and Mintzberg, 2001). Such a collaborative culture minimizes the possibility that individualism will thwart the effectiveness of the BSC (Qu and Cooper, 2011).

Learning processes are a special concern of the BSC. They are crucial to innovation and business growth. Learning denotes that *knowledge* and *professional qualifications* are priorities in achieving success. The BSC also highlights the principle of *accountability* and supports this through processes of control and coordination (Kaplan and Norton, 1996). The BSC strives for *transparency* by clearly defining responsibilities and functions; and by informing employees about their performance in terms of implemented indicators (Kaplan and Norton, 1996). Executive leadership is crucial in implementing the BSC and ensuring employees collaborate and aspire to organization development (Adler and Borys, 1996).

Review of studies reporting use of a BSC in hospitals

We searched the terms 'BSC and hospitals' and 'BSC and health' on the website of *B-on* (https://www.b-on.pt/). This website contains journals listed by the *Web of Science, Scopus* and *PubMed*, among others. The following search filters were applied: integral texts, peer review, published in academic journals, and written in English. The search revealed 124 studies. Within those papers, we searched the exact expression of any of the nine bureaucratic features aforementioned. We also searched for synonyms or related terms that might point to the same characteristics, such as cooperation (for *discipline*), training (for *professional qualification and knowledge*), hierarchy (for *authority*), control (*authority, jurisdiction* or *accountability*), and formality (*jurisdiction*). Despite the high number of papers searched, few identified bureaucratic features: only 16 mentioned at least one of the nine bureaucratic features. The features are reviewed below.

In the US, a study of MedCath hospitals reported that the BSC was effective in streamlining organizational learning and updating staff *knowledge* and *professional qualification* (Guinane et al., 2006). Another US study in hospital settings stressed the importance of the BSC's learning and growth perspective in achieving improved performance because of the focus it applied to the *professional qualification* and *knowledge* of hospital staff (Emami and Doolen, 2015). In Taiwan, Wu and Kuo (2012) highlighted the importance of the BSC in evaluating information technologies, learning, and *knowledge.*

By using the BSC as a way of evaluating performance, Gao et al. (2018) suggested ways of improving performance in five Chinese hospitals. In particular, they recommended *knowledge* development through medical training.

A Brazilian study of the BSC in two hospitals (one public and one private) emphasized the importance of promoting collaborative dialogue; and highlighted the potentially imposing nature of the presence of an appropriate and contextualized *discipline* (Correa et al., 2014).

In the U.K., a study of the National Health Service acknowledged the growing importance of assessing performance when providing health care services and highlighted the BSC's ability to meet *accountability* requirements (Radnor and Lovell, 2003). In a US study, Walker and Dunn (2006) showed how *accountability* developed through BSC metrics improved performance and strategic management. A study in an American university hospital concluded that the BSC was valued in a multi-interest environment because of its capability to develop *accountability* adjusted to such an environment, and because it was sufficiently *transparent* to be considered reliable (Trotta et al., 2013).

In Lebanon, a study of the BSC in 52 hospitals reported that improved services arose because benchmarking and evaluation standards improved *accountability* (El-Jardali et al., 2011). Similarly, hospital administrators in Ontario, Canada, emphasized the helpfulness of the BSC as a tool for comparative evaluation and external *accountability* (Chan, 2004). Yap et al. (2005) refer to a hospital report that revealed 55% of hospitals in Ontario have an *accountability* framework in which the BSC was important. A Malaysian study of the structure of private hospitals, and their performance in terms of the BSC, mentioned the development of a strongly centralized and formal structure — indicating *authority* and the development of *accountability* (Nur and Ramli, 2015). Such a structure assisted in evaluating performance because of its emphasis on *transparency*. A Californian study of the implementation of the BSC in a group of hospitals also acknowledged the creation of *transparency* and *accountability* (Hwa et al., 2013).

In Jordan, a study endorsed the BSC approach as a means of evaluating hospital performance. The BSC was found to help achieve the main objectives of the Jordanian public health sector (cost efficiency and *transparency)* (Nassar et al., 2015). In Australia, van de Wetering et al. (2006) studied the application of the BSC in the *Picture Archiving and Communication System* of a large hospital. They reported a dominant *transparency* perspective.

In similar vein, the relevance of *transparency* for a successful BSC was demonstrated in the US in a financially struggling community teaching hospital (Lorden et al., 2008).

The preceding literature review finds the term *accountability* expressed in eight studies, *transparency* in six, *knowledge* in four, *professional qualification* in two, and *discipline* and *authority* in one. Thus, the bureaucratic features of *accountability* and *transparency* were especially prominent. None of the empirical studies reviewed made a straightforward mention, or alluded to, *jurisdiction*, *systematization*, or *rationality*. However, due to the small number of empirical studies conducted, the absence of these terms does not allow any reliable conclusion to be drawn. The review conducted indicates the current importance of some concepts of bureaucracy and hints at their close relation to the BSC.

For purposes of additional validation, and to add another contextual setting to the empirical database, we report below on a Portuguese case study. Our aim is to determine whether the features that describe bureaucratic order were present in a BSC in a Portuguese LHU.

Method

Setting and case purpose

The operational setting was the LHU of the North Regional Health Administration (RHA) in Porto, Portugal. This LHU is a public legal entity, is entrepreneurial in nature, and has administrative and financial autonomy. In 2018, the LHU comprised seven primary health care services, a hospital (with 1867 employees and 342 beds), an intensive care unit, a care support area, and management and logistic areas.

We explore whether features of bureaucracy were present in the BSC used to manage the LHU. Based on Oliveira et al. (2019) nine bureaucracy features were proposed: *systematization, rationality, authority, jurisdiction, professional qualification, knowledge,*

discipline, transparency, and *accountability*. Were these features present in the LHU's use of the BSC?

Data collection

We used an interpretative, qualitative approach (Beuving and Vries, 2015) to collect data. This involved document analysis and interviews of key employees (Somekh and Lewin, 2005). First, we met with a member of the LHU board in 2014 to assess the organizational structure of the hospital; understand how to best select interviewees; and assess how to gather information about the operational functioning of the hospital's BSC.

Nine staff members were interviewed between 2015 and 2018. The length of the interview process had the additional benefit of allowing us to assess the temporal sustainability of the BSC in the LHU and the consistency of responses over time. Some interviewees had responsibilities across more than one department. After the ninth interview, it became apparent that no further interviews would be necessary since it was unlikely that extra insights or added value would accrue beyond this 'saturation point' (Somekh and Lewin, 2005, p. 37). We selected interviewees based on their area of responsibility and rank in the hospital's management. They comprised a member of the board, the manager of the contracting office, the manager of the planning and control office, two service managers from the Care Support Area, and four department managers (every manager responded directly to the board of directors). The interviewees were selected because they presented an integrated view of the management from different perspectives.

The interviews were conducted in Portuguese, the native language of all interviewees, at the interviewees' workplace. The average duration was 57 minutes. We develop a script specific for this study using the bureaucratic features developed in the literature review. (Appendix A presents the list of the interviews questions. These are ordered by bureaucratic

features). We sent the script of the proposed interview to interviewees in advance to allow them an opportunity to prepare. The interviews were semi-structured to facilitate flexibility and spontaneity. The dual intent of the questions was first, to verify how the design and implementation of the BSC were followed; and second, to highlight any bureaucratic features of the BSC. Interviewees were given time to develop their responses. Whenever necessary, we read back answers to interviewees in summary form to confirm their understanding. Six of the nine interviews were recorded. Three interviewees did not give permission to record the interview. We used two interviews tools: *Transcreve* to help transcribe the recorded interviews; and *N-Vivo* to help analyse the interviews content. We sent all interview transcripts to respondents to allow them to check for accuracy and make any necessary amendments.

We also analysed several of the LHU's internal document. These included the Annual Report and Accounts; Annual Report of Activities of the Internal Audit Service; Code of Ethical Conduct; Internal Control Report; Internal Regulation; Objectives, Indicators and Targets Maps; Plan of Activities and Budgets; Program Contracts; Regulation Internal Communication of Irregularities; Report of Corporate Governance; Sustainability Report; Strategic Map and Strategic Axes. To enhance reliability and counteract the risk of bias in the interviews, we triangulated results with the documents analyses for assurance purposes.

To avoid bias between the features found in the literature review and in the interview data, the first and second authors examined the interview data separately and reached a consensus on the conclusion to be drawn.

Data analysis

To validate *systematization*, we examined how the plans of each department articulated; and how their objectives influenced the individual objectives and actions of employees. In doing this, we explored whether managers understood their contribution to the higher goals of the

LHU. With respect to *rationality,* we searched for rational criteria in the hospital's strategy. For *authority*, we assessed whether there was a well-defined hierarchy, with well-differentiated responsibilities. In terms of *jurisdiction*, we sought to understand whether protocols and action plans were defined, whether responsibilities were recognized and formalized, and whether there were any informal relations evident. In addition, we sought to understand whether staff agreed with the processes instituted, followed them, and engaged in any discretionary behaviours.

With respect to *professional qualification and knowledge,* we looked for aspects of learning and growth, such as training actions that gave personnel formal employment-related credentials. Regarding *discipline*, we explored whether a recognized order was present and if so, how to characterize that. For *transparency*, we focused on the existing feedback processes in the LHU, and whether personnel were aware of evaluation criteria and trusted the evaluation process. We also explored the existence of control through *accountability* or reward processes.

Results

LHU's implementation of the BSC occurred in two stages. In 2008, the initial implementation was driven by mimetic isomorphism - that is, by a management decision to follow the lead of private organizations. In 2010, coercive isomorphism was evident in the imposition of the BSC by the RHA: that is, by an external (political) decision (DiMaggio and Powell, 1983). The LHU developed the BSC for clinical departments of medicine, surgery, anesthesia, outpatient care, nursing mothers and youth, imaging, diagnosis and treatment, emergency and intensive medicine, and mental health. The BSC was also developed for three of the eight services provided by the Care Support Area: social service, nutrition service, and central sterilization service. At the end of each year, the following year's activities plan and budget was drawn up and submitted to the board of directors for approval, along with BSC indicators.

During the phasing-in of the BSC, meetings were held to provide information and allow for interaction between departments. When scorecards for individual departments were created, there were concerns about the way several departments were strategically aligned.

All the performance indicators contracted externally with the RHA, and the internally established objectives, were included in the BSC. This was because they all affected the level of hospital financing. The process of collecting information for the diverse range of performance indicators was lengthy: some were not easily measurable and their calculation was not automated by the information system. A common criticism was of the inadequacy of the information system for the demands of the BSC. The compilation of much relevant information for the BSC was not centralized and its integration into the BSC was very time-consuming.

The planning and management control service collected information from the diverse departments. Subsequently, the contracting office analysed the information and reported detailed deviations from the plan to the management board. If the deviations were negative, new information could be requested from the respective departments and plans proposed for improvement. This analysis was performed quarterly. All departments were provided with feedback from the departmental indicators in the BSC.

All departmental strategic maps in the LHU were derived from the LHU's overall strategic map. Objectives and measures were defined and framed for strategic purposes to avoid discretionary drift or abuse. Staff felt free to discuss what was expected of them and the consequences of their acts.

There was a properly formalized hierarchical order in the LHU. Each department had a management team with a director (a senior doctor), a manager, and a nurse or technician (Internal Regulation, 2018). Generally, all staff knew to whom they reported and who reported to them. Department managers reported directly to the board of directors, and they, in turn,

reported to the RHA. Despite a well-defined hierarchy, the management teams had some autonomy and there was a culture of communicative leadership. The LHU operated a 'shared folder' system in which global information for each department was available for regular informal communication between departments. Protocols and action plans were well defined and staff recognized their functions and responsibilities. An *Internal Control Regulation* clarified the constitution, organization, and objectives of each department, together with the competencies of their management team. A document titled *Function Segregation* and the *Corporate Governance Report* clarified the functions of the board directors.

The LHU had a *Knowledge Management Service* with a training centre and a library. This service diagnosed the training needs of the diverse departments and established an annual training plan. Several training courses were offered to improve the diffusion of the BSC. There was good awareness of training courses. However, there were concerns about the general lack of financial resources to fund training activities; and about the lack of time to attend training. Nonetheless, training and knowledge were generally highly valued and encouraged. In 2017, the LHU was associated with 82 research studies and 57 articles published in journals indexed in *Pubmed*. The LHU encouraged research and identified research projects and outcomes in the *Annual Report and Accounts*. There was an established order in the LHU, fostered by a *Code of Ethical Conduct*. This code expressed a *Policy of Conflict of Interest* and promoted discipline and a collaborative spirit, as intended by the BSC.

The LHU had established a set of strategies, policies, processes, rules, and procedures as part of an internal control system. Expected operational deviations and instances of internal non-compliance had to be justified by the directors responsible — not as a penalty, but as a natural way of improvement. All employees, except physicians, were subjected to an individual assessment process. An *Internal Control Regulation* guided the communication of irregularities (such as violation of regulatory and deontological principles and legal provisions)

by members of statutory bodies, employees and suppliers. This regulation also required information about any damage, abuse or diversion relating to the LHU's assets and about events that diminished the LHU's image or reputation.

Discussion

Implementation of the BSC involved designing strategic maps, seeking a collaborative organizational culture, and aligning a plurality of interests with the LHU's mission and objectives. The LHU sought to have its component parts articulate with a common purpose — one that was formally presented and subjectively understood. The alignment of the strategy of departments (a sign of *systematization*) indicated awareness of the implications of a department's performance to other departments and to the organization as a whole. The BSC's strategic map was reflected in departmental strategic maps, confirming the presence of a deliberate plan and an idea of *rationality*.

The demarcation of responsibility in the LHU's hierarchical structure could lead to a lack of communication. However, this was counterbalanced by regular meetings between department directors and the board of directors, and between department directors and their subordinates. There was a well-defined *authority* in the LHU and clear reporting responsibilities.

Discipline was evident in a regulated order that did not preclude departmental autonomy. Disciplinary order was framed by a collaborative culture in which the responsible authority used negotiated accountability mechanisms, typifying a neo-bureaucratic order.

The bureaucratic feature of *jurisdiction* was evident in the unambiguous formalization of functions and responsibilities for each working position. Despite this formalism, staff were encouraged to suggest alternatives and improvise short-term solutions. Thus, the typical neo-bureaucratic traits of flexibility and adaptability were evident.

The LHU's maintenance of an active training centre to promote the development of professional competencies evidenced its concern for *professional qualifications* and *knowledge*.

Staff had a good level of understanding and acceptance of procedural rules that ensured an *accountability* based on disciplined, continuous information feedback processes.

The commitment to comply with objectives based on the hospital contracting with the RHA stimulated the processes of *accountability* and *transparency*.

The above findings are consistent with the literature review which reported evidence of only six of the nine bureaucratic features of interest. The present study finds evidence of these six features too. But, importantly, it also finds evidence of the three features not reported previously: *jurisdiction*, *systematization*, and *rationality*. The features of *systematization* and *rationality* were strongly apparent in the design of strategic maps that helped execute the BSC. Design of the strategic maps fostered a collaborative and participative regime. Additionally, a collaborative approach to management was aided strongly by the two bureaucratic features of *rationality* and *systematization*. The organizational culture generated fostered dialogue and a sense of interdependency.

Thus, we found the nine features of a bureaucratic order in the Portuguese LHU managed by the BSC, indicating an inherent neo-bureaucratic approach. Since a hospital is a bureaucratic organization, the generally good reception accorded to the BSC in effecting health management can be understood: hospitals encapsulate the fundamental features of bureaucratic order. The BSC accommodates a bureaucratic order while changing that order in a way that addresses lingering bureaucratic problems. The BSC helps to advance a neo-bureaucratic approach by offering a way of addressing bureaucratic health management problems. These include those highlighted in a study of performance management in Portuguese primary health care, such as

distrust in the administrative bureaucratic process, lack of coordination and accountability processes, and issues of formal communication and control (Silva and Ferreira, 2010).

The implementation of the BSC enhances the traits of *systematization* and *rationality* and instigates a neo-bureaucratic order through a cultural change that is intended to address bureaucratic health management problems. The bureaucratic traits of *discipline* and *authority,* cultivated by the LHU's management in the contemporary social context, are publicly ill-perceived. The BSC can help to alleviate this image by developing a collaborative culture that enables their acceptance in the organization.

This study provides new insights to the implementation of the BSC and bureaucracy in hospital contexts. The BSC assumes bureaucratic traits but endorses a neo-bureaucratic approach. This is important to improve health care outcomes because it fosters flexibility, collaboration, innovation and adaptation. This continual presence of bureaucracy in a contemporary management tool (BSC), helps to demystify bureaucracy in hospital contexts.

This study contributes to the body of knowledge about the BSC, and will help promote better social and economic understanding of the bureaucratic values and empowering hospital management. It would be beneficial of future research explored how the BSC can change perceptions of bureaucracy in health organizations in different contexts, and particularly in non-Anglo-American contexts. There would be benefits too from inquiring whether, and how, a pre-existing bureaucratic order hinders the implementation of a BSC. Because leadership is an important element of a BSC's success, future research addressing leadership in health care organizations would be very pertinent and helpful. A research question of relevance is "Does poor leadership promote failure of a BSC?"

Appendix A

List of the interviews questions order by bureaucratic features

Rationality

Do you know the criteria that drives departmental and hospital strategy? Do you recognize its rationality and relevance? Do you have a strategic map?

Authority

Is there a well-defined hierarchy, with positions well-differentiated regarding responsibilities? Do you know to whom to report and who reports to you?

Accountability

Do employees know what is required of them? Do they have assigned objectives? Are there well-defined performance evaluation processes either general or individual?

Do people perceive the consequences in their performance (responsibility or recognition)?

Jurisdiction

Are the procedures all expressed and formalized or is there an informal and implied dimension? Do people agree with the established processes? Are they scrupulously defined, or is there some freedom of action?

Professional qualifications and knowledge

Do you know of any training programs in your department or hospital?

Do you recognize innovations in your department? Do you recognize your training needs?

Discipline

Are employee's suggestions welcomed by management?

Are there consequences due to non-compliance with formal rules? Does employee participation in developing the BSC increase their commitment to the hospital's discipline?

Transparency

Does everyone know the criteria and sources of information for their assessment?

Do employees know what the BSC indicators are? Are they given any information about them? Are you aware of the evaluation criteria in other departments?

Systematization

How do departmental plans articulate with other departments and the LHU? Do departmental objectives influence the definition of the individual objectives of employees?

Do employees understand their contribution to the higher goals of the LHU? Do they assess their relative position to the hospital environment? Do employees recognize the defined rules as being of general interest?

How do you classify leadership: powerless, demanding, or open to communication?

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