HOW MANAGERS USE THE BALANCED SCORECARD TO SUPPORT THE STRATEGY IMPLEMENTATION AND FORMULATION PROCESSES

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Abstract

This paper investigates how the Balanced Scorecard (BSC) is used by managers, to support the strategy implementation and change processes. In the last twenty years the relationship between Management Control Systems (MCS) and strategy has become a relevant issue to management control investigation. The control framework of Simons (1995, 2000) provided a significant contribution assuming that MCS can be used both diagnostically and interactively. This study adopts an exploratory and an explanatory case study approach and focuses on a business unit of a large industrial Portuguese company, describing a true success case of BSC’s methodology adoption and use. The results demonstrate that BSC methodology may be used under a diagnosis mode to implement deliberated strategies and, simultaneously, under an interactive mode to promote learning, support strategy revision and provide conditions for new strategies. The research provides insights into the relationship between MCS and strategy, as it identifies the characteristics of using BSC in the several levers of control.

Resumen

Este artículo explora cómo el Balanced Scorecard (BSC) es utilizado por los gerentes para apoyar los procesos de aplicación y cambio de estrategia. En los últimos veinte años, la relación entre Sistemas de Control de Gestión (SCG) y la estrategia fue vista como un tema relevante para la investigación en control de gestión. El framework de Simons (1995, 2000) realizó una contribución importante a esta nueva línea de investigación, demostrando que los SCG pueden ser utilizados en forma de diagnóstico y forma interactiva. Esta investigación adopta el método de estudio de caso, exploratorio y explicativo, centrándose en la atención en una unidad de negocio de un grupo industrial portugués, describiendo un caso com éxito en la adopción y uso de la metodología BSC. Los resultados muestran que la metodología BSC se puede utilizar simultáneamente en la forma de diagnóstico con el fin de implementar estrategias deliberadas y, simultáneamente, en la forma interactiva para promover el aprendizaje, el apoyo a la revisión de la estrategia y llevar a cabo nuevas estrategias. Este estudio contribuye a una mejor comprensión de la relación entre los SCG y la estrategia, la identificación de las caraterísticas asociadas con el uso del BSC en las diferentes palancas de control.
INTRODUCTION

This paper investigates how the Balanced Scorecard (BSC) is used by managers, to support the strategy implementation and change processes. Discussion about the relation between Management Control Systems (MCS) and strategy is fairly new. The variable strategy is only openly used in Management Control (MC) investigation papers in the last three decades (Langfield-Smith, 1997). MC was, until then, viewed as a set of mechanisms created for the purpose of producing information to support planning and control, favoring financial control and accounting related information. During the decade of 80, investigation starts to relate MC and strategy based on the contingency theory. However, these studies have been widely criticized on, because do not facilitate the interpretation of results within an integrated model, the fact that the identified relationships are weak and the results are fragmented (Chenhall, 2003; Chenhall and Chapman, 2006; Covaleskiet al., 1996; Dent, 1990; Hopper et al., 2001; Langfield-Smith, 1997; Otley, 1999; Wickramasinghe and Alawattage, 2007). Starting on the mid-decade of 90, research highlighted the active role assumed by MC on the process of strategy formulation and strategy change. Conducted research assumes that strategy influences MCS and these can influence strategy. The studies of Simons (1987, 90, 91, 94, 95a, 2000) have provided important contribution for this new vision of MC. The conceptual framework of Simons highlights the way managers can use MCS to define and implement strategy and also promote strategic change (Langfield-Smith, 1997).

Along with the interest on the way that MCS influence strategy, the decade of 90 also witnessed the emergence of the concept of performance management as well as its relationship with strategy (Ittner and Larcker, 2001). The era of performance management introduces, in academic research and corporate practice, a set of management techniques focused on value creation, where BSC is included. Some studies about the use of performance measurement systems suggest that these type of techniques to support strategy implementation (Bhimani and Langfield-Smith, 2007; Chenhall, 2005; Dixon et al., 1992; Henri, 2006; Ittner and Larcker, 2005; Marginson, 2002; Mooraj et al., 1999; Tuomela, 2005), as well to promote strategic changes (e.g., Henri, 2006; Ittner and Larcker, 2005; Jazayeri and Scapens, 2008; Kaplan and Norton, 2001; Mooraj et al., 1999; Otley, 1999; Simons, 1995; Tuomela, 2005; Vaivio, 1999, 2004).

Therefore, the research questions considered in this investigation are: how is BSC used by managers, within the Business Unit (BU), and how is the BSC implicated in the process of strategy implementation and strategic change? Our research focuses on the use of the BSC, on its diagnosis and interactive mode, and its relationship with strategy implementation and change, rather than on the BSC’s technical details.

This paper provides a number of contributions. First, it investigates the relationship between the BSC and the strategy implementation and change processes. Since the decade of 80 that academic research studies the relations between MCS and strategy, contributing to the understanding of the interactive nature between MCS and strategy. The studies of Simons, started in 1987, opened new ground for investigation with theoretical contributions for the dynamic relationship model among MCS and the process of strategic change (Langfield-Smith, 1997). One of the advantages of the conceptual framework of Simons (1995, 2000) is the fact that it focuses on how MCS are used and not if MCS are used (Berry et al., 2009). This research explains how BSC is used by managers, from a practical standpoint, to implement strategy and promote new strategic initiatives. Furthermore, the paper shows how the interactive use of BSC enables its effectiveness across the organization; and which are the success factors for the interactive use of BSC.
Second, this research contributes to increase the theorization on the methodology of BSC, whose scarce levels have led several researchers to criticize this performance measurement system (Marr and Schiuma, 2003; Norreklit, 2000, 03). The research on the BSC is considered insufficient and some of the premises do not foster consensus across the research community. For some authors, the BSC is the result of the work of management gurus that use ambiguous, contradictory and unclear concepts. Based on the institutional theory, Norreklit and Mitchell (2007) refer that the adoption of the BSC might result from the need to legitimate decisions with corporate stakeholders, or from mimetic processes, independently of the results at the level of corporate performance.

Third, the study responds to requests for case studies of MCS in general (e.g., Berry and Otley, 2004; Berry et al., 2009; Chenhall, 2003; Dent, 1990; Hopper et al., 2001; Humphrey and Scapens, 1996; Kaplan, 1984, 93, 98; Langfield-Smith, 1997; Marginson, 2004; Otley, 2001; Otley and Berry, 1994; Ryan et al., 2002; Scapens, 1990, 2004, 2006; Wickramasinghe and Alawattage, 2007). They argue this to be the best method to study organizational processes that are difficult to quantify, allows reaching a better understanding and theorization of concept, processes and context in which MC is practiced.

The structure of the paper is as follows. Section 2 presents the literature review and propositions which are used to guide fieldwork and subsequent analysis. Section 3 draws the research methodology and design. Results from this investigation are described in Section 4 and Section 5 contains conclusions and issues for future research.

LITERATURE REVISION

Simons (1995, 2000) presented a framework that relates four types of control with implemented strategies and with emerging strategies:

- The diagnosis management systems result in the management tools that are capable of transforming planned strategies into implemented strategies;
- The interactive control systems motivate managers to seek opportunities that might result in strategic changes and, later, in implemented strategies;
- The belief systems inspire employees to implement planned strategies but also to look for opportunities to change, as long as they are aligned with the organizational mission;
- The frontier systems assure that implemented actions are coherent with defined product and market strategies.

Control and business strategies implementation imply the integration and balance of the four control levers. And the effectiveness level which is achieved in the implementation of the planned strategies and in the identification, formulation and implementation of emerging strategies depends on the way that the four control levers are used by managers and how they complement each other. The belief and interactive control systems foster creativity and the search for new opportunities, creating an organizational environment that stimulates information sharing and the organizational learning process. The frontier system and the use of control systems for diagnosis are used to guide behaviors, imposing managers some action frontiers and focusing them on the defined objective set and reward criteria.

Literature revision focused on the framework of Simons (1995, 2000) and on the studies that used the four control levers to study the relationship between management control tools and strategy.

Simons’ (2000) Framework and Interaction between MCS and Strategy
The studies of Simons determined the course of research on the relationship between the management control systems (MCS) and strategy. Part of the most recent research, on this theme, has proved the work hypothesis in the model of Simons (1995, 2000), especially in the use of management control in the diagnosis or interactive mode, and in the impact of different management control modes in the implementation and strategic changes (Abernethy and Brownell, 1999; Bisbe and Otley, 2004; Kober et al., 2007; Marginson, 2002). Nevertheless, the results are not consensual.

Abernethy and Brownell (1999) analyzed the way the budget was used within a context of strategic change and collected evidence that the use of the budget in interactive mode responds better to the learning and adaptation needs in a context of strategic change.

Marginson (2002) sought, through a case study, to understand the relationship between management control and strategy, exploring how (and why) the model and the use of MCS may affect the autonomy of managers in the development of new ideas and initiatives. Based on the model of Simons (1995, 2000), he concluded that: the system of beliefs and values may be used as a strategic change mechanism; the tools of administrative control may be used at the various levels of the organization to assure the strategy implementation; and, the key performance indicators may be used to secure performance in the critical strategic areas. The obtained results validate the conceptual framework of Simons (1995, 2000).

The results of the study of Bisbe and Otley (2004) show that there is no positive relation between the use of management control in the interactive mode and product innovation, countering the assumptions of Simons (2000). Research suggests that the interactive management control seem only to hold any positive influence in companies with reduced innovation levels; in highly innovative companies, the interactive use of management control reduces the initiatives of product innovation.

The work developed by Kober et al. (2007) studies the interaction between management control and strategy. Moving away from the classical view that management control adapts to the strategy of the organization, Kober et al. resorted to the model of Simons (1995, 2000) and tested, on one hand, if the use of interactive management control facilitates strategic change and, on the other, if the mechanisms of management control altered as a result of a strategic change. They concluded that management control systems influence and are influenced by strategy: the mechanisms of management control used by interactive mode facilitate strategic change and, on its turn, the management control mechanisms adapt to the strategic changes that take place.

**The use of performance evaluation systems in the diagnosis and interactive mode**

Other researchers have studied the way that performance evaluation systems are used by managers (Henri, 2006; Jazayeri and Scapens, 2008; Ramos and Hidalgo, 2003; Tuomela, 2005; Widener, 2007) and what benefits have resulted of the interactive use of performance measures (Tuomela, 2005).

Ramos and Hidalgo (2003) concluded that the use of performance measurement systems may evolve from the diagnosis mode to the interactive mode.

Tuomela (2005) developed a long longitudinal case-study and the results show that the performance measurement system (in the specific case the scorecard) may be used as diagnostic on interactive control systems. The use of performance measurement systems through interactive mode presents benefits when compared with the use through the diagnosis mode.

Henri (2006) supported on the theory based on the resources and studied the relationship between the use of performance measurement systems and organizational
capabilities inductive of strategic choices. Results are consistent with the model of Simons (2000): the management control tools not only contribute for the implementation of planned strategies but also stimulate the emergence of new strategies.

The study of Widener (2007) shows that strategic risk and strategic uncertainties determine the importance and the way how management control is used. It still suggests that belief systems and the use of management control tools for diagnosis facilitate the efficient use of managers’ attention, while the interactive mode consumes managers’ attention. The belief systems and the use of management control for diagnosis promotes organizational learning.

Jazayeri and Scapens (2008) have concluded that, in this case, the performance measurement system was used to allow that strategies emerged within the organization and not as an implementation tool of planned and top-down decentralized strategies.

Several researchers have focused on the way that performance measurement systems (like the BSC) and the performance measures are used in organizations. Opinions are consensual – the BSC and the performance measures are privileged mechanisms of management control used in the interactive mode (e.g., Ittner and Larcker, 2005; Kaplan and Norton, 2001; Mooraj et al., 1999; Otley, 1999; Simons, 2000; Vaivio, 1999; 2004).

In brief, a significant set of published research, since the decade of 90, focuses on the relation of performance measurement systems, highlighting non-financial metrics, and the process of strategy implementation and change. Some researchers studied if the performance measurement systems, like for example the BSC, can be used of an interactive form. Major conclusions suggest that: (1) performance measurement systems can be used as diagnosis instruments to support strategy implementation (Bhimani and Langfield-Smith, 2007; Chenhall, 2005; Dixon et al., 1992; Henri, 2006; Ittner and Larcker, 2005; Marginson, 2002; Mooraj et al., 1999; Tuomela, 2005); (2) performance measurement systems can be used interactively and, therefore, can lead to the emergence of strategic changes (e.g., Henri, 2006; Ittner and Larcker, 2005; Jazayeri and Scapens, 2008; Kaplan and Norton, 2001; Mooraj et al., 1999; Otley, 1999; Simons, 1995; Tuomela, 2005; Vaivio, 1999, 2004).

This paper investigates how the Balanced Scorecard (BSC) is used by managers, to support the strategy implementation and change processes. The empirical study has been realized based on the theoretical framework of the diagnostic and interactive management control of Simons (2000) whose main propositions are presented in Table 1:
### Table 1: The use of BSC in the diagnostic and interactive mode

<table>
<thead>
<tr>
<th>The use of BSC in DIAGNOSTIC mode</th>
<th>The use of BSC in INTERACTIVE mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>To implement the planned strategy</td>
<td>To test and review strategy. To identify and facilitate the emergence of new strategies.</td>
</tr>
</tbody>
</table>

- The strategy is planned and communicated to the structure;
- Managers involve themselves periodically to monitor the execution level of strategy;

- Periodically, managers:
  - Define and negotiate goals
  - Receive and review performance reports
  - Analyze deviations
  - Meet to evaluate and discuss progress in strategy execution

  **Management by Exception**

- The strategy is developed with the contribution of managers;
- Strong involvement in the phase of strategic planning; in the communication and decentralization of strategy; and during the execution and monitoring, involving in the decisions of subordinates;

- Managers involve regularly and personally in the decisions of decentralized managers:
  - the information of the BSC is a theme discussed recurrently among managers and subordinates
  - The system is the Organization permanent focus
  - Senior managers participate in meetings with the subordinates
  - Permanent debate on information, assumptions and action plans

- Communication and dialogue to clarify objectives and strategy
- Discussion and communication along the structure
- Focus on few metrics
- Search for coherence among the components of the strategy map
- Permanent search of new information with the purpose of adjusting current strategy or to define new strategies.

### RESEARCH METHODOLOGY AND DESIGN

This investigation adopts an explanatory and an exploratory qualitative case study method to understand how BSC is used by managers, within an organization, to support the strategy implementation and change processes. The researchers chose the case study method because it provides a better understanding and content theorization, of the processes and context in which the practices of management control take place (Berry and Otley, 2004; Berry et al., 2009).

Research was conducted on two separate moments: a pilot study realized from January to June 2008; and the main study from July 2008 to June 2009. The study was
conducted in one BU of one of the largest Portuguese manufacturing groups that controls industrial and sales operations in 103 different countries. The BU wished to remain anonymous and will be referred to as Alpha. The company has a 400-employee workforce, generating annual sales in excess of 80 million euros, with foreign markets accounting for more than 85% of total production. Alpha was selected based on its theoretical importance (Yin, 2003). First, the group uses the BSC methodology since 2003, which provided adequate time frame to study the form of use and impact of the BSC. The adoption of the BSC aimed to assure the alignment of the objectives of management structures and the implementation and monitoring of strategy within each BU. Since then, Alpha managers use the BSC on a rather permanent and dynamic fashion. Second, Alpha has proved significant willingness and interest on the adoption of new management techniques and, particularly, of MC. Third, Alpha is included in one of the largest Portuguese manufacturing groups standing for the business units that operate within context and conditions equivalent to those object of our study. (see Yin, 2003). Finally, the research reports a successful case in the adoption and use of the BSC methodology. The tool was peacefully accepted and integrated into daily routines, of the organization, by all the organizational players. The methodology is in use, and general organizational perception is of overall satisfaction. All these reasons led researchers to choose the realization of an unique case study providing deep and detailed descriptions and explanations (Dyer and Wilkins, 1991). Alpha also proved to offer adequate context to the study of the form in which the BSC is used by managers and by the relationship between BSC and strategy (see Keating, 1995, about research settings).

For data collection, researchers used semi-structured interviews, direct observation and document collection. Data collection was made during an 18-month period, which allowed for gaining deep knowledge on the culture and management methodologies used in Alpha. Detailed interview was the main data source of this research (Bédard and Gendron, 2004; Mason, 2002), which allowed to obtain detailed and holistic understanding on the experience, opinions, and interviewee attitudes (Mason, 2002; Horton et al., 2004; Patton, 1987). Questions were designed in accordance to key theoretical constructs (Silverman, 2005; Patton, 1987; Yin, 2003). Interview scripts were used flexibly, in the sense that they were being adjusted as the researchers were proceeding with the interviews (Yin, 2003).

The research study included a total of 28 semi-structured interviews during 30 hours being the major part realized with senior executives. The researcher has not faced significant resistance to recording as managers are used to routine meetings being video and audio recorded. Apart from the interviews the researcher still interacted with additional 80 BU employees, of different hierarchical levels, by both mail and directly. Table 2 presents the interviews made.

<table>
<thead>
<tr>
<th>Nº</th>
<th>POSITION</th>
<th>DATE</th>
<th>DURATION (h)</th>
<th>METHOD OF RECORDING</th>
</tr>
</thead>
<tbody>
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<td>1</td>
<td>Group Manager, Organizational Development &amp; Management Control</td>
<td>1 October 2008</td>
<td>2</td>
<td>Notes</td>
</tr>
<tr>
<td>2</td>
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<tr>
<td>3</td>
<td>Business Development Director</td>
<td>16 February 2009</td>
<td>1</td>
<td>Transcription</td>
</tr>
<tr>
<td>4</td>
<td>Production Manager 1</td>
<td>20 February 2009</td>
<td>0,75</td>
<td>Transcription</td>
</tr>
<tr>
<td>5</td>
<td>Quality &amp; Product Development Director</td>
<td>20 February 2009</td>
<td>0,75</td>
<td>Transcription</td>
</tr>
</tbody>
</table>
After each interview, the researcher filled contact forms where some notes such as date, local, attending people, themes discussed, interviewee's reactions and unanticipated themes discussed to be included in the following interviews were registered (following the recommendations of Miles and Huberman, 1994 and Scapens, 2004, on this process). As soon as possible, the researcher transcribed the interviews where additional notes were registered (following the recommendations of Yin, 2003; Miles and Huberman, 1994; Moll et al., 2006; Scapens, 2004) and indexed some expressions and interviewee behaviors such as pauses, interruptions, tone, emphasis, concordance, discordance among others (see Mason, 2002). The realization of the contact form and the almost immediate transcription of the interviews allowed the researcher to prepare to the following interviews (Miles and Huberman, 1994; Moll et al., 2006). Besides the audio record, the researchers wrote down some notes during the interview that allowed, for one side, to conduct the interview and, on the other, to help to elaborate the contact forms and in the indexation of interview transcriptions. In the situations in which the researcher has not been authorized to audio record, exhaustive annotations were taken. The analysis of data, resulting from the interviews, was made through the method of content analysis.

In the phase of evidence collection, the researchers adopted the following procedures: first, they conducted the maximum number of interviews involving employees of the BU and corporate headquarters; second, the researchers resorted to data and method triangulation; third, they considered the importance of data and sources; fourth, the researchers then resorted to key informers to validated collected evidence and the

<table>
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<th></th>
<th>Name</th>
<th>Date</th>
<th>Notes</th>
<th>Transcription</th>
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<td>6</td>
<td>Engineering Applications, Manager 1</td>
<td>20 February</td>
<td>0.5</td>
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</tr>
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<td>7</td>
<td>Information Systems Management, Manager</td>
<td>4 March 2009</td>
<td>2</td>
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<tr>
<td>8</td>
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<td>9</td>
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<td>22 April 2009</td>
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<td>Transcription</td>
</tr>
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<td>22 April 2009</td>
<td>1.5</td>
<td>Transcription</td>
</tr>
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<td>26</td>
<td>General Foreman 1</td>
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<td>27</td>
<td>General Foreman 2</td>
<td>22 April 2009</td>
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<td>28</td>
<td>General Foreman 3</td>
<td>22 April 2009</td>
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</table>
interpretation that were formulated. Data was coded using the key theoretical constructs (Miles and Huberman, 1994) looking for patterns and exceptions. Still in the analysis phase, the researchers replicated some of the results gathered, through the collection of additional data, and discussed the results obtained with the key informers. The researchers tested the coherence of the results of this case study comparing the results obtained with the results of other investigations on the BSC and on the Simons’ framework. The results were registered in a report, in narrative format, following a logic of theory construction (Yin, 2003).

RESULTS

The Use of BSC in Diagnosis Mode

Prescriptive literature and also some empirical studies have stated that performance measurement systems, including the BSC, may be used to support the implementation of strategy. According to the proposition of Simons (1995, 2000), strategy is deliberate, previously planned and communicated to the organizational structure, and managers involve themselves periodically on monitoring the strategy execution level.

In Alpha BU, after formulating/revising and describing the strategy, first-line managers communicate strategy to their employees, negotiate and identify objectives and decentralized actions, and the targets. The objectives and the goals are incorporated in the Individual Objectives Contract (IOC). The monitoring of the IOCs is made through formal controls, with periodical report. Besides the formal monitoring of the IOCs, monthly meetings also take place (Executive Board meetings) with the purpose of monitoring strategic directions, and quarterly meetings to monitor BU and headquarters’ IOCs.

This control mode corresponds to diagnosis control mode. This means that the BSC is used by the BU to support the execution of strategy, which has been previously planned and formalized into projects and plans. This results are consistent with former research that analyzed the use of BSC to implement deliberate strategies (e.g., Ahn, 2001; Lipe and Salterio, 2002; Malina and Selto, 2001; Simons, 1995, 2000; Tuomela, 2005; Wijn and Veen-Dirks, 2002).

The Use of BSC in Interactive Mode

The study has shown that from the four strategic control levers indicated by Simons (1995, 2000) it is the interactive mode that prevails in the BU. Evidence has shown that BSC is used, by top management and executive management team, in an interactive mode.

The Interactive Use of BSC in the BU

The methodology of BSC has been adopted by Alpha BU, in 2003, following headquarters directions. However, evidence revealed that the BSC has not been used to impose the BU a strategy that has been previously formulated by the holding company. On the contrary, the methodology has been used, during the process of strategic planning, to allow for the intervention and contribution of executive managers on the revision, definition and change of the BU strategy, and to prevent the impression that the BU strategy is imposed by the holding. Other studies have demonstrated equivalent results (Jazayeri and Scapens, 2008; Ramos and Hidalgo, 2003; Tuomela, 2005).

One of the results of this investigation is that the BSC is used, by top management and executive management team, in an interactive mode. The formulation and revision of
strategy is to be made by the executive management team that, in its first stage, involves a larger population to gather contributions for the process of strategic thinking and, in the second stage, leads the revision and definition of strategy – defining objectives and strategic initiatives, setting goals, resources and milestones, identifying owners and relationships among the several components of strategy as well as validating its coherence. Evidence showed that this is a much participated process, supported by discussion and working meetings, and by clarification, brainstorming and strategic thinking sessions. The structure and consistency of the elements that compose the strategy map helps in the definition, clarification and description of BU strategy and, therefore, contributes to executive team consensus around strategy.

Monitoring of strategic scorecard is equally achieved with strong involvement of executive managers. Monthly, strategic topics are discussed in executive board meetings, and executive managers evaluate the progress of its objectives and strategic initiatives, discuss action plans and strategic assumptions, and propose new adjustments and new actions to correct previous decisions that are not providing expected results. Evidence also reflected that the use of non-financial indicators helps to identify the problems resulting from threats and strategic uncertainty, and facilitates dialogue among managers (see results of Otley, 1999; Simons, 1995, 2000; Tuomela, 2005; Vaivio, 1999, 2004). Board monthly meetings are formal components of control.

As referred previously, the BSC methodology has allowed for a common interpretation of strategy. This is also a facilitator factor of interaction and communication, among managers, in the daily routine. Evidence showed that informal control and strategic dialogue are determinant in the form of use of BSC in the Alpha BU. The interactive use is, many times, supported by conversations and informal discussions that lead to the emergence of new actions or initiatives.

Simons (2000) refers that one of the characteristics of interactive MC is its capacity to generate new initiatives and action plans. In its opinion, managers should systematically question themselves on: what changed, why it changed, what will be done about that change. The interactive use of MC tools implies adjust the strategies or create emerging strategies, in light of what is routinely going on. In the case being studied, the researcher has verified that executive managers use the methodology of BSC to raise, within the organization, the emergence of new action plans or strategic initiatives.

In conclusion, executive managers use the BSC interactively, contributing to the search of new opportunities and detection of threats in a way to adjust existing action plans and/or strategy to new information or realities. Strategy is initially planned keeping room for the incorporation of adjustments or corrections, or even emerging strategies that result from detecting threats or opportunities. Periodically, and according to the annual cycle of strategic management, the strategy is subject to revision. The interactive use of BSC means that BU Alpha managers use this methodology, not only to support the implementation of the planned strategy, but also to raise, within the organization, the detection of threats and opportunities and the emergence of alerts, new ideas, initiatives, and the correction or adjustment of ongoing actions. Results achieved complement research of Tuomela (2005) and Jazayeri and Scapens (2008).

These results counteract the argument of Norreklit (2000), when he defends that BSC cannot be used interactively because it has a mechanical and hierarchical vision. This study suggests that the interactive use does not depend on the technical characteristics of the tools, in itself, but on the way that the tool is used being consistent with results of former studies (e.g., Abernethy and Brownell, 1999; Bisbe and Otley, 2004; Langfield-Smith, 1997; Ramos and Hidalgo, 2003; Tuomela, 2005).
BU Managers Commitment to Strategy

In a first stage, the election of executive managers as team leaders for directions, objectives and strategic initiatives seeks to assure their accountability. They lead teams composed of people from several units across different functional hierarchies. The study of Haas and Kleingeld (1999) showed that one of the consequences of sharing responsibilities, for delivering objectives and goals, is to promote strategic dialogue about performance drivers in a language that is perceptible for all managers. Researchers concluded that strategic dialogue leads the organization to control strategy collectively and interactively, based on, for example, in the process of double cycle learning. For that reason, the strategic dialogue is included within the interactive control mode (Simons, 1995, 2000).

Results of current research are consistent with the study of Haas and Kleingeld (1999). Evidence suggests that the form of use of BSC, in the BU of Alpha, promotes the interaction and strategic dialogue among the managers of the BU. This is because strategy is defined with their intervention; because strategy understanding is clear and consensual; because the objectives, indicators and goals are perceptible and because managers felt accountable for the delivery of strategy.

This research still showed that the interactive use of BSC raises the commitment of managers towards strategic goals, validating the research conclusions of Tuomela (2005) but rejects the idea that the discussion around specific metrics, by providing greater visibility on the actions of managers, creates resistance by these. On the contrary, the current research showed consistent results with those of Papalexandris et al. (2004). The interactive use of BSC promotes the sharing of information on initiatives and an action carried out by each responsibility area and, often, leads to the emergence of transversal teams that assume collective responsibility to implement initiatives, actions or projects.

Involvement of BU managers and Strategic Learning

The study showed that, for the managers of Alpha BU, the notion of coherence among perspectives and objectives is more relevant than cause and effect relationships. For that reason, the strategy map was successively tuned as managers and organization learned and improved their understanding of the underlying concepts and links among the several components of the tool. The objective, indicators and strategic initiatives have emerged, within the BU, as a result of the learning process. The methodology is used, in the phase of strategy revision, to facilitate discussion and interaction among executive managers, promote the launch of new ideas or strategies, and call on the knowledge on the form in which former strategies have been implemented (learning process).

But discussion of themes related with strategy is not limited to the executive board members. Evidence showed that executive managers involve themselves directly in communicating and decentralizing strategic objectives for their functional teams (during the planning phase), and in the follow-up of the execution of the several activities. In the initial stage of the strategic management cycle, the dialogue between managers and their subordinates aims to clarify the strategy and the objectives of the BU, of the responsibility areas and people. In the execution phase, the decentralized objectives and resulting actions are themes discussed recurrently between managers and subordinates, in formal meetings or during daily routine interactions. In this phase, managers seek to validate the assumptions and action plans, evaluate the results that are being generated and identify information to adjust actions or the current strategy. First line managers involve themselves in the activities and decisions of their managers, even those that are in the most elementary lines of their hierarchical report. This permanent interaction facilitates learning among the inter
relationships among objectives, between operational and strategic objectives, between actions and objectives, between initiatives and objectives. This allows validating the coherence between the various components of the BSC, to gather information for feedback, and to help in the formulation/revision of BU strategy.

This research suggest that the methodology of BSC, used in an interactive mode, raises the decision making power of managers and their commitment towards strategic goals, and promotes strategic learning. These results complement the study of Henri (2006) that concludes that performance measurement systems used interactively favor market awareness, managers’ entrepreneurial mindset, innovation and organizational learning. Also Jazayeri and Scapens (2008) concluded that the performance measurement system that they studied raised the decision making power of managers as well as their accountability level.

CONCLUSIONS, LIMITATIONS AND FUTURE RESEARCH

Our research finds that BSC methodology may be used under a diagnosis mode to implement deliberated strategies and, simultaneously, under an interactive mode to promote learning, support strategy revision and provide conditions for new strategies. BSC may still be used to communicate beliefs and boundaries underlying the organization strategic options. This study still showed that the interactive use of MC is not dependent on the features of the technical tools, per se, but on the form in which the tools are used.

The top manager and the executive management team use the BSC on interactive mode, to facilitate the formation of emerging strategies. This is the dominant control lever in the BU. The study has confirmed that the interactive use of BSC supports the formulation / revision of strategy and the formation of emerging strategies. The strategy map has been tuned, over time, as managers and Organization learned and better understood the concepts and links between the several components of the tool. In addition, the methodology can be used to enhance the discussion and interaction between managers, call on the knowledge on the form in which the execution of former strategies have occurred, and promote the launch of new initiatives, action plans, ideas or strategic changes. The permanent interaction boosts the learning on the inter relationships between objectives, between operational and strategic objectives, and between actions/initiatives and objectives. This allows the validation of the coherence between the various components of BSC, gather information for feedback, and help in the formulation / revision of strategy of the organizations.

The current research confirms the results of former research (Ahn, 2001; Moorajet al., 1999; Tuomela, 2005), on the use of BSC to communicate the beliefs and the frontier systems. Evidence have shown that top managers use the BSC to communicate assumed commitment with the stakeholders (the beliefs), through the formalization and communication of mission, strategic challenge, values and critical skills, emphasizing the responsibility that the Organization assumes with their clients, shareholders and employees. Similarly, also the frontiers of strategic action may be communicated through the BSC, through the disclosure of strategic objectives, orientation on the markets and products to develop, and the minimum financial performance to achieve.

This study allowed the systematization of the characteristics associated to the use of the BSC, in one of the control levers (table 3):
Table 3 – Links between the BSC and the four control levers

<table>
<thead>
<tr>
<th>Control for Diagnosis</th>
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<tbody>
<tr>
<td>Managers’ focus on the critical variables for performance (performance drivers), normally, through formal mechanisms</td>
</tr>
<tr>
<td>Periodical report of Individual Objectives Contract (IOC) metrics</td>
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<tr>
<td>Quarterly meetings for IOC reporting in the BU and holding</td>
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<tr>
<td>Monthly meetings to monitor the strategic scorecard</td>
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<tr>
<th>Interactive control</th>
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<tr>
<td>Formal and informal control mechanisms to keep the structure on alert to identify the strategic uncertainties, opportunities and launch new initiatives and action plans</td>
</tr>
<tr>
<td>Strategic recurring dialogue</td>
</tr>
<tr>
<td>Strong involvement of top managers and first-line managers in the discussion and revision / formulation of strategy</td>
</tr>
<tr>
<td>The use of non-financial indicators as a facilitator of the strategic dialogue</td>
</tr>
<tr>
<td>Simple system with a reduced number of metrics</td>
</tr>
<tr>
<td>Strategic themes and decentralized objectives are recurring themes of discussions between superiors and subordinates</td>
</tr>
<tr>
<td>First-line managers involve in the decisions and in the daily activities of its subordinates</td>
</tr>
<tr>
<td>Search for coherence and inter relationships between the several components of the BSC</td>
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<tr>
<th>Beliefs System</th>
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<tbody>
<tr>
<td>Formalization and communications of the mission, strategic challenge, values and critical skills, emphasize the responsibility that the Organization assumes towards its clients, shareholders and employees</td>
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<table>
<thead>
<tr>
<th>Frontier System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guidance on the markets and products to develop, and on the minimum financial performance inform the Organization on the frontiers of strategic action.</td>
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</tbody>
</table>

In light of the fact that the research was supported by a case study, the results that were presented cannot be generalized. Furthermore, and as it was not possible to realize a longitudinal study, the researcher sought to rebuild the historic context and the evolution of the form of use of the BSC, through documental evidence and interviews with some of the actors in the process of adoption of the BSC methodology. So, a retrospective approach was used, asking interviewees to describe and explain former events and current situation.

One of the opportunities for future research is the extension of this research, through a longitudinal study that analyses the evolution and impact of the use of BSC methodology in Alpha BU. It will also be opportune to replicate this study on other organizations, belonging to same industry or not, that adopted and uses the BSC. Future research might “test” and develop the results of this research. These studies should provide new contribution to
characterize the interactive use of management control practices, identify its success factors, and deepen the role of top managers, management control professionals, and operational managers in the interactive use of control systems. One would suggest that future research focuses on the study of the role assumed by management control professionals and consultants in the implementation and in the form of use of management control practices. In the case presented, the management control professionals prevailed and evidence showed that these assumed a determinant role in the successful use of the BSC in the BU.
REFERENCES


