THE EFFECTIVENESS OF BALANCED SCORECARD OVER THE STRATEGY
MANAGEMENT PROCESSES: A CASE STUDY IN A PORTUGUESE INDUSTRIAL
COMPANY

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Abstract

The Balanced Scorecard (BSC) has taken a prominent role as a reference methodology to develop research and as an internationally adopted corporate practice. However, it is difficult to assess the success of the BSC on its impact on the financial performance. Alternatively, this investigation studies the effectiveness of the BSC on the strategy management processes. This study adopts an exploratory and an explanatory qualitative case study approach and focuses on a business unit of industrial Portuguese company, describing a true success case of the adoption and use of the BSC methodology. The results demonstrate that BSC improves the strategy management processes and may be used to implement planned strategies and lead to the emergence of new initiatives and actions. The research identifies critical success factors that determine the effectiveness of BSC on the strategy management processes.

Resumen

El Balanced Scorecard (BSC) ha asumido una posición destacada, ya sea como una metodología de referencia para el desarrollo de la investigación, tanto en términos de las prácticas comerciales adoptadas a nivel internacional. Sin embargo, es difícil evaluar el éxito del BSC por el impacto en el desempeño financiero. Como alternativa, esta investigación analiza la eficacia del BSC en el proceso de gestión de la estrategia. El estudio adopta una metodología cualitativa y el método de estudio de caso, exploratorio y explicativo, y ha sido desarrollado en una unidad de negocio de una empresa industrial portugués. La implementación del BSC en esta UN fue considerada como un caso de éxito en la adopción y el uso del BSC. Los resultados muestran que el BSC mejora los procesos de gestión de la estrategia y que se puede utilizar para aplicar estrategias planificadas y para lograr nuevas iniciativas y acciones. La investigación identifica los factores críticos de éxito que contribuyen a la eficacia del BSC en los procesos de gestión de la estrategia.
1. INTRODUCTION

Actually, the use of non-financial metrics is not new. Already in the decade of 50, General Electric used non-financial indicators with the objective of associating and balance short term and long term objectives (Anthony and Govindarajan, 1998); and in the decade of 30, French companies used the tableau de bord complementing financial indicators with non-financial indicators (Bourguignon et al., 2004).

Along several years, various studies and publications alerted for the insufficiency of financial indicators and the emergence of non-financial indicators (e.g., Eccles, 1991; Johnson and Kaplan, 1987; Kaplan, 1983, 84; Neely, 1999; Simons, 1995). The emergence and use of non-financial indicators had a more prominent role starting the decade of 90 (Ittnerand Larcker, 1998a; Neely et al., 2005). Since then, management consultants and researchers have developed performance management and measurement models that reinforce the relationship between financial and non-financial metrics. These are systems that demand the identification of sustainable performance drivers, which are normally translated in non-financial indicators but are naturally related with the financial performance of organizations.

One of the principles underlying these performance measurement systems is that the improvement of aspects such as quality, customers and employee satisfaction and innovation is not directly translated by classical financial indicators. Some authors argue that non-financial indicators provide a more informed view on the investments and performance in these intangible aspects and therefore are better predictors of future financial performance (Eccles, 1991; Epstein and Manzoni, 1998; Kaplan and Norton, 2006). These intangibles provide a source of sustainable competitive advantage being resources held by the company and not easily copied or mimicked (Marr et al., 2004; Peteraf, 1993).

An additional characteristic of the performance measurement systems is the alignment of performance metrics to strategy. It is assumed that a good performance measurement system translates strategy and communicates it to the organization (Epstein and Manzoni, 1998; Kaplan and Norton, 1992, 96a, 96b, 96c).

The consultancy and research community has proposed, during the last couple of years, some organizational performance measurement models that structure the dimensions of the performance assessment, the organization of the indicators, its connection to strategy or stakeholders, among other aspects. The methodologies of Skandia Navigator, IC-Index Approach, Balanced Scorecard (BSC), Performance Prism, Tableau de Bord all provide examples of this. A significant number of those models highlight the need to manage and monitor the intangible assets and organizational capabilities because these assure the creation of sustainable and long-term competitive advantages. (Marr et al., 2004; Kaplan and Norton, 2004). According with prescriptive literature, all of them, in its role of performance measurement systems, support managers on the follow-up and control of strategy implementation.

The theme of performance measurement has been present in management literature and in research papers. But within the various models, the BSC assumed a leadership position both as a research reference (Marr and Schiuma, 2003; Neely, 2005) and as an internationally adopted corporate practice (Ax e Bjørnenak, 2005; Bourguignon et al., 2004; Ittner and Larcker, 1998a; Malmi, 2001; Rigby, 2001; Speckbacher et al., 2003).

In spite of BSC international proliferation, is not easy to evaluate the effectiveness of success of the BSC implementation by the impact on the financial performance (Papalexandriset al., 2004), even because one cannot assume that the adoption of the BSC automatically improves the financial performance (Braam and Nijssen, 2004). Due to that, the
effectiveness and benefit derived from the implementation of the BSC depend on and should be measured by the effectiveness that the methodology holds on the management processes and on the knowledge of the factors that, in reality, create value for the Organizations (Papalexandris et al., 2004).

According to the importance of BSC on management control practices and the relevance it has taken on corporate management processes, the objective of this study is to analyze the effectiveness of BSC on the processes of strategy management. In light of this objective, the nature of the phenomenon to investigate and the ontological and epistemological assumptions, it was decided to adopt the qualitative and interpretative methodology, and the case study method. 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 (Adams et al., 2006; Berry and Otley, 2004; Berry et al., 2009).

This article is composed of 5 sections. After the introduction, the following section presents the literature revision on the BSC and its relation with the strategy management processes. Section 3 presents the objectives and the study methodological aspects. In Section 4, the results of the field work are analyzed. Finally, section 5 presents the conclusion of this research.

2. THE BALANCED SCORECARD AND THE MANAGEMENT STRATEGY PROCESSES

2.1. The Prescriptive Vision of the Balanced Scorecard

The structure of the BSC is based on the systematization of a set of performance metrics on four different performance perspectives—financial, customer, internal processes, learning and growth. This four perspectives facilitate the balance between short term and long term, between desired results and performance drivers that lead to those results, and between objective indicators (normally of financially nature) and more subjective but quantifiable indicators (Kaplan and Norton, 1996a).

The indicators selected to integrate BSC translate organizational objectives and are therefore consistent with a determined strategy. BSC focus managers because, for a given strategy, it provides visibility on the positioning of the company in each of the perspectives and, for each of them, identifies what measures and indicators are critical for organizational performance.

Some authors argue that BSC overcomes some deficiencies associated with classical performance evaluation systems supported in indicators of financial nature. For example, the BSC recognises the need to satisfy the objective of multiple stakeholders, namely the investors, customers and employees (Ahn, 2001; Brown and McDonnell, 1995) and, because of that, combines financial and non-financial indicators. On the other hand, it responds to Eccles manifesto (1991) where there is a call to the use of financial indicators as a part of a diversified set of performance measures.

As an instrument of strategic management, the BSC promotes the development of four management processes that, in an integrated way, contribute for the alignment between strategic long term objectives and short term actions (Kaplan and Norton, 1996a; 96c). BSC is also understood as a tool of organizational alignment. Corporations, especially large sized companies and economic groups, use the BSC to align several business units and areas of strategy support (Kaplan and Norton, 2006). The effectiveness of methodology in executing strategy depends, on one hand, in the ability to clearly describe the strategy into objectives and measures that are easily perceptible (strategy maps) and, on the other, on the ability of
linking strategy to the management systems (scorecards). The final outcome should result in the effective alignment of all units, processes and organizational systems to corporate strategy (Kaplan and Norton, 2006: 259).

The methodology of BSC entails the description of strategy in a causal diagram that relates the objectives and initiatives among themselves and with the organization or business unit strategy. Kaplan and Norton (2000, 01a, 04) named this diagram as a strategy map. The strategy map describes and shows, using a manager friendly language, the objectives and performance drivers in each of the perspectives of the BSC, and the existing cause effect relationships between objectives and performance drivers. This relations frame the future direction of the organization or the business unit (Kaplan and Norton, 2000). The strategy map shows how the organization will convert initiatives and resources, including intangible assets, into tangible and strategy consistent results. For that reason, they present themselves as tools to communicate strategic objectives, but also of processes and systems that will back the implementation of strategy (Kaplan and Norton, 2000).

2.2. The strategic approach of the BSC

In 1992, Kaplan and Norton presented the BSC as a system of performance measurement with a paramount role on implementing the strategy. Afterwards, they developed it into a strategic management system (Kaplan and Norton, 1996a, 96c, 2000, 2001b, 01c): “Recently we have seen some companies move beyond our early vision for the scorecard to discover its value as the cornerstone of a new strategic management system” (Kaplan and Norton, 1996a: 75). The authors of BSC verified that, after developing the performance measurement system, organizations used the measurement system not only to monitor actions and past performance but also to focus managers’ mindset in the future. The indicators selected for the BSC communicate to all the organization, business units and managers, messages on what is being expected in the future (Kaplan and Norton, 2001a, 01b).

In 1996, Kaplan and Norton (1996a, 96c) argued that the BSC facilitated a good execution of four key management processes: (1) translation of vision and strategy; (2) communicating and align strategy objectives and measures; (3) planning, defining milestones and align strategic initiatives; (4) promote feedback and learning. Together, these four processes contribute to connect the short term actions to long term objectives. Besides the authors of BSC, some other researchers have considered the BSC as a management system, capable of improving the management of strategy processes (Ahn, 2001; Butler et al., 1997; Malmi, 2001; Mooraj et al., 1999).

Translating the Vision and Strategy

The BSC helps to translate and communicate vision and strategy, at all the organization, based on relevant and clear facts. It promotes the consensus across all the organization and calls top management to communicate its vision through meaningful concepts and representations to those that are going to realize the vision (Kaplan and Norton, 1996a, 96c, 2001c). The strategy map is the privileged tool to describe strategy in a way that is clear for all the organization (Kaplan and Norton, 2008b). The case study of Ahn (2001) showed that, in fact, the BSC contributed to clarify and describe strategy, of a business unit, into clear elements that are easily understandable by all people: “A clear strength of the Balanced Scorecard was that of being an easily understood concept” (Ahn, 2001: 457). And the results of the research of Geuser et al. (2009) showed that the BSC helps to traduce strategy at the operational level.
Communicate and Align Strategic Objectives

A properly developed BSC communicates strategy to all the organization and aligns departamental and individual objectives to long term strategic objectives (Kaplan and Norton, 1996a, 96c, 2006). The BSC provides indications on how an organization pursues the objective of the various stakeholders. To do so, and in order to assure the alignment of individual performance to organizational strategy, the construction process of the BSC should grant that it has been properly publicized and its users received the necessary training to use it; that departamental and individual objectives and indicators have been defined and are aligned with strategic objectives; and the reward system was linked to the performance indicators of BSC (Kaplan and Norton, 1996a).

Of the four management processes, supported by the BSC, this will probably be the one that has received larger focus from the research community. A significant part of the BSC research has focused on validating the BSC as a communication and organizational alignment tool. A part of those studies conclude that the BSC helps to communicate and implement strategy (Ahn, 2001; Epstein and Manzoni, 1998; Malina and Selto, 2001; Mooraj et al., 1999; Wijn and Veen-Dirks, 2002), while other studies have shown that the BSC not always is the most adequate tool to support managers of the process of strategy implementation (Butler et al., 1997).

Plan, Define Milestones and Align Initiatives

After defining the strategy and performance drivers are clearly identified, the scorecard focuses managers on the launch of the necessary initiatives in order to achieve the results expected for each perspective. These initiatives result on actions that aim to improve the efficiency or effectiveness of processes that are critical to the success of the strategy. This way, the BSC aligns managerial action to the strategy of the organization. After that step, managers will have to define short term milestones for the indicators of BSC. Milestones are the tangible expression of management judgment on when and how their initiatives will impact the indicators of the BSC. The definition of milestones for the financial and non financial indicators of BSC expands the budget process by incorporating in this process the financial component of strategic objectives (Kaplan and Norton, 1996a).

Notwithstanding, the research on the way to integrate the BSC with other management tools is reduced (Ahn, 2001; Atkinson, 2006; Kaplan and Norton, 2001c; Mooraj et al., 1999; Otley, 1999) and opinions diverge. Kaplan and Norton (1996a, 2001c) defended that a proper elaboration of the BSC compels the integration between the strategic planning and the budget process, being even possible that it comes to replaces the budget process. On the same reasoning of Kaplan and Norton, Ahn (2001) argues that the BSC should replace and not complement other mechanisms of management control, including the budget. On its turn, Otley (2001) argues that the BSC has not completely replaced other control mechanisms, defending even that one of the challenges in this area, will be to evaluate the way that the BSC may be combined with other control mechanisms.

Promote Feedback and Learning

The three processes revealed earlier deal with the implementation of strategy but do not respond to the threats and opportunities which are permanently placed to the company by the external environment (Kaplan and Norton, 1996a). The fourth process—feedback and learning—promotes the development of a learning cycle that produces changes in the
assumptions and theories that frame the cause and effect relationships. This process is called by management literature as *double loop learning* (Kaplan and Norton, 1996a; WijnandVeen-Dirks, 2002).

The BSC facilitates strategic learning on the organization and its environment (Kaplan and Norton, 2001a). According with the authors (Kaplan and Norton, 1996a), BSC entails three core elements to strategic learning:

- BSC clarifies, through the strategy map, the vision and organization strategy and articulates the operational actions with strategic objectives, through cause and effect relationships that build the strategic hypothesis;

- BSC provides strategic feedback as it gives structured and comprehensive information that allow for testing, validation and revision of the strategic hypothesis underlying the strategy map. The definition of milestones for long term objectives, integrated in the planning process, allow the managers to follow the realization level of the various objectives and the relationships between the changes registered on the performance drivers and the changes verified on the desired results;

- BSC facilitates the process of strategic revision, given that the causal model among performance drivers and objectives allow managers to periodically evaluate the validity of the strategic hypothesis and the quality of its execution.

In the work of 1999, Moorajet al.refer that the BSC contains elements of the form of use of interactive management control (Simons, 2000). According with the authors, the BSC contributes to the organizational learning because it provides managers with the possibility of testing and reviewing its strategic hypothesis described in the causal model. On its turn, Wijn and Veen-Dirks (2002), supported in the work of Norreklit (2000), argued that the BSC cannot be used for strategic control given that it is not capable of producing adequate feedback on the way that the strategy is being executed.

### 3. RESEARCH METHODOLOGY AND DESIGN

This investigation adopts an explanatory and an exploratory qualitative case study method to analyze the effectiveness of BSC over the strategy management 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 (Adams *et al.*, 2006; 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 Business Unit (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 BU 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).

For data collection, researchers used semi-structured interviews, direct observation and document collection. Data collection was made during a 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 (Horton et al., 2004; Mason, 2002; Patton, 1987). Questions were designed in accordance to key theoretical constructs (Patton, 1987; Silverman, 2005; 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.

After each interview, the researchers 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; of Scapens, 2004, on this process). As soon as possible, the researchers transcribed the interviews where additional notes were registered (following the recommendations of Miles and Huberman, 1994; Moll et al., 2006; Scapens, 2004; Yin, 2003) and indexed some expressions and behaviours such as pauses, interruptions, tone, emphasis, concordance, discordance among others (see Mason, 2002). 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 researchers have not been authorized to audio record, exhaustive annotations were taken.

Even since the pilot study was started, the researchers have compiled some information on the group, on the business unit, the industry and corporate environment, through internet research and in several websites. Newspaper and magazine information was also retrieved namely in what concerns the group structure, its evolution and growth. This information provided the researcher with some previous knowledge on the group and BU structure, products, markets and activities as a way to support the elaboration of interview scripts and facilitate the communication between the researchers and the interviews (following the recommendations of Patton, 1987). The empirical study led to the collection of countless documents namely: management reports (financial and non-financial), annual reports, BSC reports, organizational charts, documents resulting from the annual strategy map, objectives, performance metrics and respective milestones, documents and power point files with internal and external presentations to communicate the strategy map, the BSC and other. These elements helped to prepare the subsequent interviews and assure triangulation between the data collected from different sources. The researchers took advantage of the visits to the BU to observe some of the management control practices in the BU namely in what concerns the use of the BSC methodology. The researchers made numerous visits to the facilities and industrial operations and witnessed several sessions and internal meetings in which the strategic management process was discussed namely the communication and objectives decentralization and strategic initiatives.

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 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. The results were registered in a report, in narrative format, following a logic of theory construction (Yin, 2003).

4. RESULTS

This section presents the results obtained on the effectiveness of the BSC, relatively to each of the strategy management processes.

Effectiveness of the BSC on the Description of Strategy

For Kaplan and Norton, (1996a, 96c), the strategy map represents the organization strategy in a precise way, through concepts and representations that are meaningful to those that are going to implement strategy, and that representations translate the consensus view of the company top management. This research showed that the BSC improves the strategic planning process, in the sense that:

a) The strategy map clarifies and describes the vision and strategy of the BU

In the initial stage of the strategic planning cycle, the methodology of the BSC, more specifically the strategy maps, helps business unit executive managers to structure their strategic thinking and translate strategy. The structure and conception process of the strategy map help in the phase of discussing the strategy because it provides visibility and quantification to the vision of the business unit and the way it will compete in the marketplace. Besides that, the structure of the strategy map based on strategic guidelines presents advantages to the BU. Strategic guidelines allow the BU to define its competitive strategy on three foundations of strategy with a medium to long term time frame. The strategy foundations may be translated into objectives with short term impact and these might be adapted, changed or updated resulting from the progress of strategy execution and threats and opportunities posed by the marketplace.

The ultimate objective of the BU has been expressed, in the strategy map, in terms of value created for the shareholders and as the main guideline for the definition of strategy and the conception of the strategy map. On other words, in Alpha BU, BSC has not been used to promote the objective of the several stakeholder groups the same way, as it has been sometimes suggested by the literature (see for example, Otley, 1999). This does not mean that the BU has ignored the interest of the other stakeholders, besides the shareholder. On the contrary: the perspective of infra-structure (denomination used by the BU to the learning and growth perspective) has reinforced the importance of the employee group for the Organization performance; moreover, the perspective of processes has been used to reinforce the need to better serve the markets and clients. However, the role of the employees and the clients is to create value for the shareholder. Evidence showed that this vision and underlying strategies are clear for the BU management team.

b) The strategy map promotes consensus around strategy

At the level of the Executive Board, the findings showed that there is a common understanding on the strategy for the BU. The management team consensus around strategy essentially depends on the way that the process of discussing strategy and building the strategy map is developed, and not exclusively on the technical characteristics derived from
the BSC methodology. The consensus levers around strategy among the management team members have been identified as:

- Coherence, consistence and integration of the various concepts used during the discussion of strategy;
- Clarity and capacity of materializing concepts;
- Involvement and participation of chief executive and executive directors in the discussion and revision of strategy;
- Synthesis effort during the conception phase of the strategy map, especially in what concerns the quantity of objectives and initiatives defined.

The Effectiveness of the BSC on the Communication of Strategy and BU Alignment

On the effectiveness of the use of BSC methodology in the communication of strategy this research showed that:

a) The strategy map communicates strategy to the organization

Obtaining consistent results with the study of Ahn (2001), evidence showed that the logical structure of the strategy map and the link it establishes between actions and strategic objectives allow managers, beyond first line structures, to understand the BU objectives and recognize its contribution for the execution of strategy. Managers define the actions and organize its resources and activities in order to achieve its objectives. They believe that, by meeting their objectives, they contribute for the strategy of the BU and, consequently, to improve organization performance. This outcome confirms the conclusions of other studies that showed that BSC methodology supports the implementation of strategy (e.g., Ahn, 2001; Lipe and Salterio, 2002; MalinaandSelto, 2001; WijnandVeen-Dirks, 2002).

The study showed also that, within the scope of BSC methodology, this is perhaps the most visible process inside the BU.

b) The effectiveness of communication is differenced, between responsibility areas, hierarquical levels and people

Notwithstanding the importance granted to the alignment component and the effort made to reinforce the communication of organization strategy, this researched showed that knowledge and sharing of strategy differ:

- Evidence show that employees which are involved in the performance management system have superior knowledge of the BU strategy and a more global vision of the contribution of each responsibility area for the strategic challenge;
- The responsibility areas more directly involved in the business have greater knowledge of the strategy map and its content;
- The administrative areas and the employees that are not integrated in the performance management system have limited knowledge of the BU strategy and are mainly focused on the local objectives or guidelines.

The Effectiveness of BSC on the Alignment of Responsibility Areas and People

This is possibly the phase of strategy management cycle for which research has provided less contribution. In fact, research on the form and effectiveness of how objectives and initiatives are unfolded to the operational levels is scarce (Ahn, 2001; DecoeneandBruggeman, 2006).
This research showed that, in Alpha BU, the decentralization processes starts right in the initial planning phase with the identification of responsibility areas that will be involved in the execution of initiatives and strategic objectives. It will then be the responsibility of a first line director, to involve its teams, in the process of operational planning, unfold objectives and global initiatives into objectives, activities or priority actions. About the use of BSC methodology in the alignment of responsibility areas and people, this research showed that:

a) **Managers believe that BSC align and focus the operational areas**

Evidence showed that the perception of managers, in each one of the structure decision lines, is that the objective unfolding process assures the alignment and focus along the organizational structure. The assumption is that the objective and actions identified for the individual level are aligned and impact the strategic objectives.

b) **The employees know and understand its objectives**

The strategy decentralization process is the responsibility of first-line managers. This process develops differently in each one of the functional areas, depending on the nature of the functions and on its larger or lesser proximity with the strategic objectives, the nature of objectives, the dimension of the teams and the leadership profiles. However, independently of the form how the process materializes, evidence showed that, by majority, decentralized managers know and understand their objectives, even if they are not integrated in the performance management system.

c) **The insatisfaction of managers, in relation with performance management system, may jeopardize the effectiveness of the BSC on the alignment of the individuals**

Until recently, the performance management system assumed that if the BU did not achieve a minimum global performance threshold that would imply that the employees would not receive a bonus even if they had accomplished their individual objectives. Evidence showed that this policy caused some insatisfaction on the managers whose performance was assessed jeopardizing the effectiveness of the BSC methodology in the alignment of the organizational structure.

**The Effectiveness of BSC on Monitoring, Learning and Feedback for the Strategy Revision**

Management literature suggests that BSC methodology facilitates strategic learning on the organization and its environment (Kaplan and Norton, 2001a, 08a, 08b; Oliver et al., 1999). It still argues that the double cycle learning supports the evolution or revision of the strategy, or even the emergence of new strategies. On the effectiveness of use of the BSC methodology on monitoring, strategic learning and feedback for the purpose of strategy revision the case study showed the following:

a) **Difficult access to the information troubles the monitoring process, especially of decentralized objectives**

One of the shortcomings associated to the use of BSC, in the BU, results from the difficulty of managers to monitor the progress of their own objectives. The BU does not have a specific information system focused on reporting the information that results from the strategic
scorecard or the individual objectives. The monitoring of indicators is dependent on a structure area that, within specific time frames gathers information, determines the value of the several indicators and discloses the information.

Especially, the second line of structure, with larger dependency on management control information showed some disappointment with the late disclosure of information or even its non-disclosure. The evidence suggests that this shortcoming may place the effectiveness of the methodology of BSC at risk, in special in what concerns: managers accountability; alignment and focus effort through time; to learning and the adoption of corrective action.

b) Managers use formal and informal mechanisms to monitor and learn

Executive managers are regularly involved in the discussion of BU strategy and, parallely, are called to inform on the progress of its objectives and the strategic initiatives in which they participate. Research has shown that, in fact, first-line managers evaluate and discuss, regularly, strategic themes and are knowledgeable of the level of execution of the strategy of the BU. At this level of the structure, information flows more or less regularly, and monitoring, discussion and corrective action, on the strategy map and strategic scorecard, are formally made at the Executive Board meetings.

Research also exposed that the remaining levels of management have less proximity of information generated to monitor the scorecard and its strategic guidelines, and little involvement in the discussion of the strategic themes. For that reason, first line managers use less formal resources for:

- Define the objective of its subordinates;
- Transmit to its subordinates, regular information on the progress of strategic objectives;
- Monitor the progress of the objectives of its subordinates;
- Promote the discussion with its team work and lead to the emergence of corrective measures;
- Keep alerts to identify new opportunities;
- Intervene and participate in the decision of its subordinates;
- Keep the alignment and focus throughout time.

This study showed that the use of BSC in the BU incorporates formal and informal aspects, in special, in the definition and monitoring of objectives of decentralized teams (see results of Collier study, 2005).

c) Managers recognize coherence among the perspectives and among strategic objectives, but not necessarily cause-and-effect relationships

Kaplan and Norton (1996c) assume that there are cause-and-effect relationships among the strategic objectives. For the authors, this is a crucial assumption given that it allows the monitoring of non-financial objectives to be used to predict future financial performance. In the BU, managers recognize that there are interrelationships and expected impact among the various components of the BSC, but not linear or direct relationships of cause-and-effect (vide criticism to BSC by, Ittner and Larcker, 1998b, 2005; Norreklit, 2000, 03; Norreklit and Mitchell, 2007). Managers still refer that there is other factors, namely, exogenous ones, that may, in the past, have impacted the BU financial results but that does not undermines the consistency of the components of the strategy map or the strategic hypothesis assumed in the phase of revision and define strategy.
The results obtained show consistency with the empirical study of Jazayeri and Scapens (2008). The BU managers understand that there are interrelationships among the strategic objectives (and the respective indicators); between the objective and the strategic guidelines; and between the four perspectives of performance. But they recognize that these interrelationships are not necessarily relations of cause-and-effect. Besides that fact, they recognize that there might exist a temporal gap between an action and the expected effect derived from that action. This means that there must exist coherence among the objectives, in each perspective, between objectives and guidelines, and among the various perspectives. This coherence is paramount to assure the integration and consistency of the various components of the BSC. For the managers of the BU, the notion of coherence is more relevant than the relations of cause-and-effect. Evidence showed that, since its adoption, managers have reinforced the notion of coherence, as they learned the way that objectives (and indicators), the guidelines and the perspectives relate among themselves.

Besides that, evidence showed that, even when expected relations between the indicators that are part of the strategic scorecard do not take place, the logical relationships between objectives, guidelines and perspectives motivate the dialogue and support the process (formal and informal) of monitoring of strategy.

da) **The feedback for strategy revision results from the knowledge and interpretation of the way the execution of former strategies and coherence validation among objectives, initiatives, guidelines and perspectives took place**

The group holding triggers annually the process of strategy revision of each one of its BUs, providing indicating the challenge and strategic guidelines for a 3-year time frame. Nowadays, strategic planning is more focused on adapting or revising former strategy, than actually formulate a new strategy. Evidence gathered from the executive managers showed that the strategy revision process is a peaceful process: the guidelines tend to be maintained and so the macro objectives; what ends up by being revised are the initiatives, milestones (of objectives and initiatives) and priority actions. Annual revision (with a 3-year vision) gradually introduces progressive and continued adaptations, which naturally leads to non-radical changes.

Evidence shows that there is no clear separation between the revision and description of strategy. The process of strategy revision, discussion and underlying reflexion takes place on the framework of the strategy map which leads to a very close relation between the revision of strategy and the strategy map. This suggests that the methodology of BSC helps not only to structure strategic thinking and to translate strategy but also to revise former strategies. This means that the methodology of the BSC and, in special, the coherence and underlying logic to the relations (or inter relations) between the various components of the strategy map promote the strategic learning and facilitate the strategy revision.

Synthetically, results suggest that the methodology of BSC facilitates strategic learning of the organization; and the feedback for strategy revision results from the knowledge and interpretation of the way the execution of former strategies and the coherence validation between objectives, initiatives, guidelines and perspectives. This results are consistent with the study of Mooraj et al. (1999) that concluded that the BSC methodology contributes for organizational learning because it provides managers with the possibility of testing and reviewing its strategic hypothesis described by the causal model (in the present study, causal relations are not studied but coherence).
Table 1 presents the main aspects related to effectiveness level of the use of BSC in the Alpha BU, in each of the strategy management processes. The critical factors determining the effectiveness of the use of the BSC are also systematized.
<table>
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<tr>
<th>Strategy Management Processes</th>
<th>Level of BSC effectiveness of use</th>
<th>Critical Factors</th>
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| **Strategy Description**      | • The strategy map clarifies and describes the vision and strategy, into tangible elements and easily understood by the management teams;  
• Strategy maps promotes consensus, on strategy with executive management team. | • Experience/maturity of executive management team on using the methodology;  
• Integrating objectives and initiatives in reduced number;  
• Clear and objective concepts; simple language;  
• Coherence of concepts and component of strategy map;  
• Involvement of top management and senior executive management;  
• Discussed and consensed strategy;  
• Strategy Office as a facilitator. |
| **Communication of Strategy and BU Alignment** | • The strategy map has a crucial role on communicating strategic objectives and, therefore, in the organizational alignment;  
• The effectiveness of communication is differenced, among responsibility areas, hierarchical levels and people. | • Involvement of top management in communication and alignment (alignment sessions);  
• Strategy Office as a catalyst;  
• Simplicity of language and concept present in the strategy map;  
• Population included in the PMS. |
| **Alignment of Responsibility Areas and People** | • Bu managers believe that the BSC methodology assures the alignment and focus of people, and due to that helps to implement BU strategy;  
• Employees know and understand their objectives;  
• Insatisfaction of managers concerning the PMS, may jeopardize the effectiveness of BSC on the alignment of individuals. | • Top manager involvement and sponsoring;  
• Ability of executive managers to communicate and decentralize objectives at the operational level; involvement level of operational teams in the identification of objectives and operational actions;  
• Population included in the PMS;  
• Satisfaction / insatisfaction relatively to the PMS. |
| **In Monitoring, Learning and feedback for Strategy Revision** | • Difficulties on accessing the information troubles the monitoring process, in special, the decentralized objectives;  
• Managers use formal and informal mechanisms to monitor and learn;  
• Managers recognize coherence between the perspectives and the strategic objectives but not necessarily relationships of case-and-effect;  
• Feedback for strategy revision results from the knowledge and interpretation of the way former strategies have been executed and the validation of the coherence level between objectives, initiatives, guidelines and perspectives. | • Easy access to information;  
• Involvement of executive managers in the monitoring of results of its responsibility areas together with its teams;  
• Use of informal mechanisms to strategic control;  
• Management control role as facilitator;  
• Understanding of the coherence and inter relations between the various components of the BSC;  
• Willingness for the strategic dialogue, use of non-financial indicators;  
• Simple and reliable monitoring system. |

Source: Researchers from compiled evidence
The objective of this research was to analyze the effectiveness of BSC over the strategy management processes, in a Portuguese BU of an industrial company. Results showed that, in BU Alpha, the BSC improves the execution of strategy management processes, particularly, in what concerns the clarification and strategy description, the communication of strategy to the BU, organizational alignment, monitoring of objectives and strategic learning.

The effective use of BSC, by the BU Alpha, showed that the BSC is used to implement planned strategy (described in the strategy map and translated into objectives along the structure), but also to support the revision and change of strategy and promote the formation of emergent strategies. Managers use the components of the BSC (and the interrelations among components) and the knowledge on the way the execution of former strategies took place (strategic learning effect) to promote the strategic dialogue and interaction. Information gathered and knowledge accumulated support the process of formulation / revision of future strategies and the formation of emerging strategies.

The key contribution of this research is the recognition that the implementation of the BSC, on its own, does not assure the success of the use of the methodology. The benefits over the financial performance are not automatic and are difficult to measure. The practitioners of the BSC should be aware that the methodology may result on benefits for the Organization, depending on the way the BSC is implemented and on the way it is used during the time. This research has identified a set of factors that may determine the success on the use of the BSC.

There were some limitations in the development of this research. Research has been supported by the case study research methodology with the researcher choosing a unique case study. This option prevented the comparison of results with other studies that may have been realized in the companies of the same industry or different industries. Consequently, the results presented cannot be generalized (Ryan et al., 2002; Yin, 2003), opening room for the need to replicate the study on other organizations that use management control practices.

These limitations also suggest some opportunities for additional research. Further similar studies can be conducted in order to replicate the findings of this and other studies. Because there is still some gaps between the reward system and the BSC, the realization of more detailed studies on this subject is recommended. This studies should be supported on psychology, namely in the aspect related with the motivation of the individuals. At last, it is suggested the realization of studies on the form by which each one of the hierarchical levels percept and use the methodology of BSC.
6. REFERENCES


