JOURNAL OF APPLIED SCIENCES RESEARCH

ISSN: 1819-544X EISSN: 1816-157X

JOURNAL home page: http://www.aensiweb.com/JASR 2015 July; 11(12): pages 17-30.

Published Online 30 July 2015. **Research Article**

The Influence of Strategic Control Systems on Organizational Performance by the Resource Based View Perspective: A Metallurgist Case Study

[1]Clarissa Figueredo Rocha, [2]Maria Alexandra Viegas Cortez da Cunha, [1]Luiz Carlos Duclós, [1]Claudimar Pereira da Veiga, [1]Ney Augusto Furtado Neves

[1]Department of Business School, PPAD, Pontifical University of Paraná - PUCPR, Brazil.
[2]Business School, EAESP, Fundação Getúlio Vargas, FVG - São Paulo, Brazil.

Received: 12 May 2015; **Accepted:** 18 July 2015

ABSTRACT

The aim of this study is to examine, through the Resource Based View - RBV, the relationship between the use of Management Control Systems – MCS, and organizational performance through organizational learning, of which would have a mediating role in this relationship. The study focuses on the use of diagnostic and interactive controls as aspects of the MCS and their relation with learning. The dimention use of MCS was defined by Simons (1994) whose work is related to strategic controls and how these can be inserted within the strategic process cycle. A study was configured in a Brazilian multinational metallurgical subsidiary. The period of the research execution was throughout the year of 2013. The study focused on the analysis of two critical processes that are crucial to the company's competitiveness. It was a documentary type research, whose primary data were the application of semi-structured interviews with the top managers of this subsidiary. The evidence suggests that the positive influence of the dynamic tension resulting from the balancing between the uses of MCS in learning and in performance makes this subsidiary maintains its competitive advantages. As differential contributions of this study: the theoretical and empirical model developed has been tested and validated in the reality of this company; the interactive use, with a connection to the diagnostic use, fosters the development of learning enabling organizational focus on strategic priorities, stimulating discussions, critical analysis and improvements in critical processes.

Keywords: Diagnostic and interactive control; Organizational learning; organizational performance;

INTRODUCTION

In a current organizational environment permeated by fast-changing technology, customers and competitors, the organizations need to continuously renew to survive and thrive. The current situation shows the need for companies to adopt new philosophies, techniques and processes that allow them for a greater effort to obtain flexibility, adaptation and necessary adjustments to cope with the demands of the companies' market segment [7].

The notion of control has opposite characteristics to the idea of organizational learning. However, the combination of these disparate concepts is often necessary [6,11]. The sustaining of the competitive advantage requires organizations to adapt and even to innovate in order to create new products, services and processes. To succeed, companies need to promote evolutionary improvements, detaching from traditional models, leaping towards models that bring improvements through changes to the business and differentiating it from competitors [18]. Whoever continues in an old and "plastered" model, probably will not have endurance breath to act in a market with a completely different model from the traditional one [21].

Corresponding Author: Clarissa Figueredo Rocha, Department of Business School, PPAD,Pontifical University of Paraná - PUCPR, Brazil.
Tel: +55-4132711476, E-mail: kaclaia@gmail.com

The Organizational Learning is recognized as one of the major capabilities to achieve competitive advantage. The RBV of a firm concerning the source to obtain competitive advantages, has become an influential framework [4]. There is scenario setting that forces companies to suit a new reality permeated by constant changes [11,8]. The management of organizations becomes characterized by an environment of complex activities, subject to risks and various types of environmental uncertainty of which the company must identify and monitor [29]. In organizational control, the quantification of resources, the direction of efforts and the continuous adjustment of the strategic management cycle are alternatives that help to make an assertive decision [1,30,23,11].

Despite considerable interest in the relationship between MCS and strategy, the literature of the MCS has devoted little attention to the RBV [16,33,29,30]. This study seeks to expand the research concerning the influence of MCS in the strategy, under the application of the RBV. Some studies have reported the strategy for a level of capacity in terms of innovation, organizational learning, market orientation and entrepreneurship [10,16,5,30]. In these concepts, the strategy is considered to be influenced by the MCS, considering it within a process perspective and its scope is expanded to the notion of incremental strategy. The MCS follow a procedural and dynamic approach and the focus becomes strategic dialogues and interactions issues [11,15].

Following the logic of RBV, the link between strategy and MCS can occur at a level of management capabilities. RBV is based on the principle that competitiveness is a function of force, exploitation of specialties and leveraging of specific sources and capabilities controlled by a company, so that such company creates sustainable competitive advantage [4]. In this perspective, the MCS should be aligned with the skills to be effective and consistent with the strategic choices [16].

Companies need to be able to "reinvent" their strategy not only once a decade, but continuously and cyclically [18]. As new information arises, managers need to "reset" the business strategy. With an intense and fierce competition revolving around the ability of the companies present to develop themselves in terms of adapting to new technologies in products and processes, the understanding of the dynamic adaptation is essential and it is strategic to the survival and the success of the companies.

In this context, this article analyzes the MCS as key determinants that instigate the process of strategic incremental change through the capacity building, more specifically through organizational learning. From improvements in learning, the organization can achieve improvements in performance [16]. The dealings of strategic controls rescue the importance of this theme.

This paper has Simons' [27] work as the main theoretical motivation. For the author, the MCS inform the need to initiate a possible process of strategic change, giving support and clarification for the change, adjusting and resizing the strategy. Following the author's work, several studies have examined the active role of MCS in the execution process and in the (re) formulation strategy process [5,33]. The controls, for Simons [27], are used by top managers not only to traditionally formalize beliefs and establish limitations on what are acceptable strategic behaviors, but also how to define and measure critical performance variables and motivate debates and discussions on strategic uncertainties.

2. Objectives:

This paper investigates how the controls can play a more proactive, multi-functional and interactive role. When dealing with MCS, strategic management is emphasized as a continuous and virtuous process. Built by the framework developed by Simons [27] to examine the MCS in a strategic context, this study explores the controls as determinant for the performance through the mediation of organizational development learning in critical processes.

The study examines, from the perceptions of top managers of a Brazilian metallurgical multinational, how the use of MCS can act as a precedent for the development of organizational capabilities such as learning, which leads to reach the desired performance. The study aims to verify the existence and qualify the relationships between the use of MCS and learning, as an organizational competence, and understand how this relationship influences the performance. This study emphasizes the traditional roles of feedbacks promoted by MCS to support in the execution of the strategy - diagnostic use. This paper also emphasizes the active role of MCS associated with the signals sent to the entire firm focused on stimulating dialogue and supporting the emergency of new strategies - interactive use. Collectively, the power of these control uses is based on the tension generated by its balanced use which reflects the notion of complementarity and competition [16]. The issues raised in this study concern the following issues: (i) to what extent the diagnosis and interactive use of MCS act in combination to create and maintain learning? (ii) to what extent the use of MCS influence on organizational performance through development of learning in a metallurgical multinational in Araucaria - PR? A theoretical and empirical model was developed, tested and evaluated in this multinational.

The remainder of this study will address the following sessions: (i) the next section will review previous research and literature concerning the RBV

and its relation to the dimension use of the MCS and performance; (ii) section three describes the methodological detailing to be used in this study; (iii) section four presents the main findings and interpretations of the current reality of the metallurgical multinational company. This section also aims to verify to what extent and how the proposed model developed suits the reality of the case under review; (iv) the section five features, in a generalized way, the principal evidences found that validated the developed model and presents the main contributions extracted from the research.

3. Literature Review:

The dynamic and interactive control systems are embedded in a process of organizational learning that can encourage the emergence of both emerging strategies and incremental strategies. This research focuses on analyzing and gaining, in this section, a better understanding, from the exposure of thoughts of many researchers on the problem of how MCS can help not only on the strategic execution, translating it, but also assisting the process of strategic renewal. This process can result in improved performance through the capacity building, exemplified by the organizational learning.

3.1 The Resource-Based View and Organizational Capabilities:

The main idea of RBV [32,14,25] is that the source of sustainable competitive advantage [24] is primarily found in the resources and capabilities of the company and only secondarily in the structure of industries [30]. In some situations, the sustainability of competitive advantage is achieved by the "complexity" of the resource, that is, by incorporating the resource within a complex corporate network [24] or by the collection and mechanisms of information processing that allow the incorporation of knowledge assets [13]. The sustainability of competitive advantage is also achieved through the development of unique and strategic capabilities. Resources are defined as all assets, capabilities, information, knowledge and processes that help the organization to increase its effectiveness and efficiency. Resources can be classified as physical, financial, human or organizational. Resources that are valuable, rare, non-imitable and non-substitutable lead to the achievement of sustainable competitive advantages that cannot be easily replicated by competitors [4].

Capabilities are defined as organizational processes where firms synthesize and acquire knowledge resources and generate new applications from these resources. Internal learning through knowledge by training, and external learning, acquired through market orientation, are recognized as the major capabilities to achieve advantages and create changes within the organization [17]. Each of these two learning is appropriate to provide forces, however this is not enough to develop sustainable advantages. Only when in collectively way, along with other capabilities, they can help the firm to be competitive [4]. Although there are others capabilities, this paper is restricted to internal and external learning [17], in order to analyze organizational capabilities. The competences used to perform activities are important for the survival and growth of the company.

Organizational learning refers to the development of insights, knowledge and associations with past effective actions that can guide future actions. Learning is seen as an important enabler for competitive advantage by improving information processing activities of a company that is faster than its competitors [16]. This learning can be understood as the ability of an organization to monitor changes in its environments and adjust its processes, goods and services to capitalize based on these changes [27].

3.2 The MCS and their Influences on Strategy Management Process:

Management accounting has evolved from a prescriptive and technical approach to empirically relate constructs with accounting fields from elsewhere in an attempt to understand how organizations obtain performance [30,8,22]. There is a growing need to study if each company's way of using the MCS could help explain the achievement of the desired performance [15]. The literature on management states the contribution and the need for control mechanisms. This statement has its main premise the following sentence: what is not measured nor evaluated, cannot be judged nor managed [18]. If we cannot measure the performance of a process, for example, we cannot evaluate it and we cannot give an opinion on this process. The measurement mentioned is a direct inference to the controls. The control framework provides conditions to make information available. This provision will enable the development of the management process [30,9].

The work of Simons [27] emphasizes the controls on procedures and how these can generate results. This study focused on answering the following question: how do managers use MCS to develop and execute new business strategies in order to promote organizational change? In order to answer this question, the author suggests that the controls can not only be used to support the execution of the strategy, but also for its renewal. Controls are defined as formalized procedure systems that use information systems to maintain or alter patterns in organizational activity. MCS can inform the need to initiate a possible process of strategic change, adjusting and resizing the strategy [27].

The MCS are operationalized through four systems that complement each other, they are: belief

system - core values, boundary system - risks to be avoided, diagnostic system - critical performance variables, and interactive system - strategic uncertainties. Together these systems would bring formal ways to frame the controls carried out and highlighted in organizations [15]. This classification of these MCS extends its concept which is replaced by a more proactive, dynamic and strategic function. To understand the theme of this paper, it is focused on the analysis of the diagnostic and interactive use of MCS approached by Simons [27], since it is from the intertwining of these uses that the strategic resizing process can be generated. Although these two MCS have been slightly studied in Brazil, internationally there are several empirical studies [5,33,22,16] on these constructs, supporting the theoretical model developed by Simons [27].

3.2.1. Diagnostic Use of the Controls:

The diagnostic control system is used by managers to: (i) communicate and review the critical variables of performance; (ii) measure and monitor organizational results and (iii) correct possible performance deviations from standards that have been previously established by management [27]. This control system has the function to restrict the behavior of employees and communicate, translate and monitor the execution of the intended strategy, motivating employees to improve their performance. The role of this control is to analyze the performance variations, to evaluate if the objectives are being achieved according to the planned strategy and provide feedbacks to improve performance [9].

3.2.2. Interactive Use of the Controls:

Managers seek to check for significant changes that signal the need to reconfigure and readjust organizational structures, capabilities, technologies and business processes. The interactive use serves to: (i) discuss strategic uncertainties; (ii) expand the search for opportunities and (iii) learn from the results obtained in a changing environment [27]. This use is for adjusting and updating the strategy and drive the competitiveness of the organization in its environment [9].

From the diagnostic use along with the interactive use, it is managed the tension between the creative innovation and the achievement of the predictable objective. This is the essence of strategy management control. The interactive system instrumentalizes managers to a more efficient decision-making process and tailored to the strategic uncertainties that are unforeseen external events [9,29,23]. These uncertainties are contingencies that threaten the business or invalidate the assumptions of the current strategy. The analysis of these uncertainties can help develop new ideas and stimulate strategic dialogues.

For all these facts, this system allows the appearance of emergent strategies (Simons, 1994). This becomes the basis for managers to adapt more quickly to environmental changes, thinking of new strategies [1]. The interactive debate, which takes place from the results of performance measurement can reformulate the strategy inducing the organizational change [11,12].

Interactive controls exist to question whether the current strategies are still relevant. Simons [27] reinforces the characteristic of interactive feedback when he says that many of the successful strategies do not have their origin in formal plans, but in experiments being that many approaches already put into action may fail. Some of these initiatives operate in unexpected ways and contribute to the generation of ideas, learning about processes and about strategic positioning changes [28]. One of the main objectives of managers regarding the application of MCS is to balance the existent tension between, on one hand, the sense of initiative, creativity and learning and, on the other hand, the discipline and monitoring. The diagnostic use acts in "restrictive" character, since it represents mechanisms to track, review and support the achievement of foreseeable goals [16]. The interactive use acts as a stimulant, supporting the emergency of the communication processes [16,29].

Dynamic tensions are the organizational dilemmas present in the organization, representing organizational "conflicting" objectives, but that the organization aims certain balance between these objectives, such as: (i) the pursuit for long-term objectives without losing focus on short-term goals; (ii) the rational control of costs, but without hindering innovation process; (iii) an environment that encourages cooperation among organizational members, however, while stimulating competition for achieving the results; (iv) control *versus* flexibility and internal focus *versus* market focus [29,30].

3.3 The Influence of the Controls on Organizational Learning:

The learning process enables companies to acquire, interpret, disseminate and store information and the results of the organizational experience [18]. These experiences can be obtained from the informational feedbacks generated by the controls targeting continuous improvement. For Ruas *et al.* [34], learning is conceptualized as the ability to, continually, learn and acquire new knowledge to improve performance. In a changing environment, the ability to learn becomes the main source of competitive advantage of a company.

In order to keep the focus on the theme of this paper, it is necessary to relate the MCS to learning opportunities, in a more differentiated way, in each control element proposed by Simons [27]. The concepts of Exploration & Exploitation were

originated with the study of March [20] on organizational learning. For the author, the learning occurs by exploration of the current knowledge and skills, by refining existing processes and technologies, seeking efficiency, lower costs and better results in the short term - Exploitation. A second form of learning is through research, experimentation, in pursuit of innovation, creating more risks for the business, but allowing the business to increase its flexibility, seeking alternative for medium and long term - Exploration.

The Exploration and Exploitation concepts have been used to analyze the technological innovation constructs, learning and adaptation, competitive advantage and organizational survival. The balance between the use of Exploration and Exploitation in the organizational process is essential for the survival and prosperity of firms [20]. For the continuity of a business, there is a need to seek alternative organizational processes (Exploration) on forms, routines and procedures, especially in environments where rapid changes occur [20]. For Penrose [24] the new knowledge obtained by Exploration type of learning are essential to the continued growth of organizations. The empirical findings of Simons [27] it was shown that the organizational control shows influence on learning [29,22,28].

The diagnostic use privileges learning which typology is characterized by the presence of refinement, efficiency and execution, where the mistakes are corrected without the occurrence of the modification in processes and objectives. This learning is typified as Exploitation, also known as Single-Loop Learning [2]. The learning that occurs in the diagnosis control acts as a prerequisite for the interactive use that presents aspects of greater flexibility and interactivity, focused on a type of learning permeated by experimentation, trial and error, discoveries and innovation. It is in this type of learning that questioning and alteration of procedures and modification of objectives can occur. This learning is typified as Exploration or Double-Loop Learning [2].

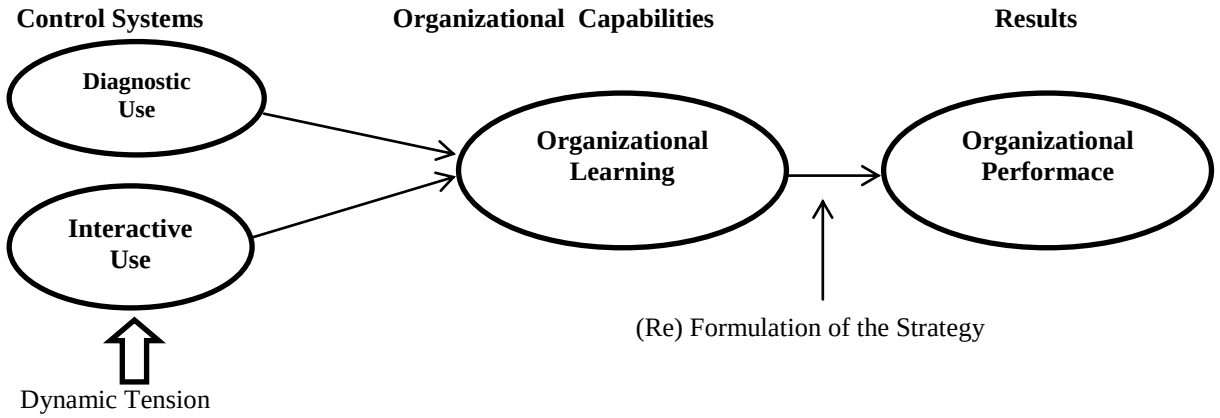
This paper, empirically, makes a "typification" about learning. This can be internal and external [17]. The internal learning process covers the learning of employees in a multifunctional way and it becomes a process to integrate any suggestions or explanations expressed by employees in order to develop products and processes. In a manufacturing context, external learning is defined as an ability on how to solve problems that emerge by customers and suppliers [17]. This learning aims to solve problems from the interaction with external stakeholders to create tacit knowledge within the organization. When strengthening relationships with customers, the firm can develop an implicit knowledge that is hard to imitate or duplicate by the competitor [19].

3.4. The Influence of Learning on Organizational Performance:

Previous studies offer evidence that the organizational capacity contributes positively to performance [26,35]. The balance between the use of MCS or dynamic tension has been linked to learning capabilities, which, in turn, positively influence the performance [29,30,28,22]. Following the perspective of the RBV, the MCS can not contribute directly to the performance, but contribute indirectly through capacity building. The balance between the uses of MCS, in a perspective of the RBV, can be considered a valuable, distinctive and not imitable capability.

Learning is linked to the management regarding to what can facilitate the process of change, which is one of the pillars that can foster competitive advantage [8]. The change may result from the continuous learning, that is made possible in a favorable organizational environment and there should be: incentives for people to experience, take risks, have their mistakes tolerated, express their creativity, learn from their own experiences and understand the influence of innovations on the company [18]. This change can occur with the activation of MCS supported by the flow and dissemination of information [11]. It is necessary to make the information propitious for people to use. These people take the action, by managing the process of strategic reformulation. Resulting from continuous learning, the strategic management is no longer a change management, to become management by changes [21].

For Senge [26], organizations that learn will be more flexible, adaptable and more capable to "reinvent themselves". In a context of accelerated change and interdependence between processes, the basic source of competitive advantage will be in the relative ability of the company to learn faster than their competitors. As business becomes more complex and dynamic, organizational activities need to be linked to learning. When faced with this theoretical review, the theoretical framework presented in Figure 1 was developed, where each analytical category and its interrelations discussed theoretically were identified and analyzed qualitatively through a case study. The study aims to contribute to the literature by extending the work of Simons [27], providing new empirical evidence about the use of MCS, aiming to improve the performance of organizations through the mediation of capacity development.



Source: Developed by the authors, 2013.
Fig. 1: Theoretical Research Framework.

4. Methodological Procedures:

Considering the research objectives aimed at: (i) knowing how the mechanisms of controls can influence the strategic management in a metallurgical business; (ii) describing the nature of the analytical categories under analysis represented in Figure 1, which is the theoretical and empirical model developed by the authors to be tested and applied in the case study, this research is classified as descriptive. The developed research is qualitative of a unique case study. The nature and complexity of the theme, the level of depth that the study requires, the type of information and analysis necessary for the answers to the research questions contributed to the assumption of this perspective. There were two research questions investigated in this study: (i) to what extent does the use of MCS act in combination with the production of dynamic tension that contributes to create and maintain organizational learning? (ii) to what extent does the use of MCS contribute to organizational performance by developing these learning?

Due to the fact that the problematic presented in this research still has a lack of answers, the most appropriate research method is the case study [31]. According to Voss *et al*. [31], Voss *et al*. [31], the case study is one of the most powerful methods of research and it aims to deepen the knowledge about a problem not sufficiently defined, targeting the stimulation of the understanding, suggestion hypotheses and questions or development of existing theories. Its use is recommended in many situations, for example, extending an existing theory aimed at deepening and aimed at validation of empirical results of previous research, allowing to see how generalizable the theory is and in which contexts it applies to. This is a suitable method for this paper, which aims to understand if the uses of MCS can lead to reach the desired performance through the development of organizational learning.

The analysis unit, which comprises the research are the processes of production and sales elected as critical of a metallurgical Strategic Business Unit - SBU, in a Brazilian subsidiary which is part of a North-American corporation. The case was studied in this subsidiary, since this company presents a typical case. There are prior information of the existence of certain practices regarding the formal MCS present in the critical processes of this company. This study aims to get a real and current diagnosis of these processes. All survey data for subsequent analysis was in the year of 2013.

4.1 Data Collection Instruments:

The research was of documentary type. Through the analysis of these documentations provided by the company, it was evidenced the relationship of the MCS in the strategy. Records available in the software of the production process, QS - Quality Systems, and of the sales process, QON - Quality on Line and Sales Force, and Excel spreadsheets were also analyzed. These softwares and spreadsheets present a quantitative and qualitative portrait of the company in terms of monthly performance. The spreadsheets, which consolidate the data of performance evaluations of the production process, were fundamental to analyze what and where are the weaknesses and opportunities in terms of economies of scale at each stage of the production process. It is from the spreadsheet that is done further detailed analysis. Concerning primary data, semi-structured interviews were conducted with the application of a script to the top managers of the Brazilian subsidiary: controller, the manager of the production process, the manager of the sales process and the quality control director. Based on these interviews, information was obtained about the characteristics, relationships and implications of analytical categories schematized in Figure 1.

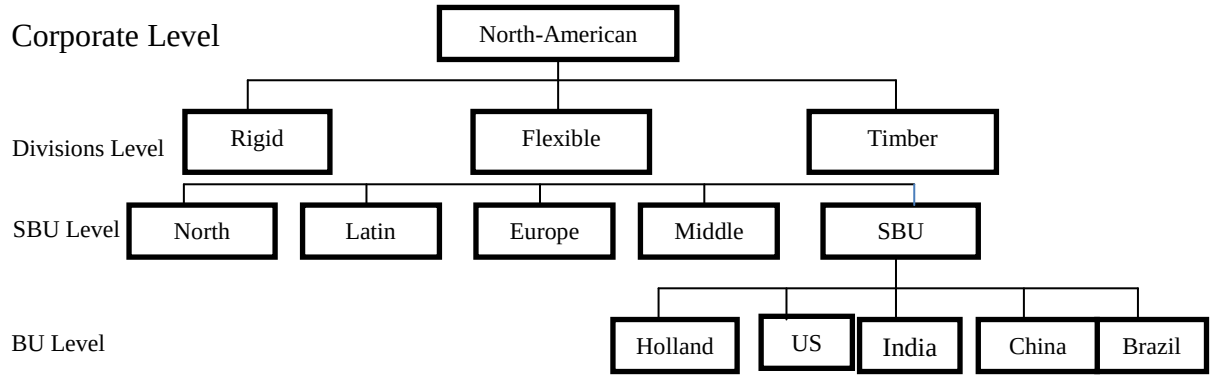
4.2 Data Analysis:

The interviews were conducted in order to allow the collection of data for further analysis around the categories: mechanisms of diagnostic use and interactive use of the controls and their influence on the critical processes under review; the influence of these mechanisms in generating internal and external learning and the influence of these learning, once developed by MCS, in the strategy reformulation process and in the performance. The "performance" category was measured and analyzed according to the customer satisfaction level. Secondary data were previously analyzed, "summarized" and framed in the interviews' script. The elaboration of this script was guided by the theoretical foundation and the objectives outlined in the introduction. For each analytical category, questions were made to characterize them, understand them and describe them in the context of the metallurgical subsidiary in Brazil. The content analysis technique that consists of message analysis techniques through objective and systematic procedures, which can be qualitative or quantitative was used. Those procedures allow inference about the message content [3]. The responses of the semi-structured interviews were all recorded to be transcribed into text. Once transcribed, codifications of text fragments were made. These fragments, considered as relevant, were related in each analytical category and, therefore, related to the theory exposed. These fragments grouped in their respective categories were subsequently interpreted to construct the article report.

5. Analysis of Case Study and Search Results:

The case study has as object of analysis a regional factory located in Araucaria - PR, of an SBU belonging to a multinational corporation. This corporation has three main divisions: (i) Rigid: active in the industrial manufacturing of bottles, buckets, drums and steel closures and firm plastic; (ii) Flexible: manufacturing of cardboard containers, plastic film that pack products, and (iii) Timber: for planting trees. These divisions are structured in SBUs divided geographically. But the only SBU that is not divided in this way is the metallurgical multinational under review that produces closures, since it's the only one that has a global scope to produce seals for other SBUs of the North American corporation considered customers or "Inter-companies" and also for the competitors of this corporation.

The final product of this metallurgical SBU is the input or raw material for the production of other SBUs. This SBU has some regional plants, inserted into the Business Unit or BU level that have a limited freedom and autonomy to define their own strategies that are directed by the North-American corporation and by the headquarter of the metallurgical SBU. These strategies are materialized in the form of an annual corporate budget. Each regional factory of this SBU rigidly follows the control systems dictated by the headquarter of this SBU. This SBU is responsible, amongst other attributions, for the production of components of steel and plastic seals with standardized specifications by ISO. In each BU factory three business processes were elected as critical: sales, production and controllership. Figure 2 schematizes the organizational structure of the corporation.



Source: Developed by the authors.
Fig. 2: Organizational Structure of the Corporation.

In order to be certified by international Standards of quality, the SBU under analysis presents a managerial effort to achieve and exceed performance levels stipulated in the planning, with a focus on making continuous and incremental improvements in its critical processes. In fully obeying the norm ISO 9001, the BU Brazil plans its production by controlling the quality of finished products and procedures of the critical end processes - sales and production. There are formal control tools in this factory which are interconnected whose objective is to measure the strategic performance indicators of production and sales. After measuring the results, it is up to the manager of these two processes to develop their interpretative analysis and discussion of the results for the headquarter of this

metallurgical SBU. These tools are part of the definition, monthly monitoring and monthly discussion of the strategy.

5.1 The Diagnostic Use of Controls in Critical Processes:

The BU Brazil presents a rigid and formal MCS that guide all of its critical processes. The company monitors the level of progress in terms of the achievement of the objectives proposed by the Budget Plan monthly. This company is concerned to measure not only its results in terms of financial indicators, but also in terms of intangible results. In measuring and in evaluating intangible values, it is highlighted, in this company, the monitoring: (i) in the quality and efficiency at every stage of its production process; (ii) in the satisfaction and complaints from customers and from suppliers; (iii) in the external uncertainties; and (iv) in the production cycle that needs to be shorter, ensuring its agility.

When analyzing the production process, this factory uses an industrial tool called BIC or Best in Class, which measures many aspects of productivity. BIC is an Excel spreadsheet where the production manager and his team have the capacity and autonomy of calculating and allocating data on the results of performance evaluations of this factory. BIC presents a conjuncture of raw data or numbers concerning the evaluation of tangible aspects and represents a more objective monitoring of this process since it is a "scoreboard of indicators". The data regarding the performance results of each closures production line are calculated in BIC. The results of evaluations of all strategic indicators are published and disseminated to employees including those from the operational level. The company announce it on the notice boards in order to get everyone to know how each may be contributing to the company.

It was found in BIC the following indicators and their performance evaluations for a given steel closures production line: production volume, raw material consumed; amount of hours consumed by employees for production; the measurement of the level of efficiency in machinery and equipment and steel scrap generated at the end of the process that will be utilized in sales. There are also monthly indicators in the production process for measuring: (i) the overtime hours worked; (ii) in factory employee training hours; (iii) claim level to supplier: if the company has a high incidence of complaints of the same supplier, this supplier may be discarded and the company will trigger a new negotiation process with a new supplier; (iv) supplier punctuality which is a control of the delivery of raw materials or lead-time: if the supplier delays its delivery beyond the expected, the BU Brazil inspect the reason for this delay so that this supplier can solve this problem; (v) worker safety control at the factory. The execution of actions to promote continuous improvement not only in terms of workers, machines and equipment efficiencies, but also in terms of cost reductions are considered critical factors in production. All in all, BIC is the diagnostic use in the production process.

As a management system, the quality control permeates all processes not only critical processes, but also the support processes. In the control of the sales process there is consolidation, organization and monitoring of customer requirements, such as: punctuality - delivery time respecting the 15 days; quality of products to be delivered; the delivery quantity and confirmation of the customer's request. There is an intense and formal communication with customers where they, by email, upon receipt of the requests, send their opinions with complaints or suggestions for improvements. There is a communication channel where all these opinions are recorded and consolidated into a database called QON - Quality online - information system. For each claim made in this system, corrective actions are made showing the status of each claim, informing whether the complaint was resolved. The check is made concerning the levels of performance of these corrective actions, attending one of the many requirements of ISO.

As for the diagnosis control, there is an effort of the staff in self-evaluation and self-measuring their respective stage of the production process of which they are responsible. This evaluation is done by filling in a form called "Control Plan". From a process management, a potential problem identified in a particular step in the production will not be transferred to the customer. These internally identified problems are called alerts. There are mechanisms that alert signals in the production where the operator, which is focused on maintaining high quality standards, feels obliged to make interventions or to make quality corrections during the production line. This operator, who feels in the position to make important safety alerts, takes more possession and feels important by his role that is crucial in the quality assurance. This makes the operators have a more active role, making the ISO tool become, increasingly, a strategic auxiliary.

5.2 The Interactive Use and its Relationship with Organizational Capabilities:

From the performance evaluations identified by each indicator at BIC, interpretative analysis are made to extract the weaknesses and, mainly, the opportunities in terms of better practices for the production. These analyzes are made in the BDP tool - Best Demonstrated Practice, which aims to do through meetings between members of different hierarchical levels, detailed and analytical interpretations to extract and discuss what were the best practices. The BDP tool also serves to justify

qualitatively and quantitatively why and how these practices were considered the best. In the agendas of BDP discussions, it is also discussed ideas and ways on how to further improve existing practices.

During these meetings, the leaders of the production process involve their subordinates in management activities. These leaders invite their staff to actively participate in decision-making at important moments. In the internal "BDPs discussions", all employees – all the way from the manager to the operational staff - discuss in order to demonstrate their views on how to apply new forms or techniques of incremental improvements in the manufacturing process. These meetings are formal and previously planned for the end of the month. The opinions of the tactical and operational level employees are taken into account by the production manager. Ideas and suggestions are not only heard by everyone, but there is also an effort in the company to operationalize them. The employees, with new ideas, have the ability to produce incremental changes in terms of providing higher productivity and savings in machinery and equipment. These changes can add more value in the production process.

The employees actively participate and contribute when they foster new ideas. They not only have the concern to "do the right thing", but they also have the responsibility to seek the "best way to do it." Those ideas that are taken into account and that are economically and financially viable for the factory and that had approval of investments by the headquarter, are performed and subsequently monitored. The obtainment of a continuous operational excellence is achieved through the BIC tool, along with the BDP tool where the results of monthly discussions among members of the production process are allocated, stored and managed by the QS - Quality Systems – software. It was also observed an interdependence between the MCS. For interactive use to be "triggered", a previous diagnostic use of the controls is needed. For the BDP discussions to occur, the performance evaluation worksheets of the each indicator contained in the BIC is necessary.

There are mechanisms of interactive control focused on opening effective channels of communication to "listen" and internalize customer complaints. It is from this control that the company can monitor and treat their strategic uncertainties. In this case, the company can monitor and react the possible loss of a customer who was unsatisfied. The company also has an indicator to measure the customer satisfaction level through market research, which is considered one of the strategic indicators for sales. The company's ability to orient to its market is based by the fact that the company has controls that monitor, categorize and evaluate feedbacks from customers regarding their complaints and satisfaction. The Brazil BU benefits from these feedbacks, seen as constructive as they offer opportunities for improvements brought on by customers. These customers actively help through complaints and relevant suggestions, improving the products of closures and the way to approach and capture customers. The interviewees interpret the QON system as a virtue and as a tool for generating external learning, focused on listening to the perceptions of the market. When listening to their opinions, the company can further reduce its defects. Customers through this channel are involved in the process of product improvement.

In the sales process, it is scheduled, reported and documented the entire visit to customers. The salespeople, whose majority are the factory engineers, when visiting clients make a detailed analysis of these customers in terms of solutions that they really need and formalize the information concerning the profile and needs of each client visited in a software considered strategic for sales call Sales Force which is a CRM - Customer Relationship Management. This CRM monitors the opportunities found by salespeople, manage the profile of each customer and manage the visits to customers, control the sales performance among other attributions.

In its quality control system, the Brazil BU monitors information relating to customer perception on whether the organization has met the requirements of these customers. This BU has a strong bond with their customers, putting great effort into bringing their claims "into the critical processes". There are information systems in the company with capabilities to communicate with the market. The softwares – QON and Salesforce – were implemented as well as after sales services made by the engineers who are trained and qualified to perform new sales or strengthen existing sales.

The salespeople are able to suggest improvements to customers since they have expertise in closures solution and have the capacity to sell, meeting the peculiarities of each client. These engineer-salespeople are key people for increasing the volume of sales and for satisfying customers, delivering not only closures, but customized solutions, since they know, from the clients visits, the actual profile of these customers. These salespeople know the real need and problem to be solved for the customers. When visiting new or existing customers, these salespeople also have the ability to capture new market opportunities

5.3 Capabilities as Performance Generator Factor:

Good ideas, in terms of discussing and incorporating, in the production process, new opportunities in terms of greater efficiencies, economies and even automation and in terms of development of customized products and new

business with existing or potential customers, in the sales process, comes from prior knowledge and experiences acquired from people. The processes, along with its employees, evolve and mature over time. For the Brazil BU, people seen as core assets with developed capacities and in the words of production manager, with "creative spirit" contribute to the continued development of the firm that also monitors, monthly, the amount of new ideas generated by these people.

The business of Brazil BU is characterized by the execution of new practices, since: (i) it has an intense orientation towards the market; (ii) it has collaboration with the others factories of the metallurgical SBU that document and openly show in the corporation's intranet all its "best practices"; (iii) it has internal collaborators responsible and pressured by the headquarter of this SBU in generating improvements in product and in processes through the discussion and execution of their improvement ideas. These practices brought both internally and externally are encouraged and welcomed and are seen as an obligation since employees feel pressured to expose them to other BUs and to its headquarter, and they feel obliged to perform such practices.

Regarding the aspects of the staff, the company presents a positive structure. The Brazilian factory has a low employee turnover. There is a culture to take advantage and retain the company's talents so they have the opportunity to get more experience and more knowledge and to grow along with the organization. This need for employee retention occurs also because of the difficulty of the company to seek on the market for a skilled workforce. A natural consequence of this is the fact of having leaders in mature critical processes and have leaders who identified themselves and shaped themselves with the culture of the company.

In the words of production manager: "employees are people filtered over the course of a good process and therefore they have a greater capacity for learning and knowledge about the reality of the company in terms of its strengths and weaknesses." By the fact that the Brazil BU has mature and competent employees, the company believes to be a mature and sustainable entity.

The continuous training offered is not only a necessity to ensure and enhance learning of the members, but also an ISO standard obligation. According to the interviewees, the ability to learn and disseminate new knowledge and ideas is essential for the factory to ensure the implementation of its incremental improvements in its critical end processes – sales and production. The internal learning, present in the production process, and external, through market orientation in the sales process, are presented as essential factors for the company to maintain its differentiation and to achieve marketplace advantage. The company believes that if they give up learning and if they give up the inclusion of new ideas or customer, employees, and other SBU factories suggestions, they will be putting at risk their future.

The company has, in perception of the interviewees, a motivating organizational climate. There is a harmony and integration of business processes, encouraging a strong collaboration, dialogue and synergy among employees. There is an intangible support that creates a fertile environment to generate and execute good ideas and, consequently, to achieve the desired performance by the Budget. The capacities developed through the imposition of MCS in critical processes impact positively on customers' quality perception, increasing their satisfaction. The Brazil BU, to satisfy its customers, can ensure the retention of these and getting new business and, thereby, can reach and even exceed its planned sales goals. In the months of 2013, it was found that sales were above the target budgeted.

6. Analysis and Discussions:

The results of this study suggest that the interactive use with the diagnostic use foster internal and external learning capabilities. Focusing organizational attention on strategic priorities and stimulating dialogues on performance evaluations, the MCS contribute to the process of the generation and dissemination of information and encourages collaboration of all members. These findings support the model of Simons [27] who sees the MCS as something bigger than mechanistic tools used to support strategic execution. The controls are also important vehicles to stimulate and manage new initiatives in critical processes aiming incremental improvements.

The findings in the Brazilian factory confirm that there is a complementarity and beneficial competition between diagnostic and interactive use. These two uses, collectively, contribute to the development of capacity. The balanced use creates dynamic tension which ensures that positive effects of interactive use in the capabilities are achieved through promotion of dialogue with customers, among organizational members of the Brazil BU and among the other BUs of the metallurgical SBU. This encourages creativity so that new actions for improvement are performed, continuously. Due to this adaptive change in terms of best actions, the company can maintain its strategic focus in terms of providing greater efficiencies, savings and revenues.

The relationship between diagnostic and interactive use, dynamic tension and performance appear to be indirect. The uses of MCS influence the capabilities that, in turn, influences in getting the desired and planned performance by the Budget. The complementarity of these two uses of MCS may represent a capacity and a source of competitive

advantage. The ability to achieve a balance between two opposing uses of MCS that, simultaneously, stimulate incremental changes and aim to achieve planned objectives, may represent a valuable, distinctive and not imitable capacity [4].

By placing the case study in RBV slope, the Brazil BU can be seen as a revenues of upper structure not because this factory engages in strategic investments and raising prices, but because it operates at a lower cost, offers higher quality, customization and performance to the product, since this company manages critical processes of excellence. Through the interactive use, the organization continuously analyzes what is in terms of threats or opportunities or strategic uncertainties in order to understand how they came about and how to deal with such uncertainties. Through the diagnostic use, this factory identifies its internal problems or deviations from expected performance and evaluates how to solve them in time.

This company found a competence that is distinct from its other competitors in the industry. This competence is developed from the MCS in the processes, which, in turn, supports and presses new information and learning. The MCS analyzed case instigates employees to learn internally and to be guided by a market orientation, approaching customers and their real needs. It is in the RBV perspective, involving acquisition and retention organizational learning and efficient management concerning the intangible assets, that lies the greatest potential for the strategy of this productive organization.

The critical processes of Brazil BU have two main functions: coordination and integration between people - a static concept - and generation of learning - a dynamic concept. It was observed that the learning obtained through the results of performance measurements and evaluations of operations and through market analysis is seen as a process by which the repetition of initiatives and experimentation of new initiatives allows them to be performed in a more customized, efficient and economical way. Tight integration and interdependence was found between critical processes. The development of the external learning brings increases in the sales process, in the first instance, and in the production process, where the Brazilian subsidiary will produce exactly what the customer wants and needs. Finally, this learning leads to improvements in the controllership process - better performances in terms of customer satisfaction and, consequently, in terms of higher revenues.

It was found that the ideas in terms of best practices to operationalize largest economies, productivity and quality in production, generated monthly in the BDP discussions, also contributes, significantly, in the level of customer satisfaction and retention. The implications of the production process discussions adds value to the product that is perceived by customers, bringing sales improvements. From the relationship between processes, it is evident that both internal and external organizational learning are seen as investments that bring results, not costs to be minimized.

7. Final Considerations:

The purpose of this research was to identify, through a case study, the relationships between the information generated by MCS as influencer on the development of organizational learning that, in turn, has a positive influence on organizational performance. The main objective that guided the development of the study was the attempt of demarcation of learning in generating performance under a perspective of the use of MCS in the RBV approach. Based on the analysis of this paper, the research answers its two research questions: (i) to what extent does the use of MCS act in combination to produce dynamic tension that contributes to creating and maintaining organizational learning? (ii) to what extent does the use of MCS contribute to organizational performance by development of these learning? The uses of MCS in the Brazil BU are associated, promoting the development of learning in the company. There is an indirect relationship between MCS and performance in this factory. This relationship is mediated by the continuous development of new organizational learning.

In contexts of rapid change and environmental instabilities, such as the Brazil BU, it is crucial the select control mechanisms that provide a dynamic and integrative vision that includes internal and external aspects that permeate the company to the decision makers, bringing not only efficiency in processes, but also adaptivity in the actions of these processes. It was found that it is by the efficiency, on the one hand, and by the adaptivity processes, on the other hand, in terms of internalizing new opportunities for incremental improvements that this BU can achieve its expected performance defined by the Budget Plan. Both efficiency and the change in critical end processes are obtained by the diagnostic and interactive use of controls harmoniously.

The findings obtained allow us to evidence that the diagnostic and interactive use, jointly, influence the organizational learning, corroborating previous studies on the theme. The diagnostic use cannot be an end itself but a necessary way to start questioning and to start strategic dialogues and to initiate critical analysis of the market, allowing the interactive use of the controls. The tension between flexibility and monitoring is present in this research. The case emphasized that the balance between the MCS promote necessary flexibility to the achievement of a balance between incremental improvements, essential in adaptive renewal moments, and compliance with the goals and rules, crucial for the survival,

robustness and effectiveness of business. The study demonstrated that it is positive to work, in organizations, with opposing views so that these views are confronted as a way to achieve organizational goals.

There is great concern and obligation, by the requirement of ISO and the guidelines of the headquarter, in offer constant training to employees from operational and tactical level. These trainings take place in order that all employees endeavor to overcome. This personal effort generates an internal competence that supports the structure of "excellence in processes." The ISO management tool is considered a key resource to be acquired continuous improvements in critical end processes and, consequently, in the strategy. Finally, in this study, it was possible to specify that the control becomes an essential capability for strategic management and is capturing mechanisms for the use and review of internal and external information to the organization. Thus, the controls can promote organizational capabilities such as learning, which positively influences performance. It is considered that this research met the proposed goals, strengthening the theoretical framework proposed by Simons [27].

The study contributes to a better understanding of the application of controls from a strategic point of view. The capacity to generate relevant information flows by the implications of the use of the controls produces a significant influence on comprehension and satisfaction of everyone within and beyond the organization. The controls have a dual function: they can be considered as a tool not only for the execution but also for the (re) formulation or renewal of practices or strategic actions.

The controls can be analyzed by a multidimensional way, being tools that assist in maintenance practices, and also in adapting these practices, helping the company to identify problems, deviations and to internalize threats and opportunities, encouraging change. The paper also contributes to empirically analyze the dynamic tension and how these can stimulate new learnings which, in turn, cause changes renewing the strategic actions of the processes and impacting, positively, the performance. Thus, this study developed, tested and validated the theoretical framework, presented in Figure 1, in the Brazil BU reality. The contribution of this study to the management practice is on the issue of the management of seemingly conflicting purposes or dynamic tension, suggesting that this tension contributes to capacity development and to the achievement of planned performance.

After the discussion of the findings in this study, it was found that part of the Simons model [27] was validated, enabling it to be studied in other Brazilian empirical researches in more depth. The application of interactive use for small businesses can be further studied, since the universe of these companies offer potential to cover literature gaps. Future research is needed to offer a deep understanding of the dynamics between positive and negative effects of the dynamic tension resulting from the balancing use of MCS.

The analysis of results should take into account that the results are based on the perception of top managers of a Brazilian case study. The results could be different if the participants of the interviews were from other processes, from other hierarchical levels or also to different sized companies. All information interpreted in this study is limited to the case studied entirely qualitative, not statistical and that does not allow generalizations without additional studies to be conducted in other organizational segments [31]. For simplification purposes, the study focused on examining only two critical processes of business. The other business processes and other variables that could interfere on the performance, and on the organizational learning, were not objects of this research.

As a suggestion for future research, there is a need to include other categories to be evaluated the organizational competences and its implications, such as: entrepreneurship, innovation and other essential competences to obtain competitive advantages. It is recommended to combine the theoretical model of Simons [27] with other constructs such as organizational culture, knowledge management and innovation. This combination may be the greatest contribution that the model of this author provides for research on MCS.

References

1. Anthony, R.N., V. Govidarajan, 2008. Sistemas de Controle Gerencial. 12a. Ed. São Paulo: McGraw-Hill.
2. Argyris, C.E., D. Schon, 1978. Organizational learning: a theory of action perspective. Reading, MA: Addison- Wesley.
3. Bardin, L., 2002. Análise de conteúdo. Lisboa: 70.
4. Barney, J., 1991. Firm resources and sustained competitive advantage. Journal of Management, 17: 99-120.
5. Bisbe, J., D. Otley, 2004. The Effects of the Interactive Use of Management Control Systems on Product Innovarion. Accounting, Organizations and Society, 29: 709-737.
6. Camargo, C., 2011. Possibilidades de aprendizagem organizacional a partir de sistemas de controle estratégico. REBRAE – Revista Brasileira de Estratégia, 4(1): 53-62.
7. Catapan, A., D.R. Colauto, E.A. and E. Barros, 2013. A relação entre a Governança Corporativa e o desempenho econômico-financeiro de empresas de capital aberto do Brasil. Revista Contabilidade, Gestão E Governança, 16(2): 16-30.

8. Conde, G., L. Valeiras and G. Sanches, 2014. Sistema de control de gestión, rendimientos de la capacidad innovadora y certificaciones ISO: modelando sus efecos sobre el rendimiento organizacional. Revista Galega de Economía, 23(1): 245-270.
9. Damke, E., E. Silva and S. Walter, 2011. Sistemas de controle e alinhamento estratégico: proposição de indicadores. Revista Eletrônica de Estratégia & Negócios, Tubarão, 4(1): 65-87.
10. Davila, T., 2005. The Promise of Management Control Systems for Innovation and Strategic Change. in: C.S. Chapman (Ed) Controlling Strategy: Management, Accounting, and Performance Measurement, Oxford: Oxford University Press.
11. Frezatti, F., D. Bido, A. Cruz and M. Machado, 2014. O papel do balanced scorecard na gestão da inovação. RAE - Revista de Administração de Empresas, 54(5): 381-392.
12. Frezatti, F., D. Bido, A. Cruz and M. Machado, 2015. The Structure of artifacts of management control in the innovation process: does exist association with the strategic profile? BBR, 12(1): 128-153.
13. Galunic, D.C., S. Rodan, 1998. Resource recombinations in the firm: knowledge structures and the potencial for schumpeterian innovation. Strategic Management Journal, 19: 1193-1201.
14. Grant, R.M., 1991. The resource-based theory of competitive advantage: implications for strategy formulation. California Management Review, 33(3).
15. Hanafi, E., Z. Fatma, 2015. The effect of the integration between levers of control and SWOT analysis on organizational performance. International Journal of Academic Research, 7(1): 215-221.
16. Henri, J.F., 2006. Management Control Systems and Strategy: a Resource-based Perspective. Accounting, Organizations and Society, 31: 529-558.
17. Ismail, T., 2013. Feedforward Control System, Organizational Learning and Business Unit Performance. International Journal of Social Science and Humanity, 3(4): 349-353.
18. Kaplan, R., D. Norton, 2001. Organizações orientadas para a estratégia. Rio de Janeiro: Elsevier.
19. Madhok, R., S. Tallman, 1998. Resource, transaction and rents: managing value through interfirm collaborative relationships. Organization Science, 9: 326-339.
20. March, J.G., 1991. Exploration and exploitation in organizational learning. Organization Science, 2(1): 71-87.
21. Mintzberg, H., B. Ahlstrand, J. Lampel, 2000. Safári de Estratégia: um roteiro pela selva do planejamento estratégico. Porto Alegre: Bookman.
22. Mohamed, R., W. Hui, I. Rahman and R. Aziz, 2014. The relationship between strategic performance system and organizational capabilities. Asian Journal of business and Accounting, 7(1): 151-173.
23. Pedrique, A., J.C. Oyadomari, D. Bido and A. Rezende. Uso do controle gerencial e decisões em organizações de saúde brasileiras. BBR, 11(2): 1-34.
24. Penrose, E., 1959. The theory of growth of the firm. New York: Wiley.
25. Peteraf, M.A., 1993. The cornerstone of competitive advantage: a resource based view. Strategic Management Journal, 14(3): 179-181.
26. Senge, P., 1998. A Quinta Disciplina: arte e prática da organização que aprende. São Paulo: Best Seller.
27. Simons, R., 1994. Levers of Control: How Managers Use Innovative Control Systems to Drive Strategic Renewal. Boston: Harvard Business.
28. Orozco, D., J. Capelleras, Y. Vaillant, 2014. Examining the impact of management control systems use on the development of firm capabilities. In.: XXIII Conferénce Internationale de Manegement Stratégique, Rennes.
29. Oyadomari, J.C.T., M.P. Lima, D.L. Pereira and B.O.T. Silva, 2014. Relacionamentos entre controle gerencial, aprendizagem organizacional e decisões. Revista Contemporânea de Contabilidade, 10(20): 53-74.
30. Oyadomari, J.C., F. Frezatti, O.R. Mendonça and R. Cardoso, 2011. O uso do sistema de controle gerencial e desempenho: um estudo em empresas brasileiras sob a perspectiva da RBV. REAd Revista Eletrônica de Administração, 69(17): 298-329.
31. Voss, C., N. Tsikriktsis and Frohlich, 2002. Case research in operations and management. International Journal of Operations & Production Management, 22(2): 195-219.
32. Wernerfelt, B., 1984. A resource-based view of the firm. Strategic Management Journal, 5(2): 171-180.
33. Widener, S.K., 2007. An Empirical Analysis of the Levers of Control Framework. Accounting, Organization and Society, 32(7): 757-788.
34. Ruas, R.L., C.S. Antonello and L.H. Boff. Os Novos Horizontes da Gestão: Aprendizagem Organizacional e Competências. Porto Alegre: Bookman.

35. Tippings, J.E. and R. Sohi, 2003. IT competency and firm performance: Is organizational learning a missing link? Strategic Management Journal, 24: 745-761.