

Adaptation of the Balanced Scorecard: Case Study in a Fuel Distribution Company

Omar José Evangelista de Barros

Universidade Federal de Pernambuco, Centro de Ciências Sociais Aplicadas, Departamento de Ciências Contábeis e Atuariais, Recife, PE, Brazil.

Cláudio de Araújo Wanderley

Universidade Federal de Pernambuco, Centro de Ciências Sociais Aplicadas, Departamento de Ciências Contábeis e Atuariais, Recife, PE, Brazil.

Received on 07.20.2015 – Desk acceptance on 08.05.2015 – 4th version approved on 05.27.2016.

ABSTRACT

This study aims to analyze and explain the adaptation of the balanced scorecard (BSC), through the theoretical model by Ansari, Fiss and Zajac (2010), in a fuel distribution company (nicknamed Oil Company), which is characterized in this article as a late adopter. By doing so, we place the adaptation process at the heart of our research on the diffusion of management accounting practices. The results showed that the BSC adopted in the Oil Company is compatible with other technologies observed in the organization. Regarding the cultural aspect, there was low adaptation of the practice to the organizational culture; however, no political misfits were observed. Due to this low cultural fit between the BSC and the Oil Company, in the latter the BSC has high fidelity and low extension in relation to the model observed in the extant literature. The article builds on the theoretical and empirical evidence that a specific adaptation pattern depends on the fit between the technical, cultural, and political characteristics of the practice implemented and the characteristics of the company. This is a distinctive aspect of our study, as it seeks to explain variations in the organizational practices by analyzing their consistency with the needs, objectives, and structure of the adopting company, especially considering the cultural and political aspects involved in the adaptation process.

Keywords: balanced scorecard, adaptation, diffusion, variation, management accounting.

1 INTRODUCTION

The literature on the diffusion of managerial practices in the organizations is characterized by two ways of explaining the adaptation process, the first derived from the economic literature based on the rational actor model. According to this model, the entities adopting new managerial practices are addressed as actors that make rational decisions in pursuit of efficiency of outcomes. This line of research is prevalent in the literature on the diffusion of innovations (Rogers, 1995), focusing on the assumption that the adoption of a new managerial practice results in an economic benefit to the organization.

The second way to explain the adaptation process of a managerial practice consists in a line of research based on sociological models that, as opposed to the rational model, supports the argument that the organizations undergo social pressures from the environment they operate in, thus they adopt certain managerial practices eager to maintain the reputation in accordance with the others. Among the sociological perspectives that help explaining this reputational pressure, the fad and fashion (Abrahamson, 1991, 1996) and the institutional perspectives stand out as the most popular (Sturdy, 2004).

The literature based on the fad and fashion perspective starts from the assumption that the adoption of a managerial practice is a result of the pressure that the organization undergoes to imitate the others, rather than a rational choice, as advocated by the model based on the economic theory. Moreover, such a perspective emphasizes the active role of fashion-setters, such as consulting firms operating in the diffusion process.

The institutional perspective establishes that organizations working in the same environment have isomorphic characteristics that lead them to the dilemma of implementing a managerial tool that, in practice, is not used on a daily basis. This kind of situation arises from the social expectations that generate the so-called *institutional isomorphism* (Boxenbaum & Jonsson, 2008). When the adaptation process of new managerial practices stems from institutional pressures that contradict the rational rationale of seeking the internal efficiency required to maximize outcomes, it was noticed that organizations mimetically adopting these new practices claim to use them, but in fact they are not observed in daily business (Boxenbaum & Jonsson, 2008).

The rational actor model and the sociological perspective help understanding how the practices are disseminated in the organizations. However, studies tend to use these two perspectives as antagonistic, i.e. one to the detriment of the other: the rational model typically emphasizes the issues of technique and efficiency by adopting the new practice, while the sociological perspective emphasizes the cultural

and social aspect of its adoption. According to Kennedy and Fiss (2009), these two perspectives are not dichotomous, i.e. the socio-technical motivations are less disjointed than the literature on diffusion has shown, something which means that the two perspectives are complementary and, therefore, capable of explaining the diffusion of managerial practices from various viewpoints.

Generally, studies in managerial accounting emphasize the diffusion of managerial innovations, as a process through which an innovation is conveyed and disseminated, focusing the study on the interorganizational level, in order to analyze and explain specifically how organizations implement or fail to implement a certain managerial practice (Ax & Bjornenak, 2007).

As a consequence, the same literature does not investigate comprehensively adaptations, misfits, and contradictions that occur during and after the adoption of these managerial tools. This classic model to study diffusion is based on the assumption that the practice is unchangeable and organizations are passive, and the only option is accepting or rejecting the new practice (Burkert & Lueg, 2013, Fiss & Zajac, 2004). This assumption hinders the diffusion model, since managerial accounting practices cannot be adopted by companies as immutable solutions (*'off-the-shelf' solutions*) (Ansari, Fiss, & Zajac, 2010).

In this research, it is suggested that the adaptation of a managerial accounting practice in the organization's context is more likely to be the rule than the exception during the implementation process, because few companies (if any) leave the diffusion process without changes.

In this article, we regard as a limitation of research on the adaptation of management accounting practices the absence in the accounting literature of a conceptual framework capable of grasping and explaining the possible adaptation patterns of accounting practices during the diffusion process. We use, herein, the framework developed by Ansari et al. (2010) to study the variation of organizational practices during the diffusion process. The adoption of this framework seeks to clarify and investigate in a more robust way how managerial accounting practices vary when diffusing from the interorganizational environment to the intraorganizational environment.

The main argument of the framework developed by Ansari et al. (2010) is that a specific adaptation pattern depends on the fit between the characteristics of the practice implemented and the characteristics of the company that is implementing it. This is a distinctive aspect of this model, given that few researchers have attempted to explain variation in organizational practices through the analysis of the consistency of its characteristics with the needs, objectives, and structure of the adopting company.

Gondo and Amis (2013, p. 3) call upon the organizational researchers to conduct studies on variation in the adaptation process of managerial practices. We used the existing research in the area of diffusion and adaptation of managerial practices and, specifically, the framework proposed by Ansari et al. (2010) in order to fill this theoretical gap and provide new contributions to research in management accounting practices.

In the face of the identification of the gap in the literature regarding the adaptation of managerial accounting practices, this study has the following research question: How do the characteristics inherent to the balanced scorecard (BSC) and to the case study company influenced the adaptation process of the BSC in the case company?

Thus, this study focuses on the case of the adaptation of the BSC in a fuel distributor (liquid, solid, and gaseous), nicknamed, for confidentiality purposes, Oil Company, whose geoeconomic area of operation comprises Northern and Northeastern Brazil. The adoption of the BSC in the Oil Company relied on the support of an organizational consulting firm, responsible for the implementation of the Performance Improvement Program (PIP) – acronym used in this article for confidentiality purposes –, with a methodology that combined theory and practice to develop strategic planning.

This article is divided into 6 sections, namely: 1) introduction; 2) adaptation of managerial practices; 3) balanced scorecard; 4) research method; 5) results; and 6) conclusions.

2 ADAPTATION OF MANAGERIAL PRACTICES BASED ON A DIFFUSION

THEORETICAL MODEL

The concept of adaptation of managerial practices used in this study was extracted from Ansari et al. (2010), whose theoretical model supports a proper adjustment between the characteristics of the practice (innovation) and the characteristics of the adopting company. Thus, the authors tried to explain the internal variations through the analysis of the consistency between the characteristics of the practice and the needs, objectives, and structure of the adopting company.

The theoretical model by Ansari et al. (2010) is based on the dimensions fidelity and extensiveness. The dimension fidelity is related to the degree to which a widespread practice resembles or deviates from the characteristics of its original version, e.g. whether the adaptation is real or detached from the prototypical version. The dimension extensiveness, in turn, evaluates whether the degree to which the practice is implemented is higher or lower than the original version. This way of understanding is based on studies suggesting that the organizations implement versions with higher or lower extension. Extensiveness, therefore, indicates to what

extent the adaptation of innovation represents the efforts for an unrestricted application.

According to Ansari et al. (2010), there is a pattern of *full* and *true* adaptation when a practice is implemented in order to preserve its characteristics of high fidelity and extension, i.e. faithful to its first version and comprehensive. The pattern *tailored adaptation* occurs when the practice has a higher extension level, while its fidelity is lower, i.e. the organization uses its resources to implement a more extended version of the practice and, at the same time, better suited to its reality, resulting in a less faithful version to the previous one. In turn, the pattern *distant adaptation* occurs by combining the low levels of fidelity and extensiveness, because, while it is less similar to the original version, it has been implemented to a lesser extent. Finally, Ansari et al. (2010) suggest that the pattern *low-dosage adaptation* occurs when there is a low extensiveness level, but a high fidelity level. This adaptation pattern indicates that the practice is more in line with its prototypical version, but there is a shy effort to implement it in terms of scope within the organization (Figure 1).

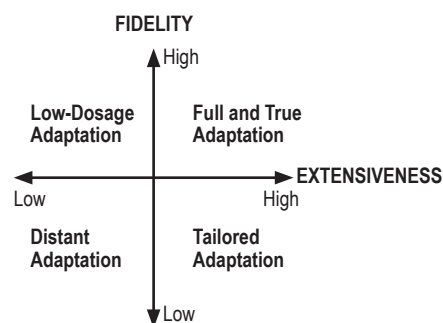


Figure 1 Adaptation patterns
Source: Ansari et al. (2010, p. 72).

The concept of fit outlined in the theoretical model by Ansari et al. (2010) takes into account the factors influencing organizational practices, among which three forms of fit that affect the adoption processes are highlighted: technical, cultural, and political fit. For technical fit we mean the degree to which the characteristics of an innovation are compatible with the technologies used by the organizations.

The organizational level factors affecting the technical adjustment include both the technological basis and the capacity of absorption and recognition of the value of an innovation, in addition to the capacity of applying it as originally conceived. According to Ansari et al. (2010), usually the innovators experience a lack of technical adjustment between the characteristics of the managerial practice and the organization, thus they tend to implement versions closer to the original one, since they have a limited capacity to reduce misfit. So, the lack of technical fit suggests a pattern of low adaptation between the early adopters and customized adaptation between the later adopters.

Uncertainties about the practice that innovators experience, as well as the lack of technical fit, cause the contrast between the dimensions fidelity and extensiveness. Thus, the more faithful to its original prototype, the less extended the adoption of a practice, as a consequence, the lower the adaptation pattern, something which is translated into a lower extension. Based on this discussion, Ansari et al. (2010, p. 77) have two propositions:

Proposition 1: when adopters experience low technical fit between the practice and the organization, early adopters will implement higher-fidelity versions whereas later adopters will implement lower-fidelity versions of the practice; and

Proposition 2: when adopters experience low technical fit between the practice and the organization, early adopters will implement less extensive versions whereas later adopters will implement more extensive versions of the practice.

When managerial innovation is compatible with the values, culture, and beliefs practiced by the organization, it is claimed there was a cultural fit. Innovations do not spread in a cultural vacuum, on the contrary, when imported by an organization, they are faced with defined actors and roles, institutionalized and legitimized behaviors. This initial misfit may constitute an obstacle to the diffusion process. According to Ansari et al. (2010), little attention has been paid to cultural fit in studies on the diffusion of managerial innovations.

Innovators in a practice do not suffer compliance pressures, they enjoy more freedom to try it, define it, and adapt it so that it fits their organizational characteristics. However, at the end of the diffusion process, when there are already established models, compliance pressures increase and hinder the capacity of followers to adapt and reduce misfit.

It is possible that followers implement the managerial practice in a ceremonial and symbolic way, in order to show compliance with the external environment, however, in daily business, it is not used. These late adopters are more likely to implement versions with lower extension.

Innovators are able to reduce misfit because they are more likely to implement managerial innovation more broadly, in the face of suffering less compliance pressure during the initial stage, because at this stage there is a reduced need for obtaining benefits. Followers, in turn, given the compliance pressures are less involved in the practical redefinition process, accepting its original version, even if misfit impacts the adoption. In this way of understanding, the last ones to implement the managerial practice, i.e. followers, do not enjoy such freedom to adjust it, since they are pressured to adopt versions similar to the original, something which provides the diffusion process with little variation. Thus, Ansari et al. (2010, p. 79) have two propositions:

Proposition 3: when adopters experience low cultural fit between the characteristics of the practice and the organization, early adopters will implement lower-fidelity versions whereas later adopters will implement higher-fidelity versions of the practice; and

Proposition 4: when adopters experience low cultural fit between the characteristics of the practice and the organization, early adopters will implement more extensive versions whereas later adopters will implement less extensive versions of the practice.

Political fit occurs when the interests and agendas of adopters are compatible with the implicit or explicit normative characteristics of the adopted practice. In view of the growing number of adopters, controlling the application of the managerial practice becomes less viable, something which allows followers to adapt it by reducing misfit with the organization. Unlike innovators, who adopt the managerial practice similar to the original version.

Increasing maturation makes the application mechanisms less stringent, something which provides followers with greater opportunities to implement less extended versions of the practice. Unlike innovators, who adopt the managerial practice in a more extended version. Taking this into account, Ansari et al. (2010, p. 81) have two propositions:

Proposition 5: when adopters experience low political fit between the characteristics of the practice and the organization, early adopters will implement higher-fidelity versions whereas later adopters will implement lower-fidelity versions of the practice; and

Proposition 6: when adopters experience low political fit between the characteristics of the practice and the organization, early adopters will implement more extensive versions whereas later adopters will implement less extensive versions of the practice.

It is worth highlighting that the theoretical model by Ansari et al. (2010) suggests that technical, cultural, and political misfit show up as different analytical ways, as aspects and mechanisms of the implementation and dissemination process, and that each of these characteristics can take on different importance levels in the adaptation process. Although the authors acknowledge that these three forms of fit are not completely independent when arising and developing, they argue that it is important to address these three categories independently, for obtaining greater

analytical clarity and better prediction capacity (Ansari et al., 2010). This view creates a primary assumption that there will be higher misfit between the technical, cultural, and political categories. This higher misfit that the adopter suffers during the diffusion process makes the implementation of an unmodified practice more costly for the company and, therefore, it is more likely that the result of this process is adaptation (modification) of the practice or occasional abandonment of it (Ansari et al., 2010).

3 THE BALANCED SCORECARD

In this article, we explain the variation in the way how the BSC is adapted in an organization by analyzing the two adaptation dimensions (fidelity and extensiveness) when compared to the *prototypical* form of the BSC. We considered, herein, the original version of the BSC published by Kaplan and Norton (1997).

This literature provides a generic BSC comprising four main features: (i) a system that combines financial and non-financial performance measures; (ii) a system that is structured into four perspectives: financial, customer, internal processes, and learning and growth (BSC taxonomy); (iii) a system based on the relationships of cause and effect between the measures that link the four perspectives; and (iv) a system that focuses on the strategy communication and implementation. We suggest, in this article, that *fidelity* in the way how the BSC is adapted in an organization may be assessed having the four prototypical BSC characteristics as a basis.

Regarding the dimension *extensiveness* of adaptation, it is suggested that it may be assessed by the degree to which the four BSC characteristics are implemented in the organization. A *high extension* adaptation means a comprehensive implementation of BSC practices in the organization, while a *low extension* adaptation means a less comprehensive implementation of BSC practices in the organization. Specifically, it is suggested that a *low extension* adaptation leads to BSC type I (see below), while a *high extension* adaptation leads to BSC type II or III.

Authors like Speckbacher, Bischof and Pfeiffer (2003) and Lee and Yang (2011) have classified the BSC into three different types:

Type I: this is the initial stage of the BSC in an organization, combining financial and non-financial measures, covering the four perspectives (financial, customer, internal processes, learning and growth). This BSC type is used to assess organizational performance, and it may establish indicators that show a cause and effect relationship;

Type II: in addition to considering the financial and

non-financial measures, it describes the strategy and the measures that use the cause and effect relationships. In this BSC type, achieving strategic objectives is rewarded in terms of values for meeting the financial and non-financial goals; and

Type III: this is the last stage of the BSC, when it reaches the maturation stage. It is characterized by a system that focuses on strategy, including a performance measurement system based on rewards, establishing a cause and effect relationship between measures.

3.1 Technical, Cultural, and Political Characteristics of the BSC

The BSC underwent strong influence of the U.S. literature on business management, something partly justified by its origin linked to the studies developed by Robert S. Kaplan and David Norton in the 1990s, in Harvard. Kaplan and Norton (2010), in their review of the conceptual bases of the BSC, highlighted the influence of U.S. writers such as Michael Porter, Peter Drucker, and Robert Anthony. The ideology that prevails in the BSC is quite consistent with the managerial style adopted in U.S. organizations, since it keeps a link between superiors and subordinates based on individuality and meritocracy (Bourguignon, Malleret, & Norreklit, 2004; Norreklit, Norreklit, & Melander, 2006).

According to Wanderley, Cullen and Tsamenyi (2013), the BSC has the following technical characteristics: step by step phased processes; interconnection with other management tools; and strong support from the information technology (IT) systems (Table 1). The studies by Robert S. Kaplan and David Norton on the BSC over 20 years followed a normative approach, with prevalence of a step by step implementation. So, in these studies, the BSC has a general organization following five steps: change mobilization through executive leadership; strategy translation; strategy alignment with the organization; employee motivation in the execution of daily work; and governance to make strategy a continuous process (Kaplan & Norton, 2001, 2010).

Table 1 *Technical, cultural, and political characteristics of the balanced scorecard*

Categories	Characteristics of the balanced scorecard
Technical	- process followed by steps;
	- interconnection with other systems;
	- strong support of information technology systems;
Cultural	- balance between financial and non financial measures;
	- alignment of strategic objectives;
	- for-profit;
Political	- apolitical approach;
	- top-down hierarchical system;
	- value-maximizing managers.

Source: Wanderley et al. (2013).

Regarding the cultural characteristics of the BSC, three aspects are highlighted: the BSC as a planning and controlling management system, which encompasses both short-term financial measures and long-term non-financial measures (Kaplan & Norton, 2010); management performance aligned with the primal strategic objectives of the organization; and long-term focus on maximizing shareholder value.

Wanderley et al. (2013) identified the three main political characteristics of the BSC. First, the BSC adopts an apolitical attitude (Modell, 2012). The BSC is presented as politically neutral in its domination exercise by the company's top management, preventing managers to ask about the legitimacy of the strategy proposed or the power that senior administration exerts on managers. Second, the BSC regards managers as outcome-maximizing neutral agents. This assumption is based on neoclassical economic theory, which differs from the sociological view that emphasizes that managers do not seek only maximizing their utility

function, but they are influenced by the cultural, political, and social aspects (Norreklit et al., 2006).

In the BSC design, the main task in the management process is obtaining the balance of all aspects linked to company performance to ensure the organization's survival in the long run (Modell, 2012). Third, the BSC is a hierarchical and top-down system (Norreklit & Mitchell, 2007, Norreklit, 2000, Wong-On-Wing, Guo, Li, & Yang, 2007).

The implementation of the BSC is materialized by means of a top-down process, in which the strategic priorities formulated by senior managers are communicated downwards in the organization across the organizational hierarchy. Managers at lower levels and employees are described as *aspects* that need to be reconciled with the strategic objectives formulated by means of training and ongoing feedback (Modell, 2009, Modell, 2012, Norreklit, Norreklit, Mitchell, & Bjornenak, 2012).

4 RESEARCH METHOD AND THE CASE STUDY COMPANY

This section introduces and explains the research method adopted, and it also explains the study by highlighting the case company (Oil Company).

4.1 Research Method

This article is characterized as a qualitative research developed by means of a single case study, in order to grasp and explain the adaptation of the BSC through the theoretical model by Ansari et al. (2010) in a fuel distributor. The study investigates the implementation of the BSC in a fuel distributor in Northern and Northeastern Brazil. This context provides a rich empirical material for our research, because it presents a context of major changes in the technical, political, and cultural aspects of the organization, in line

with the professionalization process of the company. Also, the company of the case study has adopted the BSC, something which enabled our analysis by using the theoretical model by Ansari et al. (2010).

In this study, the theoretical propositions by Ansari et al. (2010) were not used for testing or confirming. Propositions were used to inform our discussion, not in order to validate them for statistical generalization purposes. We used the central idea of the study by Ansari et al. (2010), i.e. the adaptation process is influenced by technical, cultural, and political misfit between the characteristics of the adopting company and the managerial practice adopted.

For collecting data, we used interviews and documentary analysis. The interviews were scheduled by e-mail, according to the convenience and availability of each respondent.

However, we sought informants who participated in implementation process of the BSC in the company of the case study and/or managers who are the main users of the BSC. In total, 12 semi-structured interviews were conducted (with 11 people interviewed, since the controller was interviewed twice – interviews I1 and I12), according to

the line of research reflected in the protocol, not only with the managers participating in the Strategic Planning Council, but with all those who could provide information on cultural, technical, and political factors of the organization, as shown in Table 2. Due to geographical reasons, 2 interviews were conducted through online voice and video communication.

Table 2 Profile of respondents

Interview	Position	Time working in the company	Interview mode	Interview duration
I1	Controller	4 years	Presential	00:40:28
I2	HR Manager	3 years	Presential	00:35:00
I3	Financial manager	5 years	Presential	00:49:13
I4	Logistics manager	11 years	Presential	00:36:25
I5	Controllershship analyst	7 months	Presential	00:44:39
I6	Information technology manager	12 years	Presential	00:28:13
I7	Accounting manager	17 years	Presential	00:26:38
I8	Commercial manager	19 years	Presential	00:29:36
I9	External consultant - FDC	-	Online	01:13:12
I10	Shareholder director	-	Presential	00:52:04
I11	Director of operations	12 years	Online	00:50:00
I12	Controller	4 years	Presential	00:46:29
TOTAL				08:38:05

Source: Prepared by the authors.

Most respondents have completed a graduate course and work for at least three years in the company. Respondents' graduation fields are varied: 3 are graduated in Accounting, 5 in Administration, 2 in Engineering, and 1 in IT Management. The average interview duration was 43 minutes, totaling 8 hours and 38 minutes of recorded audio.

A basic interview guide was used in a flexible and differential manner, according to respondents' positions. Each time it became clear that important issues were not addressed, there were changes in the guide, while if a subject showed to be irrelevant, it was discarded, with the possibility of being resumed later. The auxiliary resources were a voice recorder and a book of notes.

Documentary analysis consisted in gathering as much information as possible about the company of the case study. Therefore, meeting minutes were analyzed, in addition to internal records, news clippings published in the media about the company, and for each analysis notes were made for preparing the research report, in order to ensure that the analyses are documented so that other researchers can examine the way of getting the outcomes.

The next step was extracting the meaning of data, by comparing the results found to the literature to prepare

the conclusion. To do this, the specific context of the Oil Company was analyzed through the theoretical model by Ansari et al. (2010), in order to explain the process to adopt the BSC and possible technical, cultural, and political fit derived from the implementation.

According to Ansari et al. (2010), the practices adopted in organizations may be analyzed through technical, cultural, and political characteristics. So, this study analyzes the characteristics of the BSC and the characteristics of the company. The characteristics of the BSC were assimilated from the analysis by Kaplan and Norton (1997) and the seminal studies on the theme, we sought to grasp the characteristics of the BSC as conceived and prescribed by the authors and they were later on compared to the characteristics of the model adopted by the Oil Company, in order to show which were the adjustments made and whether they could be grasped and explained by means of the theoretical framework proposed by Ansari et al. (2010). However, specifically, the aspects suggested by Ansari et al. (2010) were analyzed to determine the compatibility between the characteristics of the BSC and the characteristics of the company of the case study (Table 3).

Table 3 *Basis for analyzing the compatibility practice vs. organization*

Adjustment characteristic	Practice	Organization
Technical characteristic	Technological basis and technical characteristics inherent to the practice	Organizational absorption capacity, technological basis, innovation capacity, technology sophistication level, and systems used by the company
Cultural characteristic	Cultural values and meaning structure embedded in the practice	Organizational culture, innovation, values, and beliefs
Political characteristic	Normative requirements, political view, potential controversies embedded in the practice	Formal and informal power structures, norms and rules of the organization, resource dependence and dominant coalitions in the company

Source: Ansari et al. (2010, p. 76).

In the case concerned, in order to lead the BSC to be regarded as having high fidelity to the model by Kaplan and Norton (1997), four key characteristics were considered: (i) if the system combines financial and non-financial measures; (ii) if it is divided into four perspectives: financial, customer, internal processes, learning and growth; (iii) if it has as a based the cause and effect relationships between the measures that link the four perspectives; and (iv) if it is a system that focuses on the strategy communication and implementation. Low fidelity, in turn, was represented by the absence of these four characteristics and the presence of many customizations.

To characterize the practice concerned as extensive or not, the four characteristics of the BSC mentioned above were also taken into account. Thus, in a highly extensive adaptation, all perspectives of the BSC were adopted in order to establish a cause and effect relationship between performance measures, as well as to have a reward system linked to the achievement of goals; in turn, in a lowly extensive adaptation, the implementation had not taken place comprehensively in the organization. Thus, we used the typology proposed by Speckbacher et al. (2003) and Lee and Yang (2011) (shown in section 3) to assess the extent of the implementation of the BSC, where the BSC types II and III have high extension and the BSC type I is regarded as having a low extension.

4.2 The Case Study Company

The company analyzed in this study is a limited company (Ltd.), operating for 17 years in the sector of trade and distribution of liquid, solid, and gaseous fuels, in Northern and Northeastern Brazil, with more than 170 gas stations spread over 100 northeastern municipalities. In this study, for confidentiality purposes, we decided to nickname it the Oil Company. It has a storage area in the ports of Suape (Pernambuco), Cabedelo (Paraíba), and Guamaré (Rio Grande do Norte); 10% of the fuel traded in Suape is provided by the Oil Company and the State of Pernambuco represents 10% of the national fuel consumption.

The Oil Company operates as a holding that consists of five companies, which together account for annual revenue

around R\$ 1.5 billion reais. Although its revenue allows regarding it as a large-sized company, according to the classification of the Brazilian National Bank for Economic and Social Development (BNDES), it maintains family ownership control.

Five companies make up the group called, herein, the Oil Company, two from the fuel distribution sector, the main business of the group, with two distributors, one in northeastern and another one in northern Brazil. The other three companies are businesses that support the distribution activity: a supply card administrator, a river terminal in the North region and a multinational Petroleum coke trader.

Its staff has doubled in just over two years. In 2012, there were already 371 people, compared to 176 in 2010. The group has invested in personnel management, as well as in qualification and undergraduate and graduate courses for its employees.

Currently, the group's board of directors consists of five directors: commercial and operational board, finance and planning board, administrative board, new businesses board, and institutional relations board.

In the past two years, the company has undergone a process of reshaping its management, by adopting the Performance Improvement Program (PIP), which has reflected on cultural change.

Although the Oil Company is in its first generation and focuses its founders on senior board positions, it already undergoes the professionalization phase, typical of the third generation, with the arrival of new managers and directors who are not family members. The company's financial manager stresses that the organization is undergoing an organizational structuring process:

We had no mission, vision, and values, nor a strategic map drawn; today, we have them. Our organizational chart was very fragile; today, we have a much better defined organizational chart. Today, we are restructuring our plan for jobs and wages. I think those were the major change milestones. (Respondent 3)

According to the chief executive officer's son, in the past, one of the main characteristics of the group was informality.

There was an organizational culture strongly focused on trust and reliability in the results delivered by the employees.

The length of time working in the company was more than enough to ensure that the employee fulfilled her/his tasks and duties. With the changes taking place in the company's management for about two years, all activities have been described, measured, and assessed.

The big challenge to professionalize management in the Oil Company has been making the transposition from the theoretical realm to the daily practice of employees, in addition to engaging people and providing them with skills

and knowledge on result-driven management. Respondent 10 comments on this difficulty:

[...] *the greatest difficulty is this transition from theory to practice, because in theory things are very simple, the strategy is defined, processes are drawn up, indicators to measure processes are created; I think the big work that has been done is related to involving all the people in the company in the project, providing everyone with the skills and knowledge on what is result-driven management and what is strategic planning, what is budget, flowchart, organizational chart, leading people to grasp all the processes.*

5 RESULTS

This section deals with the results obtained from the case study of the implementation and adaptation of the BSC in the Oil Company, in order to identify and explain how technical, cultural, and political adjustment or maladjustment influenced the adaptation of the BSC in this company.

5.1 Technical, Cultural, and Political Characteristics Prevailing in the Oil Company

In the case study company, the main technical characteristic identified was the use of various managerial tools, ranging from those that help monitoring strategic planning to report preparation (Table 4).

Table 4 *Technical, cultural, and political characteristics of the Oil Company*

Categories	Characteristics of the Oil Company
Technical	- use of various tools;
	- information technology management in the group's headquarters;
	- presence of specialized professionals;
Cultural	- private company (competitive market);
	- for-profit;
	- prevalence of family relationships;
Political	- ongoing professionalization;
	- top-down management;
	- autocratic management.

Source: Prepared by the authors.

Currently, the organization has an *enterprise resource planning* (ERP) system. According to Hicks (1997), ERP is a software that facilitates the flow of information between all areas in a company, such as: logistics, finance, and human resources. The ERP system *Mega* has recently undergone a reimplementation process for interconnecting all the group's units. Although all companies were operating under the same ERP, due to an implementation error, they had many disconnected processes in the system, because each unit had a plan of accounts, a directory of products and customers different from the others. So, if an employee was transferred

to another company in the group, she/he would not know how to use the system.

In addition to the ERP, the Oil Company has a *business intelligence* (BI) tool, the *Qlikview*. The latter had its beginnings in the business, in order to obtain the dynamic display of operations. This BI type has a kind of pivot table in the software *Microsoft Excel*, which allows the users to see at any time, with crossings by region, period, viewing, the customer's shopping mix by region. In this regard, Respondent 10 highlights:

[...] it started from the commercial and today our big 'case' is the BI screen for financial outcome... we open, close positions, crossing them with the previous month.

By adopting the BSC, the consulting firm provided a management software to help monitoring the strategic and operational indicators. Respondent 5 talks of the functionality of this software for the company:

[...] in this tool we monitor the performance of all areas, both operationally and strategically. In the operational, we control the sectors and in the strategic the four perspectives of the BSC, finance, customers and markets, processes and people. So, we map from the strategic to the operational.

The Oil Company is a company operating in the competitive market, hence it has sought efficiency in processes in order to maximize the outcomes delivered to the owners. The cultural characteristics that predominate are those of a family organization that has been undergoing a professionalization process, by hiring a specialized management team with higher education and graduate education in various areas, although the directors are members of the two families who hold capital. The analysis of the political aspect revealed that management in the Oil Company still has an autocratic and top-down style.

In the case of the implementation of the BSC, the decision was directly linked to strategic planning council, i.e. the BSC was implemented by following a top-down approach. This means that managers at lower levels had no participation in the decision-making process. In addition, in the Oil Company there is a prevalence of characteristics of an autocratic management, where decisions are centralized in the family's strategic core.

5.2 Reasons for Adopting the Balanced Scorecard

Although the reason for the choice is not coated with a forceful justification associated with a search for efficiency, or with a particular characteristic of the practice, people came to the understanding that the entity nicknamed the Consulting Firm herein had a strong influence on the adoption of the BSC, as this is a tool included in the PIP. In many cases, organizations adopt the BSC as a fad, only to legitimize management in face of the organizational field they operate in. Respondent 9 explains this situation:

There are many organizations that implement the balanced scorecard as a fad. Many organizations deploy it to show the brand of the Consulting Firm linked to their management. But they do not believe that such an implementation helps improving outcomes. They do this to provide the organization with legitimacy, and not because they believe this will bring good results.

In the interviews, it became clear that the idea was to make a major organizational restructuring in the company, however, people did not know exactly what should be done first: redefining the structure, planning or preparing the budget. Initiatives have emerged to define mission and ideology, but there was some internal difficulty on how to put it down on paper. The Consulting Firm emerged in this context. Respondent 1 explains this moment in the company:

That was when the Consulting Firm emerged, which is a business institution that is ahead of the pack. That was when this program came, the PIP, which is neither a consulting nor an academy... so, it ended up combining in a very positive way. So, why the BSC? Because this is the tool they use to define, monitor, and control strategic planning.

According to Abrahamson (1996), fads are cultural products created to be sold by their followers; this author also argues that consultants use a compelling rhetoric, bringing *managerial novelties* to convince contracting managers.

In the case of the Oil Company, the BSC constituted such a managerial novelty, introduced by the Consulting Firm as the system that helps monitoring the organization's strategy. Respondent 10 comments:

It arose from the need to find a tool that helped viewing the results... so, at that time the Consulting Firm came, and the balanced scorecard was the tool they used and we liked the tool. Are there other methods, other tools? Yes, there are. But at that time we had none.

In the study, external pressure for compliance did not become clear, although the Oil Company should meet requirements of the Brazilian National Petroleum Agency (ANP). The fact is that the BSC, as it was found out, has been encouraged by one of the agents of change participating in the strategic planning council who, throughout his professional experience, had contact with the said tool. Moreover, this is the tool that the Consulting Firm usually adopts when providing the organizations with consulting services.

5.3 The Balanced Scorecard Adaptation

The BSC implemented in the Oil Company was analyzed through the prototypical version available in the literature, in order to determine similarities and differences that could indicate a possible adaptation of this managerial tool.

Analyzing the characteristics of the version adopted in the company of the case study revealed compatibility with BSC type I, because, at the time it was assessed, it had been implemented for just 6 months, therefore it was at an early stage in the organization; moreover, the perspectives used (financial, customer, internal processes, learning and growth) are the same that Kaplan and Norton (1997) uttered in the 1st article published in the *Harvard Business Review*

(HBR); therefore, the BSC of the Oil Company is closer to an organizational performance measurement system, a concept used in 1st generation of this tool, although some managers claim it is a system to monitor the strategy.

The passage from the BSC to the intraorganizational environment showed little customization, something which means it has been implemented in the organization as originally reported in the literature, with little attention to the issues of internal variety in the diffusion of the practice. As this study aimed to analyze change in management accounting through the synonyms redefinition, adaptation, customization, and modification of the BSC, we came to the understanding that the adoption of the BSC did not result in profound changes in the Oil Company.

The analysis of the dimensions fidelity and extensiveness, which were used to grasp the adequacy of the technical, cultural, and political perspectives, showed that the practice diffused proves to be true when compared to the prototypical version, as well as that the extension of the BSC in the organization was low, something which led us to believe there was a minimal effort to unrestricted application, with customization and adjustment to the organization's reality.

The BSC was implemented through the performance indicators that already existed in the company and they were similar to those observed in the literature and used by many organizations. However, there was a small adaptation, with the preparation of indicators to measure the operational routine, named as routine management (ROMAN), based on Campos (2013).

The technical adaptation of the BSC took into account the organization's procedures. In this regard, the operational indicators that existed in the Oil Company were turned into strategic indicators. Respondent 5 explains this process:

[...] we created a balanced scorecard called ROMAN, which is routine management, where we map each area. So, each sector has its own indicators... these operational indicators do not mix with the strategic ones.

When comparing the characteristics of the BSC and the Oil Company, the version adopted had technical compatibility to the other technologies observed in the organization and high fidelity to the model developed by Kaplan and Norton (1997). However, in the cultural aspect there was misfit between the characteristics of the BSC and the organization, because it is a family business that did not have strategic planning in its agenda. Respondent 1 comments on this misfit:

[...] the company is in its adolescence... everyone who works here is very good, but there was not such a culture of putting things down on paper, i.e. operating a [Plan, Do, Check, and Act] PDCA. It was executed, there was no room for planning that comes from people's minds.

In this regard, our results were similar to those provided by Ansari et al. (2010). The authors point out that, when a follower adopting company suffers a cultural misfit, the tendency is that a version with high fidelity and low extensiveness is implemented. Cultural misfit occurred because, before strategic planning, there was in the organization a prevalence of relationships based on friendly ties typical of a family environment (Aggelogiannopoulos, Drosinos, & Athanasopoulos, 2007) and the adoption of the BSC has brought along a rather professional culture, by measuring the result delivered by managers. This caused greater pressure on the organizational actors to change their attitudes and practices. Respondent 10 highlights:

[...] organizational culture had to be adapted to the group's wish for professionalization. So, today, people work here with a greater focus on outcomes... there are people who are adapting better... there are people who are going through the motions.

Before, there was no planning, control, and monitoring of the implementation of the strategy, because people thought that individuals had outstanding knowledge acquired over the years in the organization and, therefore, they did not need to be assessed. With the BSC, everything tends to be measured, assessed, described, something which requires managers to change their behavior in relation to the planning process and the organizational strategy assessment. Respondent 1 comments on this behavioral issue:

[...] sometimes, ignorance is good. Generally, we have been finding a different way to work, and this stretches the comfort zone, but in a positive way. Before, we executed, now, we have to think if things are connecting to the strategy. So, there is a discomfort in this regard that is very positive.

The interviews showed that the adoption of the BSC was more difficult because decisions are made in a centralized way. According to Bernhoeft and Gallo (2003), management decentralization takes place for the purpose of delegating activities to hired management staff, either known to the family or not. Respondent 7 explains this decision-making centralization:

[...] a family company still has a very strong centralized structure, if you say it does not exist you are completely utopian... but, over the last year with the Consulting Firm, resorting to this know-how of studying, the trend is that there is decentralization... the family business in Brazil and in northeastern of Brazil, unfortunately, is too centralist.

The leader plays a central role in the changes that occur in the organization. According to Segrè (2009), the leader, by holding power for many years, shapes the culture according to his preference and style. Thus, new employees entering the organization assimilate how the organizational culture

works. According to the consultant who participated in the implementation of the BSC in the company of the case study:

[...] the leader is the one who leads the organization anywhere. If leaders do not embrace the cause of implementing the balanced scorecard, the more you have people who want to, they will have much trouble. This is true either for a family business or a multinational company.

The analysis of the political aspect did not show misfit between the characteristics of the BSC and the organization. There were no political misfit, because the adoption of the BSC was decided by the owners of the organization according to the guidelines of the strategic planning council, i.e. through a top-down approach, but there was no unanimity, since some directors do not believe the BSC, as noticed:

[...] in the Oil Company there are directors who strongly believe in the BSC and some who still remain as Saint

Thomas, they have to see to believe. It is logical when the outcome is seen [...] after all, no one implements anything just to say it is there, people want to improve results... they will start to advocate it.

The Oil Company's management style retains autocratic features. Managers have an assisted autonomy: although in the last three years there has been an effort to professionalize management, by hiring professionals experienced in the market, preparing the business budget for the companies in the group, hiring the Consulting Firm to prepare the strategic panel and adopt the BSC, those who make a decision and give the last word are the owners.

Overall, we may say that the BSC deployed in the Oil Company suffered few adjustments, with high fidelity and extension restricted to the model available in the literature, where the variation that stands out is using indicators to manage the operational routine.

6 CONCLUSIONS

This study aimed to analyze and explain the adaptation of the BSC in the Oil Company, according to the model by Ansari et al. (2010), where the adaptation was grasped by means of the analysis of the fit (technical, cultural, and political) between the characteristics of the practice implemented (BSC) to the characteristics of the adopting company.

The results show that, overall, the BSC still remains similar to the prototypical model observed in the literature, with low customization. It has been *mimic* from the literature, but in fact it does not work as a system to monitor the strategy, but rather as an isolated set of metrics related to a performance measurement system.

The first aspect noticed is that there was not a clear motivation to justify the choice of the BSC as a strategic planning tool, and the implementation is a result of hiring the management Consulting Firm, whose methodology is the PIP.

One aspect that may be related to the adoption of the BSC is the fad and fashion of management practices, because many consulting firms often sell them as management solutions. Abrahamson (1996) also argues that consultants use a compelling rhetoric, bringing *managerial novelties* to convince contracting managers. In the case concerned, the consulting firm often works with the BSC.

The BSC is not institutionalized in the Oil Company, yet. What reinforces the assertion is the fact that processes have not been mapped, and there were not profound changes in rules and routines, something which would be common in an organization after the implementation of this tool. In all the interviews, there was a prevalence of the discourse that

the company is undergoing a process of change, but the way how the BSC has helped management did not become clear.

Some resistance to the BSC was observed among directors, because they had a culture of analyzing results through financial statements. So, the change in focus to accounting ruled by the managerial information brought a certain discredit to some board members, who, due to their experience in the market and the ownership of capital, are reluctant to use information extracted from the BSC.

The Oil Company is characterized as a follower adopting entity that, when suffering a misfit between the cultural characteristics of the BSC and those of the organization, showed a similar and less extended version. Culturally, the adoption of the BSC underwent an impact, because the organization had to professionalize management and this could be noticed in the search for process efficiency. As the organization experienced cultural misfit, the trend observed was a low adaptation pattern along with high fidelity.

Cultural divergence occurred because the organization retains the innate characteristics of a family business, something which ends up hindering the adoption of a rather technical and formal management. In response to this divergence, people sought to adopt the practice similar to the prototypical version. In turn, the political aspect of the BSC did not reveal misfit to the organization's characteristics. There was no political misfit because the BSC is characterized as a top-down system, while in the Oil Company it was deployed according to the guidelines of the strategic planning council, i.e. by using a top-down approach.

The version of the BSC adopted remained similar to its prototypical version, since it combines financial and non-

financial measures; it is structured into four perspectives: financial, customer, internal processes, learning and growth; it is based on the cause and effect relationships; and it is a system that focuses on communication and strategy implementation.

The BSC has been deployed to a restricted extent, since the only variation in the model by Kaplan and Norton (1997) occurred through the adoption of operational indicators to manage the operational routine. Moreover, not all sectors underwent changes, because some areas, such as logistics, had not created their strategic indicators by the time of the interviews, something which makes impossible the full operation of the BSC and hinders measuring the outcome in the area.

This article contributes to the literature on the BSC, since it adopts a new way of explaining the adaptation of the BSC at the intraorganizational level. Qu, Cooper and Ezzamel (2010) found that one of the reasons why the BSC has been successful in the practical environment is the fact that users can adapt it according to their needs. The current view is that the BSC is a generic concept, which may be customized by users (Tayler, 2010). It might be argued that this ability to adapt and customize the BSC is the main reason for its success and popularity among companies (Cooper, Ezzamel, & Qu, 2011). However, our results suggest that the BSC may remain quite similar to its prototypical version, even when propagators of the BSC in the company identify the need to change in order to better fit the organization. There was this adaptation pattern in the context of cultural misfit between the organization and the BSC. Exploring this cultural misfit can be a fruitful avenue for further research, because there is a critical knowledge gap about what happens to the BSC during and after its adoption and which factors can affect the adaptation process.

As a theoretical contribution of the study, the application

of the model by Ansari et al. (2010) to the analysis of the BSC adaptation process in a Brazilian fuel distributor stands out. Misfit was found between the company's cultural characteristics and the characteristics of the BSC and, in response to this misfit, it was implemented in the distributor similarly and to the same extent that the prototypical version, although we have noticed that it is not institutionalized in the organization's routines, yet.

In this article, we challenged the two traditional research lines concerning diffusion: *rational* and *social*, because it is argued that the adaptation process (or not) of a practice may be related to a complex process of inter-relationships between the characteristics of the practice and the characteristics of the organization, specifically the technical, political, and cultural aspects. Therefore, the attributes of the practice during the diffusion process are subject to negotiation and change during the diffusion process. As a result, the organizational players regard as something complex performing rational calculations of costs vs. benefits and impacts of adopting a practice while its meaning and understanding are still being created.

This article deals with the adaptation as a key part of the literature on diffusion of managerial accounting practices. It suggests the need for further research on this topic, because very little is known about what happens in the organizations during the diffusion process of a new practice at the intraorganizational level (Suddaby, 2010, Gondo & Amis, 2013). Thus, it is believed that the theoretical model proposed by Ansari et al. (2010) may contribute to fill this gap. We suggest the adoption of this theoretical model as a basis for further studies on the process of adapting an external practice in an organization, for a better understanding of the technological, cultural, and political aspects involved in a managerial accounting practice.

References

- Abrahamson, E. (1991). Managerial fads and fashions: the diffusion and rejection of innovations. *The Academy of Management Review*, 16(3), 586-612.
- Abrahamson, E. (1996). Management fashions. *The Academy of Management Review*, 21(3), 254-285.
- Aggelogiannopoulos, D., Drosinos, E. H., & Athanasopoulos, P. (2007). Implementation of a quality management system (QMS) according to the ISO 9000 family in a Greek small-sized winery: a case study. *Food Control*, 18(9), 1077-1085.
- Ansari, S. M., Fiss, P. C., & Zajac, E. J. (2010). Made to fit: how practices vary as they diffuse. *Academy of Management Review*, 35(1), 67-92.
- Ax, C., & Bjornenak, T. (2007). Management accounting innovations: origins and diffusion. In T. Hopper, R. W. Scapens, & Northcott, D. (Ed.), *Issues in management accounting* (pp. 357-376). Harlow: Financial Times Prentice Hall, p. 458.
- Bernhoeft, R., & Gallo, M. (2003). *Governança na empresa familiar: gestão, poder, sucessão* (4a ed.). Rio de Janeiro: Elsevier.
- Bourguignon, A., Malleret, V., & Norreklit, H. (2004). The American balanced scorecard versus the French tableau de bord: the ideological dimension. *Management Accounting Research*, 15(2), 107-134.
- Boxenbaum, E., & Jonsson, S. (2008). Isomorphism, diffusion and decoupling. In R. Greenwood, R. Suddaby, C. Oliver, & K. Sahlin-Anderson (Eds.), *Handbook of organizational institutionalism* (pp. 78-98). New York: Sage.
- Burkert, M., & Lueg, R. (2013). Differences in the sophistication of value-based management: the role of top executives. *Management Accounting Research*, 24(1), 3-22.
- Campos, V. F. (2013). *Gerenciamento da rotina do trabalho do dia a dia* (9a ed.). Nova Lima, MG: Falconi.
- Cooper, D. J., Ezzamel, M., & Qu, S. Q. (2011). Popularizing a management accounting idea: the case of the balanced scorecard (SSRN Working Paper).
- Fiss, P. C., & Zajac, E. J. (2004). The diffusion of ideas over contested terrain: the (non)adoption of a shareholder value orientation among German firms. *Administrative Science Quarterly*, 49(4), 501-534.
- Gondo, M. B., & Amis, J. M. (2013). Variations in practice adoption: the roles of conscious reflection and discourse. *Academy of Management Review*, 38(2), 229-247.
- Hicks, D. A. (1997). The manager's guide to supply chain and logistics problem solving tools and techniques. *IIE Solutions*, 29(10), 24-29.
- Kaplan, R. S., & Norton, D. P. (1997). *A estratégia em ação: balanced scorecard* (4a ed.). Rio de Janeiro: Campus.
- Kaplan, R. S., & Norton, D. P. (2001). *The strategy-focused organization: how balanced scorecard companies thrive in the new business environment*. Boston, MA: Harvard Business School Press.
- Kaplan, R. S., & Norton, D. P. (2010). Conceptual foundations of the balanced scorecard (Working Paper). Boston, MA: Harvard Business School.
- Kennedy, M. T., & Fiss, P. C. (2009). Institutionalization, framing, and the logic of TQM adoption and implementation decisions among U.S. hospitals. *Academy of Management Journal*, 52: 897-918.
- Lee, C., & Yang, H. (2011). Organization structure, competition and performance measurement systems and their joint effects on performance. *Management Accounting Research*, 22(2), 84-104.
- Modell, S. (2009). Bundling management control innovations: a field study of organisational experimenting with total quality management and the balanced scorecard. *Accounting, Auditing and Accountability Journal*, 22(1), 59-90.
- Modell, S. (2012). The politics of the balanced scorecard. *Journal of Accounting and Organizational Change*, 8(4), 475-489.
- Norreklit, H. (2000). The balance on the balanced scorecard a critical analysis of some of its assumptions. *Management Accounting Research*, 11(1), 65-88.
- Norreklit, H., & Mitchell, F. (2007). The balanced scorecard. In T. Hopper, R. W. Scapens, & D. Northcott (Eds.), *Issues in management accounting* (3a ed., pp. 175-196). Harlow: Financial Times Prentice Hall.
- Norreklit, H., Norreklit, L., & Melander, P. (2006). US 'fair contract' based performance management models in a Danish environment. *Financial Accountability and Management*, 22(3), 213-234.
- Norreklit, H., Norreklit, L., Mitchell, F., & Bjornenak, T. (2012). The rise of the balanced scorecard! Relevance regained? *Journal of Accounting and Organizational Change*, 8(4), 490-510.
- Qu, S. Q., Cooper, D. J., & Ezzamel, M. (2010). Creating and popularising a global management accounting idea: the case of the balanced scorecard. *Research Executive Summary Series*, 6(13), 1-5.
- Rogers, E. M. (1995). *Diffusion of innovations*. New York: The Free Press.
- Segrè, G. (2009). The family business. *Technology Review*, 112(2), 5.
- Speckbacher, G., Bischof, J., & Pfeiffer, T. (2003). A descriptive analysis on the implementation of balanced scorecards in German-speaking countries. *Management Accounting Research*, 14(4), 361-388.
- Sturdy, A. (2004). The adoption of management ideas and practices: theoretical perspectives and possibilities. *Management Learning*, 35(2), 155-179.
- Suddaby, R. (2010). Challenges for institutional theory. *Journal of Management Inquiry*, 19(1), 14-20.
- Taylor, W. B. (2010). The balanced scorecard as a strategy-evaluation tool: the effects of implementation involvement and a causal-chain focus. *The Accounting Review*, 85(3), 1095-1117.
- Wanderley, C.A., Cullen, J., Tsamenyi, M. (2013). Diffusion and variations in management accounting practices: the balanced scorecard adaptation. In *Annals of the 9th International Management Control Research Conference*. Nyeronde, Netherlands.
- Wong-On-Wing, B., Guo, L., Li, W. & Yang, D. (2007). Reducing conflict in balanced scorecard evaluations. *Accounting, Organizations and Society*, 32(4), 363-377.

Correspondence Address:

Omar José Evangelista de Barros

Universidade Federal de Pernambuco, Centro de Ciências Sociais Aplicadas,
Departamento de Ciências Contábeis
Av. dos Funcionários, s/n – CEP: 50740-580
Cidade Universitária – Recife – PB
Email: omardebarros@gmail.com