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A Package of Controls for Traditional Budgeting Replacement and Organizational Alignment

A Case Study of Corticeira Amorim

Master's Final Assignment in the Modality Dissertation Presented to the Catholic University of Portugal for the degree of Master of Business Economics

by

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Abstract

Over the last few years, budgeting has been under great criticism, and the number of cases that have challenged the use of this traditional system is increasing. The present master thesis studies the case of Corticeira Amorim, a large Portuguese company that has abandoned the traditional budgeting process.

The main objectives of this study are to identify the alternative adopted by the company in order to address to the management requirements that were previously ensured by the budget, and to determine the degree of internal alignment with the implemented model. In order to answer these research questions, 18 interviews were conducted with top-level managers and an online questionnaire was sent to 30 other members of the organization.

The present study allowed concluding that, over the last years, the company has been developing, a set of norms and procedures that are adequate to its internal and external contingencies, in order to address the management requirements formerly assured by the traditional budget. This study also allowed concluding that the definition and dissemination of policies and procedures by the management control department is not a sufficient condition for their complete internal recognition. The main contribution of this work is to study management control systems as a "package" of controls, as well as to evaluate the perception and internalization of new management practices in employees.

Keywords: Management, Traditional budgeting abandonment, Package of controls, Beyond Budgeting, Corticeira Amorim, Organizational change.

Resumo

Ao longo dos últimos anos, o processo de orçamentação tem vindo a ser alvo de grande crítica, e o número de casos de empresas que desafiaram o uso deste tradicional sistema é cada vez maior. O presente estudo recai sobre o caso da Corticeira Amorim, uma empresa portuguesa de grande dimensão que abandonou o processo de orçamento tradicional.

Os principais objetivos deste estudo consistem em identificar a alternativa adotada pela empresa de forma a dar resposta aos requisitos de gestão que eram anteriormente respondidos pelo orçamento e, ainda, apurar o grau de alinhamento interno com o modelo implementado. Com o objetivo de responder às referidas questões de investigação, foram realizadas 18 entrevistas a gestores de alto nível e foi enviado um questionário *online* a outros 30 elementos da organização.

O presente estudo permitiu concluir que, ao longo dos últimos anos, a empresa tem vindo a desenvolver, um conjunto de normas e procedimentos que se adequam às suas contingências internas e externas, de forma a responder aos requerimentos de gestão anteriormente endereçados pelo orçamento. Este estudo permitiu, ainda, concluir que a definição e propagação de políticas e procedimentos pelo departamento de controlo de gestão não é condição suficiente para o seu total reconhecimento interno. O principal contributo deste trabalho passa por estudar sistemas de controlo de gestão como um "pacote" de controlos, bem como avaliar a perceção e interiorização de novas práticas de gestão nos colaboradores.

Palavras-Chave: Gestão, Abandono do orçamento tradicional, Pacote de controlos, *Beyond Budgeting*, Corticeira Amorim, Mudança organizacional

List of Abbreviations

ABB – Activity Based Budgeting

BB – Beyond Budgeting

BSC – Balance Scorecard

BU – Business Unit

CA – Management Planning and Control Model of Corticeira Amorim

MAI – Management Accounting Innovation

MCS – Management Control System

PMS – Performance Management System

ROM – Return on Management

TB – Traditional Budgeting

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Introduction

During the last decades, managers worldwide have recognized that traditional budgeting presents some limitations and, depending on how and what for it is used, it encourages undesirable behaviours, causing negative impacts on the organization without contributing for strategy execution. Using budgeting for covering a varied list of conflicting management functions can be harmful to the firm (Hansen & Van der Stede, 2004) and traditional budgeting can no longer satisfactory address all the activities it is designed to (Otley, 2006). However, as Bunce, Fraser, & Woodcock (1995) state: "These elements of good management remain essential, but they need to function better than they do through traditional budgeting." (Bunce et al., 1995, p. 257).

Although there is a lot of criticism towards budgeting, studies regarding traditional budgeting and its effect on the organization are contradictory and some may consider that these condemnations of budgetary control systems are "exaggerations of 'current worst practice" (Bhimani, Horngren, M. Datar, & Foster, 2008, p. 489). This apparent contradiction is justified by the fact that research tends to focus on only one variable of budgeting, ignoring the interconnections that exist between the various dimensions of a management control system (MCS) (Sponem & Lambert, 2016).

According to Robert Simons and Antonio Dávila (1998), "Return on Management" (ROM) measures "the payback from the investment of a company's scarcest resource—managers' time and attention" (Simons & Dávila, 1998, p. 71). Fieldwork allowed verifying that the top managers of Corticeira Amorim have realized, for a long time, that the traditional budgeting process had a low ROM. Moreover, they have identified that budgeting presented some limitations such as not inducing the desired behaviours in managers, becoming obsolete too soon, and prioritizing short-term financial performance, rather than long-term value creation through strategic execution. After recognizing the negative aspects of budgeting, it no longer made sense for Corticeira Amorim's management to continue to use it, and, in 2013, the corporate decision of abandoning traditional budget was applied in all Business Units (BUs).

Nevertheless, the changing process was progressive and had started a few years before. It began by introducing strategically oriented performance scorecards, which function was to evaluate performance without any connection to budget. Then, it continued by the specialization of some management functions with alternative tools. Finally, the former annual budget became reduced into a tool which purpose was to allow a financial forecast. After recognizing that they were systematically analysing variances from a budget that ceased to make sense very early in the year, Corticeira Amorim's top managers decided to stop wasting so much time in preparing the annual budget. In order to satisfy the forecasting's requirement, the firm substituted the budget with an annual forecast. Instead of being prepared from scratch, through an iterative and long process of negotiation, the annual forecast simply consists in a copy from the last year's results, revised by non-recurrent events and altered with some continuous improvement and future facts (about which managers are certain), being the most adherent to reality as possible.

This case study aims at addressing three main goals. The first is to understand the management motivations for abandoning budget. Secondly, it aims at identifying the alternative tools and techniques that are preconized by the Management Planning and Control Department of Corticeira Amorim to be applied by managers, in order to address the management requirements that a traditional budgeting process conventionally covers. Finally, this study aims at understanding to what extent do the elements of the organization recognize and apply this new management model's standards and procedures, that were developed during last years in Corticeira Amorim. In order to answer these research questions, 18 interviews were conducted and an online questionnaire was developed and sent to a list of 30 other managers.

This thesis adds value to the existing literature since it considers that MCSs are organizational packages of interrelated controls (Malmi & Brown, 2008), and it investigates the behaviour of not only top management but also middle and lower level managers (Hansen, Otley, & Van der Stede, 2003). Moreover, by presenting a description of what is considered to be a traditional budgeting process and what main functions it usually addresses, this study aims at avoiding confusion about what budget roles are taken into consideration.

This dissertation is structured as follows. Chapter 1 presents a literature review on MCS, the Execution Premium Model, the Budgetary Control Systems, and their alternatives. Secondly, Chapter 2 presents the methodology adopted for this study and makes a description of the case study's firm. Thirdly, Chapter 3 describes the management planning and control model that is preconized in Corticeira Amorim. Then, Chapter 4 presents Data Analysis and compares the perception of respondents with the preconized management model. Finally, Chapter 5 presents the main findings, discussion, and conclusions.

Chapter 1

1. Literature Review

1.1. Management Control Systems

Given the complexity and interdependencies that exist between controls used in an organization, the concept of an MCS has been proven to be difficult to define (Ferreira & Otley, 2009; Fisher, 1998, as cited in Malmi & Brown, 2008). The traditional approach to MCS was developed by Anthony (1965), who distinguished 'management control' from 'strategic planning' and 'operational control' (Otley, 1999). Anthony's definition of MCS is criticized because, by deliberately ignoring 'strategic planning' and 'operational control' this definition narrows the scope of such a complex concept and does not capture the interconnections that can exist in an MCS (Ferreira & Otley, 2009; Otley, 1999). For a system to be considered an MCS, we first need to assess if employees use it while developing their tasks, if it affects their behaviours and how useful these are (Otley, 1999) in assuring that their behaviours are in line with the organisational goals (Merchant & Stede, 2007).

There is a wide range of MCS definitions in literature and this diversity of concepts creates confusion when designing MCS (Malmi & Brown, 2008). In order to clarify this issue, Malmi and Brown (2008) proposed considering the following behavioural aspect: as long as the considered system is used to ensure alignment between the employees' decisions and behaviours with the organization's goals, then it can be considered an MCS. Ferreira and Otley (2009) prefer using the term 'performance management system' (PMS) for describing an MCS, in order to encompass a larger context of organizational performance management and control tools.

By complementing Otley's original framework (Otley, 1999) with Simon's levers of control framework, Ferreira and Otley (2009) developed a holistic framework for studying MCS as packages. The extended PMS framework proposes 12 questions for studying MCS and describing the interconnections that exist between different controls, thus introducing a robust framework for analysing organizational decisions on MCS design and use (Ferreira & Otley, 2009).

The need for studying MCS (and as so, budgets) as packages has been recognized for many years by different authors (Malmi & Brown, 2008). Studying a variable in isolation, discarding the behaviour of others that form part of an MCS, and ignoring the interdependencies that might exist between them, can lead to erroneous conclusions (Ferreira & Otley, 2009; Malmi & Brown, 2008). Malmi and Brown (2008) describe MCS as a package of controls and propose a framework for research in this field arguing that five types of controls constitute an MCS: Planning, Cybernetic, Reward and Compensation, Administrative, and Cultural (represented in Table 1).

<table>
<tr><th colspan="7">Cultural Controls</th></tr>
<tr><td colspan="2">Clans</td><td colspan="3">Values</td><td colspan="2">Symbols</td></tr>
<tr><th colspan="2">Planning</th><th colspan="4">Cybernetic Controls</th><th rowspan="2">Reward and Compensation</th></tr>
<tr><td>Long range planning</td><td>Action Planning</td><td>Budgets</td><td>Financial Measurement Systems</td><td>Non-Financial Measurement Systems</td><td>Hybrid Measurement Systems</td></tr>
<tr><th colspan="7">Administrative Controls</th></tr>
<tr><td colspan="3">Governance Structure</td><td colspan="2">Organisation Structure</td><td colspan="2">Policies and Procedures</td></tr>
</table>

Table 1: Malmi and Brown's MCS Package
Source: Malmi and Browns (2008)

Firstly, Planning controls aim at directing and coordinating teams, by setting the goals of each functional area in line with the ambition for the organization. Cybernetic controls are described as "a process in which a feedback loop is represented by using standards of performance, measuring system performance, comparing that performance to standards, feeding back information about unwanted variances in the systems, and modifying the system's comportment" (Green and Welch, 1988, as cited in Malmi & Brown, 2008, p. 292). Moreover, Reward and Compensation controls consist of the tools and practices applied by the company in order to incentivize workers' performance and willingness to behave according the company's interest. Finally, according to the Malmi and Brown's framework, Cultural and Administrative controls support the Planning, Cybernetic, and Reward and Compensation controls. While Cultural controls are related to the values, believes and social standards of the company, Administrative controls concerns the established policies and procedures and the hierarchical structure of the company (Malmi & Brown, 2008).

According to Malmi and Brown (2008), budgets may be considered a cybernetic system, which is of major importance for MCS in organizations worldwide (Bunce et al., as cited in Malmi & Brown, 2008). Therefore, budgets (and so their replacement) must be studied as being part of a package that includes other types of management controls.

1.2. Execution Premium Model

Early in the beginning of the research, fieldwork allowed inferring that the case study's firm, Corticeira Amorim, has adopted the main principles and sequence of stages of the *Execution Premium* model as the basis for its own adapted model. Although presenting considerable differences, namely in what concerns budgeting, understanding the Execution Premium model is considered important before presenting the model that is preconized by the management planning and control department of the case study's firm. The Management Planning and Control Model is described in Chapter 3 and consists in a set of rules and guidelines that are preconized to be applied in Corticeira Amorim, in order to address the management requirements that a traditional budgeting process usually covers.

Under the mote that it is impossible to control or improve something that we cannot measure (Kaplan, 2010), Kaplan and Norton developed the Balance Score Card (BSC), an understandable framework that allows translating strategic objectives in terms of performance measures and targets (Kaplan & Norton, 2001). Before developing the BSC, the two authors noticed that the majority of performance measures focused on a financial perspective, which was restricting sustainable value creation. According to Kaplan (2010), primordial management systems relied too much on budgets and so, on financial information, which led to a myopic decision-making that was based on short-term performance (Hansen & Van der Stede, 2004). BSC allows representing a firm's strategy in terms of financial and non-financial indicators and promoting an adequate equilibrium between short-term and long-term objectives (Kaplan, 2010).

After proposing the BSC, Kaplan and Norton noticed there was a lack of clarity in what strategic objectives firms aimed at achieving, and, therefore, developed the Strategy Map, a tool that allows visualizing the strategic objectives and the existing connections between them. The strategy map organizes the strategic objectives into a matrix that is divided into three strategic themes – growth, value, and efficiency – that lead to a final goal. These three strategic themes are grounded in four strategic perspectives – infrastructures, processes, customer, and financial. Considering the objectives included in each perspective, BSC lists the strategic indicators that measure those objectives and their target values for the year. Both BSC and strategy map must be developed according to a top-down logic (Kaplan & Norton, 2008).

Execution Premium is an integrated management model developed by Kaplan and Norton with the goal of aligning operations with strategy (Kaplan & Norton, 2008). These authors suggested an interactive management system that uses BSC and Strategy Map as the main tools that allow strategy execution. The Execution Premium model comprehends the following stages:

1. Develop the strategy – This step corresponds to the development of the mission, vision, and values of the organization. The mission statement describes the essential purpose of the organization, while the vision determines the medium/long-term ambition, and values are the internal guidelines that reflect organizational culture.
2. Plan the strategy – This step comprehends translating strategic orientation into specific strategic objectives, measures, and initiatives.
3. Align the organization – This step allows awaking and holding workers accountable for strategy. This step aims at aligning business and support units and workers through the communication of goals, the definition of rewarding plans associated to strategically oriented objectives and the development

of training plans that ensure the necessary hard and soft skills for strategy execution.

4. Plan operations – This step comprehends the development of strategic initiatives the resource plans that ensure closing the *gap* that exists between the current situation of the firm and its ambition for the future.
5. Monitor and learn –This step establishes periodic monitoring meetings that allow a proper follow-up and adjustment of the firm's strategic plans, which are based on medium/long-term strategic planning.
6. Test and adapt – This last step reinitiates the cycle through a strategy reaffirmation or modification after a strategic revision and performance evaluation of the firm.

Figure 1: Execution Premium Framework
Source: Kaplan & Norton (2008)

1.3. Budgetary Control Systems

Budgeting has always been a dominant management process used in most of the organizations worldwide (Hansen & Van der Stede, 2004; Merchant & Stede, 2007) and, while it has been under increasing criticism, studies demonstrate this is still the most commonly used management control tool and will probably persist in the near future (Cardos, 2014).

Although different theories may be considered, studies on this subject must take into consideration the contingency theory. This theory suggests that the MCS that best fits an organization will always be contingent on the context in which the organization is set (Otley, 1999). The way organizations use budgets depends upon the firm's environment, structure and technology (Lyne, 1988) and on the nature and difficulty of internal operations (Hanninen, 2013, as cited in Cardos, 2014). Although defending that the correct use of budgets is positive for organizations, Rosanas (2016) consider budgets to be a complex tool with very "nontechnical aspects", whose functions can be conflicting.

The multipurpose role of the traditional budgeting process is not new (Hansen & Van der Stede, 2004). However, there is no single configuration of a budgetary control system. In fact, Sponem and Lambert (2016) conclude that it is impossible to describe budgets as a universally standardized set of tools with the same roles in every firm since these vary significantly in each firm (Merchant & Stede, 2007). Furthermore, the performance of each budget function in an organization relies on the firm's specific characteristics and configurations of the budget (Hansen & Van der Stede, 2004) and, as some authors point out, the problem resides in how firms use budgets and what for these are used (Sponem & Lambert, 2016).

Budget Roles

Even though we can find significant differences on what the literature describes as the functions of budgeting, most authors seem to agree in a multipurpose role of the budgeting process (Hansen & Van der Stede, 2004; Henttu-Aho & Järvinen, 2013; Lyne, 1988; Rosanas, 2016). Pointing out what budgeting is used for is considered to be of major importance before reaching any kind of conclusion related to it because, as already mentioned, the roles of budget varies according to each firm, and so does its performance. Even though studies recognize the multipurpose role of budgets and the need for studying these systems as packages, the majority of studies have been focusing only on certain aspects of budgeting. Specifically, these studies continually focus on the performance evaluation role (Hansen & Van der Stede, 2004).

The most frequently cited purpose of budgeting is performance evaluation (Hansen & Van der Stede, 2004; Lyne, 1988; Malmi & Brown, 2008; Otley, 2006; Sivabalan, Booth, Malmi, & Brown, 2009). Budgeted values are compared with actual results in order to evaluate managers' and business units' performance. This is also the most commonly criticized feature of budgeting since using the budget to evaluate performance may induce budget games (or "gaming") and dysfunctional behaviours in managers (Hansen & Van der Stede, 2004).

Furthermore, other frequently mentioned roles of budgeting are: definition of operational plans (Hansen & Van der Stede, 2004; Otley, 2006; Sivabalan et al., 2009; Sponem & Lambert, 2016); coordination of firm's activities (Lyne, 1988; Merchant & Stede, 2007; Otley, 2006; Sponem & Lambert, 2016); performance incentivizing (Lyne, 1988; Merchant & Stede, 2007; Otley, 2006; Sponem & Lambert, 2016) and financial forecasting (Lyne, 1988; Merchant & Stede, 2007; Otley, 2006; Sponem & Lambert, 2016).

These are followed by strategic target setting (Hansen & Van der Stede, 2004; Lyne, 1988; Sponem & Lambert, 2016); and resource allocation (Hansen & Van der Stede, 2004; Otley, 2006; Sivabalan et al., 2009). Less mentioned, but still important to this study, budgeting is also claimed to be used for: authorizing expenses (Hansen & Van der Stede, 2004; Sponem & Lambert, 2016); cost management and control (Sivabalan et al., 2009); and activity monitoring, through item-by-item variances analysis (Lyne, 1988). We can also find the role of communicating expected results to external parties; facilitating top management oversight; and allowing risk management.

As mentioned above, traditional budgeting has different roles and configurations, depending on the firm's context. Therefore, creating a final list of traditional budget functions is not a straightforward exercise. For the purpose of this study, taking into consideration the reviewed literature, we selected a list of ten traditional budget functions, which was carefully reviewed in order to ensure this was a comprehensive and coherent list. This list was the basis for the construction of the interviews and questionnaires, which aimed at understanding how the case study's firm answers these management requirements. The ten budget roles that were selected for research purposes are:

1. Target setting;
2. Defining operational plans;
3. Resource allocation;
4. Forecasting financial results;
5. Authorizing expenses;
6. Coordinating firm's activities;
7. Managing costs;
8. Evaluating performance;
9. Performance incentivizing / compensation;
10. Monitoring activity (through variances analysis).

Finally, using budgets in a multitasked role is a premise for being considered a traditional budget process and a key aspect when arguing against this so commonly used management tool. Actually, the conflicts that can arise between these functions are one of the most criticized aspects of budgeting. Furthermore, we shall denote that some negative aspects of a traditional budgeting process, which are reviewed below, are only valid if budgeting is used to address certain ends and, therefore, can be only applied to a budgeting process with such purposes.

Budget Limitations

During last years, traditional annual budgeting process has been heavily criticized. Although some argue that these are exaggerations of worst practices (Bhimani et al., 2008) or even that this criticism can be made with ulterior motives (Ekholm & Wallin, 2000), it has been the basis for many organizational changes and gave origin to new configurations of MCS (Hope & Fraser, 2003).

Sometimes authors justify the negative aspects of traditional budgeting to new market conditions and uncertainty (Bunce et al., 1995; Cardos, 2014; Ekholm & Wallin, 2011), but it is important to denote that many of these limitations are due to the way firms use budgeting and for what purposes it is used.

One important negative aspect of traditional budgeting is that the management requirements it simultaneously tries to address are, potentially, in conflict. Even though defending that the right use of budgeting is positive for firms, Rosanas (2016) agrees that there can be conflicts between some traditional budgeting roles. David Otley (2006) explains that these conflicts arise when using budgeting both for performance evaluation and for forecasting, which needs to be as accurate as possible for planning purposes. Trying to address these two conflicting functions raises confusion on what should budgets represent, and what level of ambition should incorporate (Hansen & Van der Stede, 2004; Merchant & Stede, 2007). This ambiguity can lead to resource allocation decisions that turn out to be very costly to the firm (Cardos, 2014; Merchant & Stede, 2007). This may be the reason why some firms that still use budgeting opt not to use it for performance evaluation (Sponem & Lambert, 2016).

Although being one of the most commonly cited limitation of traditional budgeting, some argue that there can be positive externalities with addressing different purposes (Fisher et al., 2002, as cited in Hansen & Van der Stede, 2004). Moreover, some argue that traditional budgeting is the only tool that provides an integrated perspective of the firm's activities (Otley, 2006), and even conclude that the multipurpose role of budgets does not always attract criticism (Sponem & Lambert, 2016). Nevertheless, it is difficult to ignore the conflicts that can arise between some functions (Lyne, 1988) and to disagree about the impossibility of serving all traditional budgeting purposes equally well (Otley, 2006).

The literature is replete with examples of other negative practices relating traditional budgeting. Neely et al (2001) drew a list of the 12 most cited limitations of traditional budgeting (Hansen et al., 2003; Otley, 2006). Another list of the negative aspects of traditional budgeting was drawn by Sponem & Lambert (2016). As expected, most criticisms are common to both lists and frequently cited by other authors.

One of those critics is that traditional budgeting induces dysfunctional behaviours and the so-called "budget games" (Cardos, 2014; Hansen et al., 2003; Merchant & Stede, 2007; Sivabalan et al., 2009). For example, when budgeting is used to expenses authorisation, it becomes not only a ceiling but also a floor for costs. This means that even when managers are able to reduce their expenses, they will spend all the amount that budget allows, because they do not want the budget value to be lower on the following year, being this based on last year's results.

Two other very commonly cited negative aspects are that traditional budgeting takes too much time to prepare for the value it adds (Hansen et al., 2003; Merchant & Stede, 2007; Neely et al., 2001; Otley, 1999; Sivabalan et al., 2009; Sponem & Lambert, 2016), and that it becomes obsolete too soon (Sivabalan et al., 2009).

Moreover, traditional budgeting is also criticized for eliciting conservative behaviour (Sponem & Lambert, 2016). By using the budget to evaluate employees' performance, managers can be tempted to set easier targets (Hansen et al., 2003). Related to this, budgets are also said to restrict innovative thinking (Merchant & Stede, 2007) and to introduce rigidity to the organization (Sponem & Lambert, 2016).

Additionally, traditional budgeting is also criticized for imposing a culture of control, rather than a culture of engagement, and to impede cooperation between areas (Hansen et al., 2003; Neely et al., 2001; Sponem & Lambert, 2016).

Furthermore, traditional budgeting is criticized for consisting in a firmly rooted ritual (Sponem & Lambert, 2016) that prioritizes short-term profitability rather than long-term value creation, by diminishing non-financial metrics and focusing on short-term performance (Hansen et al., 2003; Merchant & Stede, 2007; Neely et al., 2001; Otley, 1999).

Finally, traditional budgeting is criticized for covering an annual time frame that is no longer suitable for the firm's business cycle (Neely et al., 2001; Otley, 1999; Sponem & Lambert, 2016), and for not accommodating the existing level of uncertainty and demanding markets (Bunce et al., 1995; Cardos, 2014; Ekholm & Wallin, 2011).

For the purpose of this study, taking into consideration the reviewed literature, we selected a list of thirteen negative aspects of a traditional budgeting process, whcih served as the basis for the collection of data. The objective consisted of understanding how far the respondents recognize each of the following limitations of budgets:

1. Traditional budgeting covers an annual timeframe that is no longer suitable for the firm’s business cycle.
2. Traditional budgeting is no longer suitable in the existing context of macroeconomic uncertainty.
3. Target setting and financial forecasting are conflicting purposes, and, therefore, these two tasks must not be covered in the same tool.
4. Traditional budgeting is not only a ceiling but also a floor for costs.
5. Traditional budgeting elicits conservative behaviours.
6. Traditional budgeting impedes innovation.
7. Traditional budgeting introduces rigidity to the organization.
8. Traditional budgeting deters cooperation between areas.
9. Traditional budgeting imposes a culture of control rather than a culture of engagement.
10. Traditional budgeting elicits opportunistic behaviours.
11. Traditional budgeting translates the predominance of short-term profitability to the detriment of long-term value creation.
12. Traditional budgeting takes too much time for little value.
13. Traditional budgeting is primarily a ritual.

1.4. Alternatives to Budgeting

With all the above-mentioned criticism, some complementary or even substitute processes have emerged, in order to overcome the limitations of traditional budgeting. There are essentially two alternatives to overcome these negative aspects of traditional budgeting: either improving it, by budgeting according to firm's activities or by budgeting more frequently or, more radically, abandoning it, by going beyond budgeting (Cardos, 2014; Hansen et al., 2003; Otley, 2006). However, there is no standardized solution for every organization facing these problems and this is once again contingent on each firm's context (Cardos, 2014). One key impediment to overcoming the negative aspects of traditional budgeting is the challenge of changing the culture. Effective transformation is dependent on the attention paid to the firm's culture, which needs to be receptive (Bunce et al., 1995).

The first mean by which firms can overcome traditional budgeting deficiencies is by adopting Activity Based Budgeting (ABB) (Hansen et al., 2003; Otley, 2006). ABB is an extension to the Activity Based Costing (ABC) and focuses on budgeting in two stages, taking into account the activities of the firm instead of its units (Cardos, 2014; Hansen et al., 2003). The first stage consists in the "operational loop", which converts demands estimates into activity need and then into resource requirements through an activity-based logic. The second stage is the "financial loop", which implies developing a financial plan that fulfils the needs of the operational plan developed in the first stage. This approach improves resource allocation decisions since these are taken according to actual needs (Hanninem, 2013, as cited in Cardos, 2014). The downside of this approach is that it increases the complexity and the time consumption in preparing budgets (Cardos, 2014).

Another alternative tool for replacing or complementing budgets is rolling forecasts (Hope & Fraser, 2003). Rolling forecasts simplify the budgeting process by having less detail than traditional budgeting, while increasing its frequency (Liang & Ordasi, 2014). Each rolling forecast covers a rolling 12 to 18 months period and it is revised monthly or quarterly or when significant events happen (Lorain, 2010). According to the literature, the advantages of rolling forecasts are their increased flexibility, to be based in more accurate values (B.G. Ekholm & Wallin, 2000), to allow making better resource allocation decisions, and to maintain a continuously link with strategy (Lorain, 2010). The downside of rolling forecasts is their complexity of preparation and time consumption during the year (Lorain, 2010). Although rolling forecasts may substitute the annual budget, some authors recognize that this may also be used as a complement to budget (Cardos, 2014; Ekholm & Wallin, 2000; Sivabalan et al., 2009). Additionally, some authors recognize that rolling forecasts introduce uncertainty that is not fair when using it for performance compensation (Gurton, 1999, as cited in Ekholm & Wallin, 2000). Lorain (2010) concludes that rolling forecasts should complement traditional budgeting instead of substituting it, at least for motivation purposes.

Lastly, Beyond Budgeting (from now on, "BB") is considered to be a complete system of controls (Østergren & Stensaker, 2011) that aims at avoiding the "annual performance trap", by abandoning traditional budgeting and radically changing into a decentralized management model (Hansen et al., 2003; Otley, 2006). The trap that BB group refers to is due to using traditional budgeting for performance evaluation and claim that targets used for this purpose must be adjustable during the year and based either on an internal or an external benchmark (Hansen et al., 2003). Abandoning traditional budgeting for performance evaluation is just the first step firms must take, in order to go beyond budgeting.

The BB philosophy defends a set of 12 principles that are divided into "leadership principles" and "management process principles", as represented in Table 2.

Leadership principles	Management processes
1. Purpose – Engage and inspire people around bold and noble causes; ***not*** *on short-term financial targets*	7. **Rhythm** – Organize management processes dynamically around business rhythms and events; ***not*** *around the calendar year only*
2. Values – Govern through shared values and sound judgement; ***not*** *through detailed rules and regulation*	8. **Targets** – Set directional, ambitious and relative goal, ***avoid*** *fixed and cascaded targets*
3. Transparency – Make information open for self-regulation, innovation, learning and control; ***don't*** *restrict it*	9. **Plans and forecasts** – Make planning and forecasting lean and unbiased processes; ***not*** *rigid and political exercises*
4. Organization – Cultive a strong sense of belonging and organise around accountable teams; ***avoid*** *hierarchical control or bureaucracy*	10. **Resource allocation** – Foster cost conscious mind-set and make resources available as needed; ***not*** *through detailed annual budget allocations*
5. Autonomy – Trust people with freedom to act; ***don't*** *punish anyone if someone should abuse it*	11. **Performance evaluation** – Evaluate performance holistically and with peer feedback for learning and development; ***not*** *based on measurement only and* ***not*** *for rewards only*
6. Customers – Connect everyone's work with customer needs; ***avoid*** *conflicts of interest*	12. **Rewards** – Reward shared success against competition; ***not*** *against fixed performance contracts*

Table 2: Beyond Budgeting Model Principles
Source: (Olesen, Larsson, Player, Röösli, & Bogsnes, 2016)

Despite defending a radical change, BB still recommends forecasting for planning purposes, but doing this with less complexity and more frequently. In fact, along with benchmarking and customer profitability, rolling forecasts is a technique being spread by the BB movement (Golyagina & Valuckas, 2012).

Firms are still making an effort in learning how traditional budgeting can be replaced and this may be given to the fact that studies focus on single innovations (Østergren & Stensaker, 2011). Among the existing alternatives to traditional budgeting, the results of a survey made to Spanish firms show that the most relevant of these are rolling forecasts, and 80% of the companies are already using it or show intentions to implement it (Lorain, 2010). Nevertheless, studies show that most firms still use traditional budgeting and do not consider abandoning it (Ekholm & Wallin, 2000).

Chapter 2

2. Methodology

2.1. Research Approach

The empirical study is set in the context of a multi-divisional company that decided to abandon the traditional budgeting process. The company being studied, Corticeira Amorim, is a large Portuguese-based multinational company that operates and leads the cork industry worldwide and is divided into five business units (BU) that operate throughout the cork value chain. Top management of Corticeira Amorim decided to stop using the traditional budget process in 2013.

This master thesis aims at achieving three main goals. These objectives are: to understand the reasons that justify the abandonment of the traditional budgeting process, to identify what alternative tools and techniques are preconized by the Management Planning and Control Department to be applied in substitution of the budget, and to infer if the organizational elements recognize and apply the new management practices.

On one hand, deductive reasoning starts by developing the hypothesis and then empirically tests the same; on the other hand, the theory is the outcome of inductive reasoning (Gill & Johnson, 2013). To attain the abovementioned goals, inductive reasoning is the adopted research methodology, based on a single case study with embedded units (Yin, 2003).

Considering that this study aims to study human behaviour, by comparing and analysing the several interpretations about the procedures implemented in the organization, it adopts a qualitative approach. Case Study is considered to be suitable when the research questions are in the “how” and “why” form, when there is not a clear set of conclusions for the study, when the population being studied cannot be manipulated and when there is not a clear separation between the context and the phenomenon being studied (Yin, 2009). Additionally, since the case study is exploratory, the research strategy must be flexible enough for accommodating different perspectives of the issue under study, which requires a full description of the adopted procedures and common practices (Kothari, 2004).

2.2. Case Study

Corticeira Amorim is a sub-holding firm belonging to the Amorim Group that has its origins back in 1870 in the cork industry. It is one of the largest Portuguese firms, with consolidated sales of 641,4 million euros in 2016 (102,7 million euros of net profit), more than 3600 employees across the world and has operations in the five continents. Observing the maxim "not just one market, not just one client, not just one currency, not just one product", Corticeira Amorim has been leading the cork sector worldwide ever since (Corticeira Amorim, S.G.P.S., 2016).

As we demonstrate in Figure 2, the more than 80 legal entities that integrate Corticeira Amorim's universe are divided into the following five BUs: Raw Materials, Cork Stoppers, Floor & Wall Coverings, Composite Cork, and Insulation Cork. The management of each business is independent and the verticalization of the businesses is considered a key differentiating factor.

By operating in the five businesses, Corticeira Amorim is able to explore all the value chain that cork can offer.

- The Raw Materials BU is responsible for the purchase, storage and initial preparation of the cork. It is the responsibility of this BU to prepare, study and decide the company's multi-annual supply policy.

- The Cork Stoppers BU makes Corticeira Amorim the leading producer of cork stoppers worldwide, by producing and supplying various types of bottle caps, mainly cork stoppers for the wine industry. This BU was accountable for almost 66% of the group sales in 2016.
- The Floor & Wall Coverings BU produces and distributes cork floor and wall coverings, produced with a cork which quality is not proper for producing cork stoppers.
- The Composite Cork BU is the most technologically advanced BU and creates innovative cork products with similar materials from the ones used in the Floor and Coverings BU, that then sells in the industry, retail, and construction markets.
- The Insulation Cork BU is dedicated to the production of acoustic and thermal insulation agglomerates, which are 100% natural.

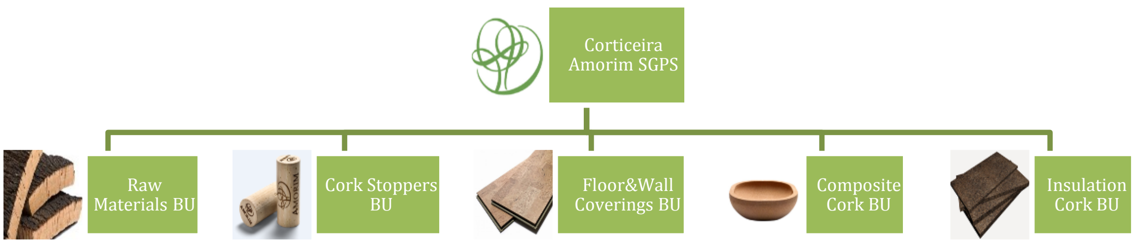

Figure 2: Corticeira Amorim's Business Units
Source: Developed by the author

2.3. Data Collection

Data collection was performed through semi-structured interviews, closed answer online questionnaires and a set of secondary data sources, such as informal meetings and internal presentations. The procedure used for data collection described below aimed at combining quantitative evidence with qualitative evidence from both questionnaires and interviews.

With the goal of having a cross-sectional perspective of the case, we selected a sample of 48 employees from the organization to participate in this study. The main goals were to understand how the firm addresses the management needs that are covered by a traditional budgeting process, what is the level of satisfaction with the adopted procedures and how far do these individuals recognize the negative impacts that can arise from a traditional budgeting process.

The 48 elements from the sample can be classified according to three groups:

- Group 1: Executive members of the board of directors of Corticeira Amorim SGPS, the holding firm of the five BUs.
- Group 2: Executive, operational and financial chief officers of each BU.
- Group 3: Other elements of the organization.

a) Interviews

Semi-structured interviews were conducted to groups 1 and 2. What distinguishes these two groups is that group 1 was the group that took the decision of abandoning budgeting. Therefore, the interview made to group 1 has an additional question from the interview made to group 2: "What were the main reasons for abandoning the traditional budgeting process in Corticeira Amorim?".

The interviews made to groups 1 and 2 aimed at understanding the different existing perspectives about how the firm addresses traditional budget functions, and how far these elements recognize the main budget limitations identified in the literature. All interviews were taped and typically lasted between 50 and 90 minutes. In order to improve and facilitate the analysis of the answers, the interviews were partially transcribed. Interviews were structured as follows:

- Part 1[1] – Traditional Budget Functions: With the list of the ten selected functions of the traditional budget process described in the Literature Review, the purpose of this part aims at understanding how the organization answers the management requirements that are traditionally addressed with the annual budget. For each of the ten functions, the goal was to understand if the respondent's perspective indicates that the firm still uses a process similar to a traditional budgeting process or if, otherwise, the firm addresses this need with a different process and, more importantly, how this process is performed without budgeting. When the answers were considered to have little detail or if any doubt needed to be clarified, unstructured questions were made. After fully understanding the process and concluding if the respondent was referring to a process that was similar to traditional budget or, otherwise, to a process with the characteristics of the preconized process, satisfaction scale questions about the adopted process were made. In the case the process corresponded to a traditional budgeting process, the investigator would ask, with a 10-limited scale question, how satisfactory did the respondent classify the process. Otherwise, if the answer pointed out to a process that is in accordance to what is preconized by the management planning and control model, the investigator would ask, with a 10-limited scale question, how more satisfactory did the respondent classify the process adopted when compared to using a traditional budgeting process.
- Part 2[2] – Traditional Budgeting Limitations: with a list of 13 possible negative aspects that, according to the literature, can arise with the use of traditional budget, this part was composed of thirteen questions that aimed at understanding, with 10-limited scale questions, how far the

[1] Please see appendix A: Interview's Part I Structure
[2] Please see Appendix B –Interview and Online Questionnaire's Part II Structure

interviewees recognize that the traditional budgeting process may give origin to those negative impacts.

b) Online Questionnaires

Under the same guidelines as interviews, online questionnaires were prepared for group 3.[3] There can be two differences between group 3 and groups 1 and 2. Firstly, the hierarchical level of the elements in the organization. While the board of directors of the holding firm constitutes group 1, top-line managers that belong to the executive board of each BU constitute groups 2, and group 3 can include both first-line managers as well as secondary level managers. Secondly, the functional area in which these elements operate. The main reasons to opt for interviewing the executive, operational and financial chief officers and perform an online questionnaire to elements who operate in other functional areas (included in group 3), is that it is perceived that the first elements are usually more affected by the traditional budgeting process and may have a more profound knowledge on how the processes are performed.

In order to understand the procedures adopted by the organization to address the traditional budgeting functions, closed answer questions were developed. In order to construct closed answer questions and, therefore, facilitate the response, there was the need of identifying answer's variables to each question. For example, the question "What is the procedure adopted in order to define the strategic targets of the firm?" considers the following variables in the answer: the periodicity used for defining targets; the level of understanding of the employees over the targets; the hierarchical flow in the process; the level of detail of the targets; if targets were revised and adopted during the period to which they should be considered; and the basis used for

[3] These questionnaires were developed in www.qualtrics.com

defining these targets. For each identified variable, alternative answers were defined. [4]

Some criticisms can be made to this methodology but it is important to mention that, with the goal of not biasing the analysis or inducing the answer, an effort was made in order to cover all possible contexts and to use neutral vocabulary when identifying the alternatives of the answer to each variable or sub-question.

Furthermore, as a strategy used in order to get a clear view of the case, the possibility of using alternatives of answers such as "not applicable" or "other" was not used. This is an important caveat because, when analysing the results to this study, the reader must take into consideration that, instead of being the exact respondent's perception on the subject, the answers given to this questionnaire may be the alternative that best suited the respondents' perception. The choice of using closed answers can also be criticized since the interpretations given to each alternative of the answer may vary by respondent.

For each question, one of the answer variables (sub-questions) was chosen to constitute the trigger for the satisfaction question about the adopted procedure. The criteria used for choosing this trigger was to select the variable that seemed to represent the most differentiating feature between a traditional budgeting process and what is preconized by the principles of the management planning and control model process. Although these variables may not represent all differences between the two processes, this was the solution found in order to identify whether a traditional budget process is used, or not, in order to address the management function under consideration, at least in what concerns that important feature. These variables are identified in Table 3.

[4] Please see appendix C: Online Questionnaire's Part I Structure

Budget Function	Distinguishing characteristic [5]	Traditional Budgeting Process	Preconized Management Planning and Control Model
Target setting	Construction basis	Conservative and based on historical results	Ambitious and in line with a medium-term strategic vision
Defining Operational plans	Purpose	To achieve budget	To achieve strategically-oriented targets [6]
Resource allocation	Flexibility	Static and relied on budget	Adaptable to on-going business
Forecasting Financial Results	Detail level	High level – all lines	Low – only totals
Expenses authorization	Frequency[7]	According to annual budget	Case by case
Coordination of firm's activities	Flexibility	Stable and set by what annual budget defines as each team's responsibility	Adjustable and permanent, through communication between departments
Costs Management	Reference[8]	Budgeted costs	Real-time periods' values (e.g.: homologous, previous period or year-to-date)
Performance evaluation	Reference	Budget results	Targets, which are unlinked to the forecast[6]
Performance incentive	Reference used as basis for the bonus	Comparison between actual performance and budget sets the bonus	Comparison between actual performance and performance intervals sets the bonus
Activity monitoring	Reference[8]	Budget	Other than budget - Real-time periods' values or targets

Table 3: Drivers for Questionnaire's Sub-questions
Source: Developed by the author based on fieldwork and literature on the topic

In order to address the goal of understanding how far the respondents recognize the identified negative impacts that can arise from the use of a traditional budget process, similar questions to the ones made to groups 1 and 2 were made to group 3[9]. It is important to denote that, in the beginning of this

[5] The distinguishing characteristic corresponds to the variable of answer selected as the distinguishing characteristic between a traditional budget process and the preconized process of Corticeira Amorim.
[6] While a traditional budgeting process sets a dilemma between the need of having accurate forecasts with the need of setting ambitious targets, the preconized process separates these two purposes.
[7] More importantly than the frequency used for authorizing expenses, the feature that mostly distinguishes a traditional budgeting process from the preconized process is if either the authorized values are based on last year's results or not, since this is what causes managers to perceive budget not only as a ceiling but also as a floor for expenses. However, this was not the chosen feature because, even if expenses are approved case by case, it can be based on last year's results too, and therefore, it is not easy to infer about.
[8] Using past values instead of budgeted values, as the reference for managing costs or for monitoring activity, does not necessarily means that it improves the analysis. If a firm does not budget line by line and solely predict total values, there are no budget values available, and therefore, a firm needs to recur to other benchmarks in order to manage costs or to monitor activity. At most, real time values are better in the sense that these values are not biased by the dilemma of choosing between forecasts accuracy and ambitious targets.
[9] Please see Appendix B –Interview and Online Questionnaire's Part II Structure

part, it was explained to all groups (1, 2 and 3) that the questions of this part were not about the reality they live in the company but about a traditional budgeting process, which brief description of the main characteristics was given. It was also asked to the respondent to place himself in a position that is independent of their role in the firm and to take into consideration all their professional, academic, and personal experience in order to answer this part.

The complexity of rules and configuration of a questionnaire with such characteristics was possible by using Qualtrics, an online tool for developing surveys. Qualtrics has proven to be an appropriate tool for developing such questionnaires, since it allows the user to programme freely the survey and to create automatic derivation rules, according to the selected drivers. Furthermore, this tool generates statistics of results that can be easily adapted. Moreover, Qualtrics allows respondents to interrupt the questionnaire and restart it later, which is recognized of great utility when considering the length of the questionnaire.

Additionally to the interviews and online questionnaires, we also had access to a set of documentary material such as firm's reports, planning documents, and presentations used for internal promotion of the model that is preconized to be applied in the Corticeira Amorim's five BUs. During the research process, we had the opportunity to communicate with some elements of the organization, who always demonstrated great interest and availability to cooperate with the study.

2.4. Sample Statistics

The interviews were made with 18 top managers of the organization, which include the executive, financial and operational chief officers of each BU and the three executive members of the board of directors of the holding firm. Each interview lasted, on average, one hour. All the interviews were conducted in an isolated room, with no one else present and without interruptions.

The online questionnaire was sent to a list of 30 members of the organization, formed by first and secondary level managers, who operate in different functional areas. The questionnaire was completed by 24 elements of the organization, which corresponds to 80% of the invited respondents. The distribution of the respondents by BU is characterized in Figure 2 and Table 4 represents the distribution of respondents by BU and functional area. According to Qualtrics' reported statistics, the questionnaires took an average of 32 minutes to be completely answered.

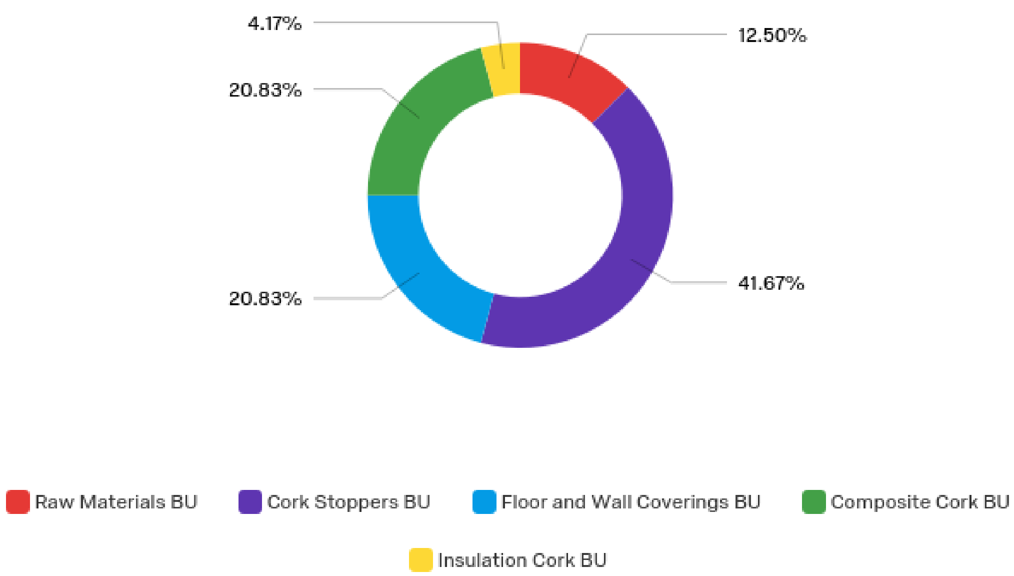

Figure 3: Distribution of Questionnaire's Respondents by BU
Source: Standard reports from Qualtrics

Functional Area		Business Unit					
		Raw Materials	Cork Stoppers	Floor&Wall Coverings	Composite Cork	Insulation Cork	Total
Functional Area	Procurement	0	1	0	0	0	1
	Industrial Operations	1	2	1	0	0	4
	Research and Development	1	1	0	0	0	2
	Project Engineering	0	2	0	0	0	2
	Quality Management	0	0	0	0	0	0
	Product Management	0	1	0	0	0	1
	Market Segment Management	0	0	0	1	0	1
	Marketing and Sales	0	1	2	3	1	7
	Transports and Logistics	0	1	1	0	0	2
	Financial and Administrative	0	1	0	0	0	1
	Human Resources	1	0	1	1	0	3
	Total	3	10	5	5	1	**24**

Table 4: Distribution of Questionnaire's Respondents by Business Unit and Functional Area
Source: Adapted from Qualtrics reports

Chapter 3

3. Management Planning and Control Model of Corticeira Amorim

3.1. Principles of the Management Planning and Control Model of Corticeira Amorim

During last years, the management planning and control department of Corticeira Amorim has been developing and promoting a set of standards and procedures on how the management requirements should be performed, without a traditional budgeting process. This chapter's main goal is to conceptualize the Management Planning and Control Model of Corticeira Amorim (from now on, "CA"), by describing the best practices and rules that the managers of Corticeira Amorim are supposed to apply in order to address the ten management requirements identified in the Literature Review.

This chapter was developed by the author, based on fieldwork, organizational presentations that were used for internal promotion of the model, and in conversations with members of the management planning and control departments, especially with one element of the board of directors, Fernando Almeida. Fernando Almeida is one of the most participative and encouraging elements of the changes made to MCS during last years and forms part of the executive board of Corticeira Amorim as the Manager of Organizational Development and Business Management Planning and Control (Corticeira Amorim, S.G.P.S., 2016).

The framework that served as the basis for developing this chapter consists in the ten management functions that a traditional budgeting conventionally covers, already identified in the Literature Review. Recalling, these ten management requirements are: target setting, defining operational plans, resource allocation, forecasting financial results, authorizing expenses, coordinating firm's activities, managing costs, evaluating performance, incentivizing performance and monitoring activity.

This chapter is divided into ten subsections, that correspond to each of the abovementioned management functions. Each subsection explains how these ten management requirements should be performed according to the preconized management model of Corticeira Amorim. Additionally, it highlights the main differences from a traditional budgeting process and identifies the negative aspects that this management model intends to overcome. Moreover, we compare the principles of tha CA with the principles of BB. At the end of this chapter, we provide a summary table with the most important aspects of the way of addressing each management requirement, according to the CA.

1. Target Setting

According to the CA, target setting is one of the most important processes. Although describing target setting is of high complexity and detail, the comprehension of this process is considered relevant since it is the first step in the model and the basis for performance evaluation and rewarding.

In Corticeira Amorim, the definition of targets follows a multiannual horizon and it is thought to begin by the development of strategy, which encompasses defining the mission, vision, and values of the organization. The vision of the organization is translated by an ambitious value for the residual result in the next three years, which is measured by the expected income after remunerating capital. This 3-year ambition is then sub-divided into annual targets.

According to the CA's principles, the executive board of each BU is supposed to design the strategy map for the following 3 years. The strategy map aims at organizing the strategic objectives into a matrix that is divided into three strategic themes – growth, value and efficiency – that lead to the final goal of Corticeira Amorim's shareholders, which is "to deliver sustained return for capital employed". These three strategic themes are grounded in four strategic perspectives – infrastructures, process, customer, and financial. Considering the objectives included in each perspective, BSC is developed in order to list the strategic indicators that measure those objectives and their target values for the year. After each BU's managers conclude the strategy map and the BSC of their BU for the three years, these are then analysed and approved by the board of directors of the holding firm.

With the goal of achieving a better alignment between the organization and strategy, the firm adopts performance scorecards. Although performance scorecards are associated to performance evaluation, this tool allows concluding the target setting process, by allocating accountability and ownership to each strategic objective. There are three hierarchical levels of performance scorecards in Corticeira Amorim: the holding's scorecard, the BU's scorecard, and the individual scorecard. The two inferior levels are supposed to be cascaded from the scorecard of the superior level. This means that, according to the model, the success of the individual performance scorecards of a certain BU should guarantee the achievement of that BU's performance scorecard, and the accomplishment of the 5 BU's performance scorecards should guarantee the success of the holding's performance scorecard.

Performance scorecards have few objectives (between 4 and 6), which, according to this model, allows managers to focus. All performance scorecards are indexed with a table that explains the calculation formulas of the indicators that measure each strategic objective, and what values are considered in each performance interval. Performance intervals vary from 0% to 120% and each strategic objective has a ponderation associated. As an exception, "residual result", the most important strategic indicator for Corticeira Amorim, has associated performance intervals that can go up to 150%. According to the model being described, having performance intervals that are higher than 100% allows motivating managers to excel. The overall performance index is calculated by the sum of the performance achieved in each strategic objective, multiplied by its weighting factor. The weights chosen for the strategic objectives should reflect the relative importance of the objectives.

The holding's performance scorecard, which is the scorecard of Corticeira Amorim as a group, has only three strategic objectives. These three objectives are also common to all BUs' performance scorecards and have pre-set performance intervals for the three following years. Therefore, instead of being revised on a yearly basis, the intervals for each of the three years are already established in the beginning of the 3-year cycle. According to Fernando Almeida, the rationale behind having pre-set intervals for the three years is "to not walk around with the carrot". These three strategic objectives are:

- Value Creation: to deliver sustained return for the capital employed (measured in terms of the value for the residual result);
- Financial consistency: to maximize free cash flow enough to cover the debt level (measured in terms of the free cash flow value);
- Competitiveness: to adjust the cost structure to margin creation (measured in terms of cash costs over gross margin ratio);

Besides these three objectives, the BU's performance scorecard includes two more objectives that are specific to each BU. After the executive board of the BU decides on what should be the strategic objectives of the BU's performance scorecard, there is a negotiation between the executive board of the BU and the board of directors of Corticeira Amorim about what values should be considered in each performance interval, for each strategic indicator. After reaching an agreement, the final performance scorecard is signed as a contract, and becomes the performance evaluation basis for the BU.

After the BU's scorecard is concluded, the managers of each BU are responsible for developing the individual performance scorecards. The same way the BU's performance scorecard derives from the holding's performance scorecard, individual performance scorecards are supposed to derive from a cascading process of the BU's scorecard. Under the principles of the CA, the logic behind individual performance scorecards is not to have a scorecard by each manager but to represent a certain profit centre or an area of responsibility of the BU. Therefore, not all workers are covered with individual performance scorecards and this tool covers only about 10% of the employees.

According to the rules that are preconized by the management model, one important principle is that there can be no changes to the holding's and to the BU's performance scorecards, after being negotiated and signed. According to the collected information, performance scorecards were revised only once, in 2009, after the financial crisis caused a serious regression in the Portuguese economy and European markets. This change consisted in multiplying the values of the sales-related indicators by 75% for each performance interval.

By adopting a triannual target setting process, which focuses on setting ambitious and directional goals, the CA's principles presents similarities to the principles of BB. However, the target setting process that is preconized by the CA differs from BB by defending fixed and cascaded targets.

Another principle that this model defends is to perform "target setting before planning". This principle is also evident in the Execution Premium framework. Therefore, the management planning and control department makes an effort in trying to negotiate the BU's performance scorecards before any kind of forecasting exercise with the goal of avoiding to bias targets with opportunistic behaviours. Traditional budgeting has this problem - since budgeting is used for performance evaluation purposes, managers will have this into consideration when budgeting, and will try to pull budget into values that will benefit them.

Furthermore, contrarily to the target setting process described above, in a traditional budgeting process, target setting is a time-consuming bottom-up process, that comprises the work of many elements of different departments, and ends up with highly detailed targets that are too much relied on the past and are not sufficiently ambitious. Moreover, contrarily to what is defended by the CA, in a traditional budgeting process targets are said to be too much focused on financial metrics and to lack a solid link to the medium-term strategic orientation of the firm.

2. Defining Operational plans

Planning is usually confused with budgeting and, according to the management planning and control elements of Corticeira Amorim, it is important to understand the difference between these two processes, because abandoning traditional budgeting does not mean to stop planning. On the contrary, CA defends that planning remains crucial for the success of any organization. As one of the company's internal presentation cites, while budgeting "is about not failing, it's about control" and firms do it "too much", planning "is about being successful, it's about what's possible" and firms do it "not enough". Therefore, this model defends that planning has to be prioritized in order to accomplish two main purposes: anticipating what is out of the firm's control (exogenous factors) and planning actions on what is under the firm's control (endogenous factors).

A key principle of the CA is the decoupling between forecasting and target setting. While forecasts reflect the most likely and realistic scenario for the future, targets translate the strategic orientation and ambition of a firm. The goal of planning is to close the gap between the forecast and targets.

According to the CA's preconized practices, when targets are sufficiently ambitious, and the gap between the forecast and the target implies disruptive changes in order to close it, action plans are denominated as "strategic initiatives" and must be proposed by the team responsible for it in order to guarantee "ownership". These strategic initiatives are supposed to be detailed with a full description of the action, how to achieve it, what are the resources needed, who is responsible for it and detailed with clear milestones, in order to allow a useful execution's follow-up.

By defending that employees should suggest their action plans in order to guarantee ownership and accountability, and complementing it with the individual performance scorecards, the CA presents similarities to the "Organization" principle of the BB model, which defends a strong sense of belonging without the need for hierarchical control.

Contrarily to the CA, the goal of operational plans in a traditional budgeting process is to achieve the annual budget, which is not sufficiently ambitious neither strategically-oriented. According to the guidelines set by the model, the key distinctive feature from a traditional budgeting process is that operational plans are strategically oriented from the beginning of the process, while in a traditional budgeting process these are not oriented and follow a time-consuming iterative process in which managers develop and propose budgets until final budget is approved.

3. Resource Allocation

Resource allocation is a complex task firms must address. There are two major concerns related to resource allocation. On one hand, managers need to predict sufficiently in advance, in order to have the resources they need, to satisfy the predicted demand on time. On the other hand, allocating resources in advance may lead to excessive costs because, for example, the sales that managers foresee may not occur as predicted. As an internal presentation of 2011 cites: "Today's hostile business environment is so unforgiving of mistakes and demands that companies must be smarter and more nimble about allocating resources.".

According the case study's model, three types of resources should be distinguished: recurrent resources that fulfil the needs of the "current book of business", non-recurrent resources that materialize the opportunities and continuous improvements that are identified in the forecast, and non-recurrent resources that support strategic initiatives and which are not identified in forecasts.

As previously mentioned, forecasts need to be differentiated from target setting. While forecasts are, *ceteris paribus*, the most likely to happen in future periods, targets are supposed to be ambitious and strategically oriented. However, according to the CA, neither forecasts nor targets define the basis for resource allocation decisions. Although the CA considers that the resource allocation process can be initially based on the annual forecast, another in-between component must be considered in order to guarantee not only that the forecast is realized, but also to allow strategic initiatives to be developed.

Furthermore, the CA sets that the resource allocation procedure should not be tied to the annual forecast, and should be flexible enough in order to allow different resource allocation decisions to be made. During the year, the norms of the model defend prioritizing the market needs. As long as it is justified and there is enough capacity for doing so, it is not because some resource is not anticipated in the annual forecast, that it becomes impossible to make a different resource allocation decision during the year.

Fieldwork allowed concluding that, regardless of budgeting or not, firms will always face difficulties related to resource allocation. These limitations are market uncertainty, and indivisibility and specificity of resources. Nevertheless, the model being described aims at solving an important problem of resource allocation that occurs in a traditional budgeting model – the (lack of) flexibility of resource allocation. While the principles of the CA strive for a flexible and continuous resource allocation process, resource allocation in a traditional budgeting model is based on the annual budget, which imposes a too much static resource allocation process, and may impede unpredicted projects to come to reality because firms are usually too much focused on achieving budget.

Finally, we can conclude that the norms that are stipulated by the CA relating resource allocation follow the same principles of BB, which defend propagating a cost-conscious mindset and trying to make resources available when necessary.

4. Forecasting Financial Results

Forecasting is one of the most important purposes of traditional budgeting (Lyne, 1988; Merchant & Stede, 2007; Otley, 2006; Sponem & Lambert, 2016). However, because traditional budgeting tries to solve conflicting purposes, forecasts are not sufficiently accurate and can penalize planning (Cardos, 2014; Merchant & Stede, 2007).

According to the case study's model, the most important difference between the CA and a traditional budgeting (TB) process is the separation of three different management requirements: target setting, forecasting, and resource allocation. The argument used by the firm's management planning and control department for promoting this principle is that, if these purposes have different ends, then there seems to be no reason for trying to combine them in only one tool that does not solve any one of the purposes sufficiently well.

According to the norms of the CA, the construction of the annual forecast must be simple and based on past results, assuming some continuous improvement and adjusted with non-recurrent events. This means replicating recurrent results from the last year, adjusted with some continuous improvement, and adding events with a high, or even certain, probability of occurring next year (e.g.: a sales contract for the next year) or eliminating results that only happened last year and that will not be repeated (e.g.: a huge sales value for a client's limited collection). According to what is preconized, the latter procedure should lead to the most accurate, likely and realistic forecast for the next year.

Furthermore, the defenders of the model also argue that the difference between what is recurrent and not recurrent should be clearly identified during the forecasting exercise. According to them, these differences are the assumptions about what is going to be different next year, and monitoring these assumptions during the year is considered to be an important task, because, for the forecast to materialize, these assumptions must also be verified.

The differentiating feature between the case study's model (CA) and a traditional budgeting process (TB) is that the annual forecast is preconized to be high-level, without too much detail. This implies forecasting a small number of key variables. According to Fernando Almeida, a high level of detail would only be useful if managers would analyse and explain variances from these values during the year. However, according to this model, since the forecasted values are so volatile and easily cease to make sense, there is no sense in justifying the firm's activity based on forecasted values. As we demonstrate below, this does not mean that managers are supposed to stop analysing variances. Instead, the model preconizes using a different referential for doing so.

An important and key feature of this model is that the annual forecast is thought to be useful only while being prepared and until it is presented to the board of directors. According to the principles of the CA, the annual forecast has only two purposes: to identify the assumptions behind non-recurrent results and to identify the dimension of the gap between forecast and targets. The disseminators of the management planning and control model argue that the forecast should not be used for anything else.

According to the arguments used for propagating model, having notion of the length of the gap between the forecast and the target incentivizes managers to develop the correct plans and initiatives, which objective is achieving the strategically oriented targets. This constitutes the reason why, according to this model, forecasts should reflect the most accurate and realistic managers' perspective, not being either optimistic or conservative. Otherwise, strategic initiatives may not be the most accurate for achieving the targets.

On one hand, the purpose of the annual forecast is not supposed to be a negotiation with the goal of getting the best results possible. According to the principles of the model, performance evaluation is not made against the forecast. Therefore, if a sales manager says to truly expect to selling 10M€, the value that the commercial indicates is probably be the most accurate as possible because he has no evident incentives for lowering that number. Thus, according to the CA's management model, the hierarchically superior of this sales manager should not try to negotiate the value in order to higher that value. This negotiation is only expected to take place when the BU's and the individual performance scorecards are discussed. On the other hand, according to the principles of the model, the annual forecast should not also be conservative because having a conservative forecast may induce too much ambitious strategic initiatives, which may lead to wrong resource allocation decisions and additional costs.

As it has been explained above, the CA institutionalizes that the forecast should present a low level of detail and be the most adherent to reality as possible. Although not adopting rolling forecasts, which is one of the tools propagated by the BB movement (Golyagina & Valuckas, 2012), we can conclude that the forecasting process that is preconized at the CA meets the BB principle of making forecasting a lean and unbiased process without rigid and political exercises.

The way forecasting is addressed presents the most radical differences from a traditional budgeting model. Firstly, according to the information collected on the management model, the time for preparing the forecast sharply decreases from 2-3 months to only about two weeks, since it essentially consists in a replication of past results with few adaptations. Secondly, it has a significantly lower level of detail and does not implies a sequence of iterations and negotiations that usually characterize a traditional budgeting process. Additionally, forecasting according to the principles of this model does not suffer from the dilemma of serving conflicting purposes, which allows an higher confidence in the forecasted values. Lastly, it has been explained that, while in a traditional budgeting process managers spend the year explaining variances from budgeting, the principles of the CA intend to eliminate the time dedicated to analysing and justifying variances between actual results and an unrealistic vision for the year.

5. Authorizing Expenses

The management model of Corticeira Amorim sets that the approval of expenses should follow a hierarchical and functional logic, through an invoice and expense approval template. Except for investments, which have a predefined plan, everything else has no previously defined value. Without predefined values, expenses are neither allowed nor blocked by a budget. Instead, there is a vertical approval process where managers must know measuring if benefits compensate the costs, in order to justify their expenses. Even regarding investments, although there is an investment plan that details how much it is supposed to be spent, there is also the need to follow a hierarchical approval process.

In most of the cases, performance is not measured by costs, instead, it is measured by results or by the ratio of results over costs. As long as there are financial resources to do so, if a manager has the right arguments for incurring in any expense (e.g: for making a commercial campaign for a certain market), there is allowance to do so. However, those expenses must be compensated with enough revenue in order to result in a good performance. This procedure aims at ensuring that managers are held accountable for their expenses, requiring them to think whether their expenses will lead them to achieve the expected performance at the end of the year.

Although all non-recurrent expenses must follow a hierarchical approval process, the most relevant expenses, which are recurrent, do not require an authorization. For example, in what concerns the costs of personnel, which is the most significant expense, the only thing that needs authorization is a new employee's entry. Similarly, there is no approval of expenditures such as energy or other resources needed for production, there is only an analysis of how much is being spent versus how much is common to spend in prior periods.

After being questioned about why not to make people completely accountable for their expenses, by eliminating this approval process, Fernando Almeida argued that spending authorization is a cultural issue and depends on the people's ability to self-manage. In his opinion, it would be very difficult to stop having this process and to decentralize this type of decisions. On the contrary, the BB model defends autonomous employees and a decentralization of decision relating expenses.

In a traditional budgeting process, the procedure for authorizing expenses is usually contingent on what is set in the budget. As long as an expense is expected in the budget, that expense is automatically allowed, and, when the limit is reached, the most probable is that managers will stop incurring in expenses because it will impact their performance evaluation and the approval process is too much complex. As already mentioned, using traditional budgeting for authorizing expenses has a significant downside. Knowing that the amount he can spend next year depend on the expenses of this year, a manager will have the tendency to spend all of this year's allowed amount in order to not be penalized in the following year. The CA eliminates this problem since the amount a manager can spend is not set in an annual budget.

6. Coordination of Activities

According to the CA, the coordination of the firm's different activities essentially derives from planning, which must be recurrent and regular. According to what is preconized to be applied in the BUs, managers should stipulate recurrent procedures such as weekly planning meetings or monthly alignment meetings between the purchasing and the industrial teams, or between sales and the industrial teams. According to Fernando Almeida, these recurrent and regular systems of alignment should ensure, for example, that the firm is buying raw materials for something that continues to make sense or that it is producing at a rate that is not lined up with the customers' real needs.

Furthermore, when correctly designed, also the performance evaluation system, which is further explained in subsequent sections, contributes to the coordination of the firm's different activities. According to what is expected by the management model, this can be achieved by, for example, including strategic objectives in a team's performance scorecard that cross with other team's strategic objectives, in order to potentiate the mutual concern and involvement in relevant strategic initiatives and avoid conflicting interests.

The BB principles state that it is possible to avoid conflicting interests between areas by centralizing the work of every team on the client's interest and that processes should be dynamic and not annually based. By preconizing permanent and regular mechanisms of coordination, the CA presents similarities to the BB model. However, by understanding the target setting and the performance evaluation processes of the case study firm, we can conclude that, although being permanent and flexible, the coordination of activities and planning at Corticeira Amorim tends to be oriented at achieving the strategically oriented targets, which are cascaded from the shareholders ambition for the residual result.

By translating the purpose of the different functional areas, traditional budgeting may decrease communication and deter cooperation between them. Because traditional budgeting is used for performance evaluation, everyone is concerned in achieving their budget, and when another team has a request that conflicts with the budget achievement, it is possible to receive a negative answer to a collaboration request with an argument such as: "It is not included in my budget.".

Contrarily to a traditional budgeting process, the coordination of activities according to the CA is not based in an annual plan. It implies frequent communication between teams of different areas and an active participation in the alignment and planning meetings. On one hand, following such a procedure to coordinate activities may consume more time. On the other hand, having such a recurrent and regular system guarantees more alignment and cooperation between areas. Moreover, according to the defenders of the CA, considering the increasing volatility of markets, it no longer makes sense to use budgets for coordinating activities.

7. Managing Costs

After abandoning budgeting, according to the CA, the values of real past periods (e.g.: previous month's values, values of homologous month in previous years or cumulated values of previous periods) should be the references used by the CA’s managers in order to control costs along the year. However, in a traditional budgeting process managers control costs essentially by comparing actual values with budget values.

With the existing volatility of markets, budget values frequently become obsolete early in the year and, therefore, the defenders of the CA argue it does not make sense to continue controlling and explaining costs based on budget values. Nevertheless, we were able to conclude that the quality of the analysis of comparing actual costs to real past values remains similar to the one a traditional budgeting process can offer. Regardless of the reference of comparison, cost variances never lead to direct conclusions. Managers must always think in relative terms when analysing costs because neither a cost reduction nor a cost increase can be classified as good or bad performance without analysing the impact on results.

Even though the quality of analysis remains similar, some could ask “why should managers spend so much time budgeting, when they can easily access historical values?”. The answer may be found in the fact that “past values may not consider non-recurrent events”. However, according to the CA, if these non-recurrent events are correctly identified during the annual forecast exercise, then, this reference becomes at least as good as budget, without spending so much time in constructing it.

8. Performance Evaluation

Corticeira Amorim has been developing a robust performance management system (PMS) for the last years. An internally developed program supports the PMS and it is essentially used for developing performance scorecards. Although performance is only calculated once in a year, this tool allows managers to monitor the degree of achievement of performance on a monthly basis. The PMS of Corticeira Amorim also includes a set of other tools and systems that allow aligning the organization with the defined strategy.

According to the CA, performance evaluation derives from performance scorecards and consists in comparing the achieved results with the values that form each performance interval. As it is possible to see in Table 5, which provides an example of a performance scorecard, each strategic objective has a ponderation (weight) associated to it, and the weighted sum of the achieved performance levels in all objectives gives the overall performance index. For example, suppose a performance scorecard of only 3 objectives. Objective A has a ponderation associated of 40%, objective B has a ponderation of 25% and objective C has a ponderation of 35%. If the actual performance is of 80% in objective A, 120% in objective B and 100% in objective C, then the overall performance index is of 85% (0,40*0,80 + 0,15*1,20 + 0,35*1). According to the principles of the model, each strategic objective as associated well defined key performance indicator (KPI) that can be measured "on time, on spec or on cost", therefore being able to assume different forms (monetary values, dates, percentages, etc.).

		Degree of Achievement / Performance Interval									
		0%	50%	75%	95%	100%	105%	110%	115%	120%	Weight
Obj. A	KPI A	a1 – A1	a2 – A2	a3 – A3	a4 – A4	a5 – A5	a6 – A6	a7 – A7	a8 – A8	a9 – A9	40%
Obj. B	KPI B	b1 – B1	b2 – B2	b3 – B3	b4 – B4	b5 – B5	b6 – B6	b7 – B7	b8 – B8	b9 – B9	25%
Obj. C	KPI C	c1 – C1	c2 – C2	c3 – C3	c4 – C4	c5 – C5	c6 – C6	c7 – C7	c8 – C8	c9 – C9	35%

Table 5: Structure of a Performance Scorecard applied in Corticeira Amorim
Source: Adapted from internal documentation of the case study's firm

CA adopts a system of performance intervals rather than of a system of targets (which characterizes a traditional budgeting process). Regardless of whether the performance is evaluated against target values or against performance intervals, it is always made in relative terms and the level of ambition and fairness of both models can always be questioned. However, the defenders of the CA argue that, while in a system of targets there are only two possibilities - achieve it or fail at achieving it – performance intervals allows to recognize excellence (by allowing levels of performance that are higher than 100%) and to incentivize managers to not give up in unfavourable circumstances (by allowing levels of performance that are lower than 100%). As we explain below, each level of performance has associated a different reward.

As previously mentioned, the CA defends that targets, which are strategically oriented and the basis for performance evaluation, should be annually fixed and not adaptable to circumstances. This differs from the BB principles, which defends that firms should have targets and performance contracts that are flexible and adjustable to the changing business environment.

Even though setting fixed targets is a common feature between a traditional budgeting (TB) model and the CA, there are relevant differences. Firstly, the performance evaluation targets that are used in Corticeira Amorim are strategically oriented and totally disconnected from the forecast. In a traditional budgeting process, however, targets are equivalent to budget values, which, as already mentioned, serve conflicting purposes. Secondly, by applying performance intervals, the defenders of this model expect inducing better behaviours in manager.

As Fernando Almeida mentioned during his interview, "The problem with systems of targets is that targets are always so ambitious that people become frustrated with the fear of not achieving them. I must not prevent this ambition to exist but, at the same time, I must be realistic in the assessment of this ambition. Therefore, I cannot say that conservative goals are worth the same as ambitious goals.”. Fernando Almeida also recognizes that “It would be so much easier to have automatic management systems that assumed that the budget was always 100%. But this is not true, since budgets, forecasts or targets, always have implicit different degrees of ambition.“. For this reason, this model adopts a system of performance intervals, where the targets that derive from strategic planning can be placed in any interval of performance, according to their level of ambition. Therefore, although there is an effort in order to have sufficient equity in the evaluation of the objectives, there is always some degree of subjectivity inherent to the evaluation of each performance interval.

Until today, the board of directors of Corticeira Amorim gave input on what should be the strategic objectives and the target values associated. Then, there was a negotiation with the BU’s executive board about what values should constitute each performance interval, namely, to what performance interval should the target value belong. However, according to Fernando Almeida, this was too much confusing and generated worthless discussion, when what really matters to the elements of the organization are the performance intervals, since these are the basis for performance evaluation and rewarding. There is no relevance in knowing what is the target value when the first question will always be: "to what performance interval does it belong to?".

After noticing that defining targets was not being useful, Fernando Almeida informed us that it was decided that in the next years there will be no more definition of targets for the purposes of performance evaluation. From now on, the board of directors will decide and inform about what values are going to be part of the 110% and of the 120% (or 150%, in the case of the residual result indicator) performance levels. The other performance intervals will continue to be negotiated with the executive board of the BU. Then, the BU’s managers are accountable for choosing what performance interval they aim at achieving.

According to Fernando Almeida, there is no logic in following a procedure that only generates confusion in the organization and which usefulness is not recognized in the model. Moreover, one important aspect of a MCS is to serve the needs of the organization in which it is used and therefore it is important to keep the system alive and to learn by doing, which supports the contingency theory (Otley, 1999).

9. Performance Incentivizing (Compensation)

According to the CA, performance is recognized and rewarded according to a "system of baskets" (represented in Figure 4) and derives from the performance evaluation process that was previously explained. As we demonstrate in Figure 4, there are usually three levels of baskets: the individual's, the BU's and the holding's basket. The employees who are evaluated by an individual performance scorecard have the right of accessing the BU's bonus. Additionally, the managers who are part of the executive board of the BU also have the right of accessing the prize related to the holding performance scorecard. Reward levels are set at the same time as the definition of performance scorecards.

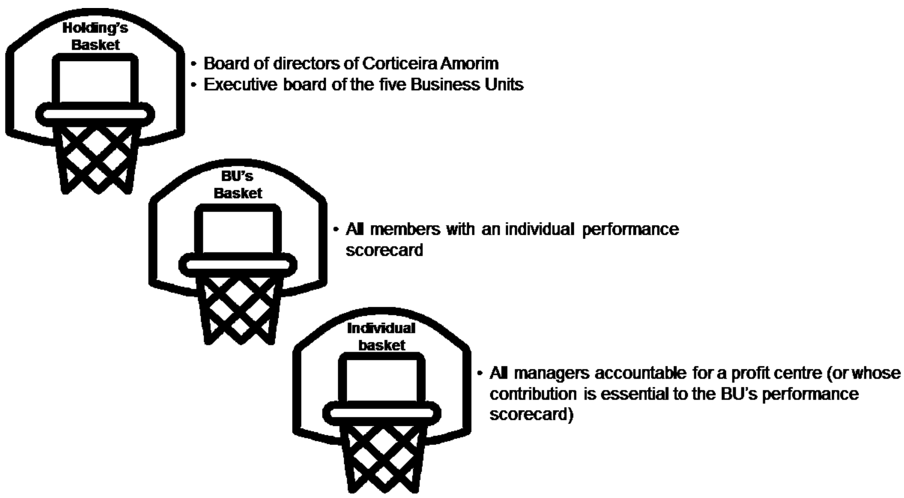

Figure 4: System of Baskets
Source: Developed by the author based on the CA's model

In Corticeira Amorim, performance rewards consist in monetary prizes that are defined as a percentage of the individual annual fixed salary and that varies according to the achieved performance in each basket. The percentage of salary that defines the reward value varies according to the functional area and responsibility that each manager has, i.e., to the role of the individual. For each basket, individual, BU, and holding, there is a pre-defined table that defines the percentage of salary each role has the right to receive. Each table has associated about five or six performance breaks. For example, if the performance index is between 90% and 94%, then the prize corresponds a certain percentage of the annual salary. If it is between 95% and 99%, then the prize is higher and this increases along with the performance intervals until a maximum break of 110% and 120% of performance. Regardless of the basket, the right of receiving a performance reward only exists for performance intervals that are higher than 90%.

According to the principles of the model, the value of the reward associated to the BU's performance scorecard is higher than the reward related to the individual performance scorecard, and the reward associated to the holding's performance scorecard is higher than the reward related to the BU's performance scorecard. Having higher rewards ensures that the manager covered by this performance management tool prioritizes collective interests in his decision-making process.

In addition to the annual reward system, the PMS of Corticeira Amorim also preconizes a reward associated to the ambition set for the three years. This deferred bonus evaluates the performance achieved in each of the three years in a different way, giving a relatively greater importance to the performance achieved in the most future years. The ponderation is 16.67% for the first year, 33.33% for the second year and 50% for the third year. This additional reward tries to ensure that managers prioritize the company's medium-term vision.

Contrarily to the CA's principles, the BB model defends that rewarding should not be performed against fixed performance targets and that the performance compensation should be linked to success relative to competitors. Therefore, we can conclude that both the performance evaluation and the performance compensation processes preconized by the CA differ from the principles of BB.

In a traditional budgeting, the process of incentivizing performance is also strictly connected to performance evaluation. However, there are some differences. Firstly, according to a traditional budgeting process, performance is evaluated by comparing actual performance with budget values. Secondly, conventional models do not adopt a "system of baskets", such as the one that is preconized to be applied in Corticeira Amorim, to ensure collective interests are prioritized against individual interests. Thirdly, there is no deferred rewarding system and, therefore, a traditional budgeting process gives more importance to short-term profitability instead of long-term value creation.

10. Variance Analysis

Variance analysis allows managers to monitor firm's different activities over the year. Without budgeting, the benchmark for variance analysis is necessarily different. In what concerns financial indicators such as contribution margins, the analysis is preconized to be against previous month and previous year results. In order to monitor operational activity, managers are supposed to compare actual values of, for example, cost centres and production orders, against historical and standard values. According to the principles of the model, there is no sense in explaining variances from something as volatile as a forecast or a budget, and therefore it is not expected that managers analyse variances against the annual forecast for any purpose.

According to the top managers of Corticeira Amorim, analysing variances against satisfactory results should induce managers to perform even better than when comparing variance analysis against unfavourable situations. The financial results of Corticeira Amorim have been showing a positive evolution during the last 7 years, and having better results than the previous year means achieving the best performance ever. This means that good results make last year's figures a good benchmark, but this may not be the ideal solution in times of lower prosperity.

Traditional budgeting imposes a culture of control that implies the formality of periodically explaining variances from budget values. The most relevant distinguishing features between the model that is preconized to be applied in Corticeira Amorim and a traditional budgeting process are the sharp reduction in the time needed to prepare data for variance analysis and the usefulness of explaining variances during the year. On one hand, in a traditional budgeting process managers spend too much time preparing the budget and the level of detail is too much high for the benefit managers can get. On the other hand, with the increasing volatility, the defenders of CA’s preconized model argue that there is no sense in spending the year repeating the same arguments for explaining why results are so distant from what managers budgeted last year.

Summary

The table presented below (Table 6) provides a summary of the main aspects of the empirical model described above, which characterizes how the case study’s firm is supposed to address each management requirement that is usually covered in a traditional budgeting process.

Management Requirement	Key Aspects
Target Setting	• Strategically-oriented targets (dissociated from the forecast) • Triannual time horizon • Top-down process • Residual result as the main indicator • Strategy Map and BSC developed by each BU after the board indicates the target values for the residual result • BU's and individual performance scorecards aligned with the targets • No changes are made to the performance scorecards after being set
Action Plans	• High importance given to planning • Permanent planning and absence of an annual plan • The main purpose is to achieve strategically-oriented targets • Strategic initiatives are proposed by the teams
Resource Allocation	• Should be a permanent process with as much flexibility as possible • Must guarantee the concretization of the annual forecast and allow for strategic initiatives to occur
Financial Forecast	• Follows an annual basis • Adherent to what managers truly expect to happen in the following year if there were no strategic initiatives • Low level of detail (e.g.: no calculation of sales per article or client) • Only two purposes: indicating the gap to the targets that were set for the year and identifying the assumptions behind non-recurrent expected results
Authorizing Expenses	• Vertical approval process that follows a functional and hierarchical logic • Supported by workflows • Absence of a predefined plan for automatic approval of expenses
Coordination of Activities	• Recurrent and regular • Based in planning • Implies a frequent communication between areas
Managing Costs	• Comparison to the values of previous periods • No comparison to the annual forecast (insufficient detail)
Performance Evaluation	• Annual calculation and monthly tracking • Linked to the target setting process • Supported by the performance scorecards, which cascade from the holding's, to the BU's and to the individuals • Comparison against performance intervals that range from 0% up to 120%
Performance Incentivizing	• Derives from performance evaluation • The remuneration varies according to the achieved performance interval • Follows a system of baskets (individual, BU, and holding) depending on the manager's level of responsibility • The compensation is monetary and represents a percentage of the annual fixed salary
Variance Analysis	• Variances against previous period or standards for monitoring activity • No variance analysis against the annual forecast

Table 6: Key aspects of the Corticeira Amorim's Management Planning and Control Model (CA)
Source: Developed by the author based on fieldwork

As it is summarized in Table 2, there are different procedures and rules that are preconized to be applied in parallel in order to address the ten management requirements that are usually covered by a traditional budgeting process. This package of controls constitutes the alternative adopted by the case study firm in order to substitute budget.

In the following section, we draw on the Malmi and Brown's framework (2008) in order to represent the CA as a package of controls. Subsequently, in Chapter 4, we confront the CA's principles with the perceptions of the survey's respondents.

3.2. Corticeira Amorim's Package of Controls

As it has been previously explained, Malmi and Brown (2008) proposed a framework for studying MCS as a package of five types of controls. In the present section, we draw on the Malmi and Brown's framework, in order to characterize the preconized principles of the Management Planning and Control Model of Corticeira Amorim (CA) that were described in the previous section, according to each of the five types of controls.

Similarly to the work of O'Grady and Akroyd (2016), who draw on the Malmi and Brown's framework for characterizing the MCS package of an organization that never had budgets, we need to adapt the original framework. This adaptation of the framework is justified by the fact that the original framework presents budgets as an important type of cybernetic controls. Therefore, according to the management principles of Corticeira Amorim, targets play the role of a key cybernetic control by establishing the main referential by which managers orientate and coordinate their behaviours.

<table>
<tr><th colspan="6">Cultural Controls</th></tr>
<tr><td colspan="2">Mission
To add value to cork, in a competitive, differentiating and innovative manner, in perfect harmony with Nature</td><td colspan="2">Values
• Pride
• Ambition
• Initiative
• Discretion
• Attitude</td><td colspan="2">Vision
To generate return on capital invested in an appropriate and sustained manner, with differentiation factors at the level of product and service and with a workforce, which has the desire to succeed.</td></tr>
<tr><th colspan="2">Planning</th><th colspan="3">Cybernetic Controls</th><th rowspan="2">Reward and Compensation</th></tr>
<tr><th>Long range planning</th><th>Action Planning</th><th>Targets</th><th>Financial</th><th>Hybrid</th></tr>
<tr><td>• 3 years strategic planning
• Targets cascaded from shareholder's ambition
• Top-.down process</td><td>• Focus on closing the gap between the forecast and targets
• Performance scorecards guarantee strategic alignment
• Strategic initiatives proposed by accountable managers
• Bottom-up process
• Permanent and flexible planning - absence of annual plan</td><td>• Cross-functional and cascaded targets
• On time, on spec and on cost targets
• Periodic Variance analysis</td><td>• Sales
• Residual Result
• Capital employed
Non-Financial
• BU's and individual-specific targets</td><td>• BSC
• Strategy Map
• Monthly tracking of performance scorecards
• Recurrent and permanent systems of coordination</td><td>• Annual monetary prize based achieve on performance
• System of baskets
• Performance intervals up to 120% incentivize excellence</td></tr>
<tr><th colspan="6">Administrative Controls</th></tr>
<tr><td colspan="2">Governance Structure
• Board of directors
• Executive board of the BU
• Top level managers with individual performance scorecards
• Lower level managers</td><td colspan="3">Organisation Structure
• Holding firm concerned in corporate decisions and synergies
• Five independent business units</td><td>Policies and Procedures
• Hierarchical flow of invoices' approval
• Monthly tracking of results</td></tr>
</table>

Table 7: Corticeira Amorim's Package of Controls
Source: Developed by the author based on Malmi and Brown (2008)

Chapter 4

4. Data Analysis

The main purpose of the present chapter is to conclude on the level of alignment between the perspectives of the respondents and the principles of the preconized management planning and control model. This objective is fulfilled by comparing the CA, which was described in the previous chapter, with how the different organizational elements interpret and perform the different principles and procedures covered in it (collected through the interviews and online questionnaires).

Secondly, we intend to verify if there are differences between the level of satisfaction associated to the processes with a characterization similar to a traditional budgeting process (TB) and the level of satisfaction associated to an alternative process with the same characteristics of the CA.

Lastly, we aim to discuss the possible correlation between misalignments with the model and certain characteristics of the respondents. The variables that characterize the respondents are the BU to which the respondent belongs, the functional area in which the respondent works, and the respondent's hierarchical level in the organization.

The BU can be one of the five business units that form part of Corticeira Amorim (Raw Materials, Cork Stoppers, Floor&Wall Coverings, Composite Cork or Insulation Cork), or the holding firm itself (being the latter the case of the three elements who form the executive board).

In order to classify the respondents, we considered ten functional. Both the elements of the board and the chief executive officers of each BU were considered to be part of a "Cross-Functional" area. The remaining functional areas are: "administrative and financial" (which include the chief financial officers), “human resources”, “industrial operations” (which include the chief operational officers), “market segment management”, “marketing and sales”, “product management”, “project engineering”, “research and development”, “sourcing and procurement”, and “transports and logistics”.

Lastly, the group to which the respondent belongs indicates the hierarchical level. As already mentioned in the Methodology’s chapter, the respondents were divided into three groups: group 1 consists in the executive elements of the board of directors of the holding firm, group 2 consists in the chief executive, financial, and operational officers of the five BUs, and group 3 consist in all the other elements of the organization.

Additionally to the main purposes described above, data analysis aimed also at inferring about how far the elements of the organization recognize the traditional budgeting limitations, through the analysis of the answers given to the second part of the interviews and questionnaires.

Finally, the answers to the additional question that was made exclusively to the elements of group 1 is analysed in order to conclude on the main reasons for abandoning the traditional budgeting process.

Empirical data can be consulted in more detail in Appendix D: “Adopted Procedures”, Appendix E: “Budget Limitations I” and Appendix F: “Budget Limitations II”.

4.1. Organizational Perception and Alignment with the Model

Considering the results from the interviews, we can characterize how respondents interpret the way each function of a traditional budgeting process is performed in the organization. Therefore, from the results of the interviews and questionnaires, it was possible to infer whether the respondents think that the management requirements are still performed according to a traditional budgeting process (TB) or if, on the contrary, they recognize that the process is already performed according to the preconized model (CA). The results from the interviews and questionnaires also allow to infer about their satisfaction about the adopted procedure (in a 0-10 scale).

Similarly to the description of the CA (Chapter 3), this part is subdivided into ten sections that correspond to the management requirements that are conventionally addressed by a traditional budgeting process (as identified in the Literature Review).

1. Target Setting

Regarding "target setting", it is possible to conclude that there is a strong alignment between the preconized model and the answers of interviews and questionnaires. In terms of the variable that differentiates target setting between a traditional budgeting process (TB) and the preconized process (CA), 78,6% of all respondents agree that the annual targets are defined "on the basis of what is aimed to happen, taking into account an ambitious vision of a longer term", instead of being defined "on the basis of what is budgeted to be possible, taking into account a forecast of what is likely to occur over the year in question".

However, cluster analysis shows that 75,0% of respondents of one of the BU, the Insulation Cork BU, believe targets are still constructed under the basis of the annual budget. It is also possible to conclude that, except for "Research and Development" and "Project Engineering", all other functional areas are in agreement with the model. When analyzing data by hierarchical groups, it is possible to conclude that all elements from group 1 agree target setting follows the CA, whereas this percentage is 80,0% in group 2 and 75,0% in group 3.

Regarding the satisfaction level with the adopted procedure, it is possible to infer that, in a zero to ten scale, on average, the level of satisfaction related to a TB is 7,33 and 7,88 related to the CA, which shows no significant difference.

The results of the questionnaires demonstrate that: 58,0% of respondents agree that target setting follows a top-down process; 67,0% of respondents stated that targets are defined in general terms, while the remaining believe targets have a high level of detail; 87,5% of respondents believe that strategic targets are understood by the employees; and 83,3% of respondents recognize that there is no revision of targets during the period for which they should be in force.

According to the interviews made to groups 1 and 2, there is an overall agreement on what characterizes the target setting process. It has been stated that targets "derive from a triannual strategic planning" and that "the most important target, in financial terms, is the residual result", which is set by the shareholders and, then, in each BU, "this financial challenge, that is set according to a top-down process, is unfolded in terms of financial and non-financial indicators, through the various functional areas".

2. Defining Operational plans

In what concerns the "definition of action plans", 93,0% of all respondents agree that the operational plans serve to achieve strategically oriented targets (CA) and not to achieve the annual budget or a forecast (TB). The only three respondents that consider that action plans do not serve to achieve strategic targets operate in the "Marketing and Sales" and in the "Industrial Operations" of the Insulation Cork BU and the Cork Stoppers BU.

Interestingly, there is a substantial difference between the level of satisfaction related to the definition of action plans according to a TB and the definition of action plans according to the CA. In a zero to ten scale, on average, the level of satisfaction related to a TB is 3,67 and 7,92 related to the CA.

Questionnaires' results show that: 87,5% of respondents agree that the definition of action plans is done in collaboration between the manager and the collaborator, while the remaining respondents consider it to be done autonomously by the heads of each area; and 79,0% of respondents state that action plans are monitored monthly, while others argue it happens quarterly (17,0%) or yearly (4,0%).

Elements from groups 1 and 2 are very conscious about the link between strategic planning and action plans. One of the interviewees describes the process as the following: "Everything starts from strategic planning. Strategic planning defines what is our ambition, what are our challenges, and what is our mission. After this, it is very clear to everyone where we want to be in terms of activity in three years. We define the BU's strategic map, which currently has 16 goals based on strategic planning, and each of these objectives is deployed in priority actions, which are those that lead us to close the gap. Each of these priority actions has an owner and has associated resources.".

3. Resource Allocation

In what concerns "resource allocation", 66,7% of all respondents agree that this is a permanent process, while the others believe this is more static and made on an yearly basis, according to an annual budget or forecast. We find it important to take into consideration the specificity and scarcity of the resource when analysing data related to resource allocation. In fact, questionnaire's respondents differentiate their answers according to the type of resource.

By analysing data by BU, it is possible to ascertain that the closer the BU is to the beginning of the cork value chain, the more its resource allocation process seems to be similar to a TB. When we exclude the Raw Materials BU and the

Cork Stoppers BU from our analysis, which are the first two BU of the value chain, we can verify that 87,0% of respondents identify that resource allocation is made according to a more flexible and permanent procedure, being closer to the CA.

As one member of Group 2 of the Raw Materials BU explains, "The allocation of resources is made yearly with the budget. When considering this business unit, we must always take into consideration the particularity that it has. In September I already know how much cork I have, and how much it will give me by quality class. This allows me to know how much we are able to deliver to the Cork Stoppers business unit, which is our main client, and to the remaining business units.".

The mission of Corticeira Amorim is to "add value to cork", a scarce raw material. It takes each cork oak 25 years before it can be stripped for the first time and it can only be stripped every 9 years. Besides this scarcity problem, cork is a natural product and therefore it is impossible to be certain about what will be yield of it, i.e., how much will be possible to extract from each quality class. However, there is a need for figuring out the characteristics of the product the firm is buying, in order to offer a competitive purchasing price for it and to know how much the Raw Materials BU will be able to supply for the group. Therefore, the buyers and industrial managers of the Raw Materials BU need to analyse a sample of all cork batches in order to create a "budget" in terms of volume by quality class. Knowing this "budget" is the only way that the Raw Materials BU has to know how much it is going to be able to supply for the other BUs of the group. This is the only form of "budgetary planning" in Corticeira Amorim, which occurs with the goal of inferring - only in terms of volume - what is the expected outcome of the cork batches that are going to be transformed in the following year.

4. Forecasting Financial Results

"Forecasting" is the process which research's results show greater proximity to a TB and so lower alignment with the empirical model. Considering that what differentiates forecasting between a TB and the CA is its level of detail, 52,0% of respondents believe forecasting follows the CA while the remaining respondents consider that it is still made according to a TB. Consistently to other results, almost all respondents who agree that forecasting follows a TB are from three BUs, the Raw Materials BU, the Cork Stoppers BU and the Insulation Cork BU. In fact, if we exclude the latter BU from the analysis, 94,7% of the respondents of the other BUs perceive that forecasting follows the CA's principles. Additionally, there is no correlation between the members that believe forecasting is made according to a TB and the hierarchical level of the organization or functional area.

The interviews allowed making clear the division that exists between the group of BUs that argue forecasting follows a TB, and the group of BUs that state forecasting follows the CA's principles.

On one hand, members who identify the CA explain that: "forecasting is about clearing history with positive or negative differences that are justified by assumptions or facts about what we know will happen the following year". It "must have the lowest possible level of detail" since "it is not because we have more detail that we are going to get it right". Moreover, forecasting "should only last about one week" and "we never look at the forecast again, it's just to define the gap between where we are going to be according to the forecast, and where we want to be.". Additionally, interviews also allowed to verify that one of the BU, Composite Cork BU, realizes rolling forecasts quarterly.

On the other hand, elements who identify a TB describe a long and iterative process where "there is much negotiation, line by line, from commercial to industrial". Although being so much contrasting, the two trains of thought present a similar level of satisfaction. In a zero to ten scale, on average, the level of satisfaction related to a TB is 7,4 and 7,9 related to the CA.

Surprisingly, the interviews revealed that a few elements consider that the forecast must be negotiated and linked to the strategic intents of the company. Those elements claim that the forecast must result from negotiation meetings with commercials and other functional areas where values are pushed to be closer to targets. In fact, one interviewee from group 2 argues that: "Forecasting is bringing a three-year goal into a one-year goal. So budgeting is a very clear negotiation, and whoever thinks it is not, is being fooled.". This means that forecasts may not represent exactly what it is expected to happen and may have some negotiation behind it. Therefore, this confusion on what the forecast must represent may implicate that the gap between forecast and targets is not correctly measured, or at least does not represent the same to all organizational elements, and so strategic initiatives to close this gap may not be the most adequate.

5. Authorizing Expenses

Regarding "expenditure authorization", the results show that 92,9% of respondents agree that expenditure, in general, is authorized in the speciality and that there is no expenditure that is automatically authorized by a budget. The only three elements who consider expenses are automatically approved by a budget are part of the group 3 and, while their level of satisfaction with the procedure used for approving expenses is, on average, 7,0, the level of satisfaction with the CA is, on average, 7,9.

As interviews demonstrate, expenses approval is recognized to be characterized by a considerable level of caution, in which "all expenses (even the lowest ones) must be approved by a certain level of hierarchy". Without budgeting, some could suppose that there would be no more place for a hierarchical process of expenses approval and that workers would start to have decision power about their own spending, as the principles of the BB model defend. However, as some interviewees explain, "One thing is to give the car key to someone and let them drive. Another thing is to give the car key to someone and go alongside that person to control it. It has to do with the way people work and the culture of the company.". This confirms the same principles that were explained in the CA.

6. Coordination of Activities

Results show that the majority of respondents (95,2%) agree that the "coordination of firm's activities" (e.g.: between commercial and industrial activities) is based on a permanent and flexible procedure instead of being rigid and based on an annual budget. It is also possible to infer that, when compared to coordinating activities according to an annual budget, the CA shows an average level of satisfaction of 8,1 while the coordination of activities according to a TB shows an average level of satisfaction of only 3,0, in a zero to ten scale. Data analysis shows that the only two elements who consider coordination of activities follows a TB are from the same BU, which happens to be the Cork Stoppers BU.

7. Costs Management

In what concerns "costs management", some respondents still refer to the word "budget" in order to explain the adopted procedure. When considering interviews and questionnaires' results, we can infer that 73,8% of respondents state that "budget is not used as the basis for comparison in order to exercise management and control of costs". However, 9,5% of the respondents who consider that budget is not used as the basis for managing costs, believe costs are compared against the annual forecast, which goes against the preconized model.

Excluding respondents who consider that the annual forecast is used for managing costs, on average, the level of satisfaction is 7,7 related to the CA and 7,3 related to a TB, which reveals no significant difference. One interviewee explained that "the advantage of comparing costs to past values is not in the quality of the referential, it is on the time you take to prepare it". This demonstrates that, even though managers are satisfied with the fact that it takes less time preparing the referential, the accuracy of the referential is not sufficiently good for offering a much higher satisfaction level. Thus, this argument might be the reason why the difference between the satisfaction of a TB and the CA is not relevant regarding costs management.

8. Performance Evaluation

"Performance evaluation" and "performance incentivizing" are the procedures where we can find more consistency in the answers and better alignment with the CA.

Considering both questionnaires and interviews, 97,6% of respondents agree that "performance evaluation is done by comparing the achieved performance with the targets, according to the performance intervals that are set in the performance scorecards". The only respondent who does not recognize the CA believes that "there is no formal performance evaluation procedure", which might indicate that this respondent is not covered by the a performance scorecard. However, all the respondents recognize that performance evaluation does not follow a TB. The level of satisfaction regarding the process of performance evaluation according to the CA's principles is, on average, 8,3, which is the highest level of satisfaction found. This means not only that respondents recognize the principles applied to performance evaluation, but also that they are highly satisfied with them.

9. Performance Incentivizing

According to questionnaires and interviews, 92,9% of respondents agree that "performance compensation is linked to the level of achievement of targets, according to the performance intervals". The remaining elements are all from group 3, which, again, might indicate that these elements are not covered by the performance scorecards. The level of satisfaction regarding performance compensation according to the CA is on average 7,9 while according to a TB is 6,3.

Additionally, interviews allowed concluding that, although there is a high level of contentment associated to the CA regarding performance compensation, there is some frustration associated with the fact that the performance evaluation and compensation system does not cover all elements of the organization.

10. Variance Analysis

Lastly, in what concerns "variance analysis" it is possible to infer that 81% of respondents agree that "the budget is not the basis for monitoring the firm's activity". However, according to questionnaires, it is possible to conclude that 12% of those elements who agree budget is not used for variance analysis, consider that, instead, it is the annual forecast that is used for that purpose, which goes against the principles of the CA. Likewise, some interviewed elements from groups 1 and 2 have also mentioned that sometimes they analyse variances from the annual forecast in order to find out some explanation for variances from past values they cannot explain.

It is important to refer that the model clearly sets that “forecast must die in the moment it is presented” and must not be used for anything else except for helping to measure its distance from targets and identify the assumptions for non-recurrent results. However, one thing is to measure and explain variances from the forecast, which goes against the model’s principles because of the unpredictability of results. Another thing is to consult the assumptions that were identified in the forecasting exercise for explaining non-recurrent results, which is completely aligned with the model and a recommendable practice.

Excluding members who consider that the annual forecast is used for variance analysis, the level of satisfaction with variance analysis according to the CA is, on average, 7,8, while the level of satisfaction relating variance analysis according to a TB is 8,3. This is the only process in which respondents who diagnose a TB seem to demonstrate a higher satisfaction from members who recognize that variance analysis follows the CA. This is not very surprising since a traditional budget allows not only to have the same level of detail as past values but also to incorporate a much higher adherence to reality if there is a high level of predictability of future results. Nevertheless, as already mentioned, this implies an iterative and time-consuming process.

Summary

The table presented below (Table 8) provides a summary of the main aspects of the interviews and questionnaires results that were described above. In order to further consult the results relating the managers perception on the adopted processes and infer about the organizational alignment with the preconized model, please see “Appendix D: Adopted Procedures”.

Management Requirement	Perceived Process %; Satisfaction Level		Main Findings
	TB	CA	
Target Setting	21,4%; 7,33	78,6%; 7,88	• 75,0% of the Insulation Cork BU's respondents believe targets are still constructed under the basis of the annual budget • All elements of group 1 agree target setting follows a CA's process, while this percentage is 80,0% in group 2 and 75,0% in group 3 • No significant difference between the satisfaction levels
Action Plans	7,1%; 3,67	92,9%; 7,92	• Strong alignment between the preconized model and the results • The only three respondents who perceive a TB operate in the "Marketing and Sales" and in the "Industrial Operations" of the Insulation Cork BU and the Cork Stoppers BU • Elements from groups 1 and 2 present a high consciousness about the link between strategic planning and action plans • Substantial difference between the levels of satisfaction
Resource Allocation	33,3%; 6,57	66,7%; 8,00	• Questionnaire's respondents differentiate their answers according to the type of resource • The closer the BU is to the beginning of the cork value chain, the more its resource allocation process seems to be similar to a TB • By excluding the Raw Materials BU and the Cork Stoppers BU, 87,0% of respondents identify that resource allocation is made according to the CA's principles
Financial Forecast	47,6%; 7,40	52,4%; 7,95	• Procedure in which managers demonstrate the lowest level of alignment with the preconized principles • There is no correlation between the misalignment with the model and the hierarchical level • While the majority of respondents of the Raw Materials BU, the Cork Stoppers BU and the Insulation Cork BU perceive that forecasting follows the TB principles, the majority of elements of the remaining BU perceive that forecasting follows the CA's principles • Elements who perceive forecasting follows a TB identify that there is negotiation inherent to it • Similar levels of satisfaction between the two models.
Authorizing Expenses	7,1%; 7,00	92,9%; 7,90	• Strong alignment between the preconized model and the research results • The only three elements who consider expenses are automatically approved by a budget are part of the group 3 • Groups 1 and 2 demonstrate total alignment with the model and reveal that "all expenses (even the lowest ones) must be approved by a certain level of hierarchy"
Coordination of Activities	4,8%; 3,00	95,2%; 8,08	• Strong alignment between the preconized model and the research results • The only two elements who consider coordination of activities follows a TB are from the same BU (Cork Stoppers BU) • Considerable difference between the level of satisfaction related to the coordination of activities of the two models
Managing Costs	26,2%; 7,27	64,3%; 7,70	• The remaining elements (9,5%) perceive costs are controlled based on the annual forecast (satisfaction level: 8,25) • The insignificant difference between the satisfaction levels might be justified by the fact that "the advantage of comparing costs to past values is not in the quality of the referential, it is on the time you take to prepare it"
Performance Evaluation	0%; -	97,6%; 8,34	• The only respondent who does not recognize the CA (remaining 2,4%), believes that "there is no formal performance evaluation procedure" (satisfaction level: 5,00)

			• Procedure in which managers demonstrate the highest level of alignment with the preconized principles • The level of satisfaction associated to a performance evaluation process according the CA's principles is the highest level of satisfaction found
Performance Incentivizing	7,1%; 6,33	92,9%; 7,89	• Strong alignment between the preconized model and the research results • All elements who perceive a process according to TB principles are from group 3, which, might indicate that these elements are not covered by the performance scorecards • Considerable different levels of satisfaction • Interviews revealed some frustration associated with the fact that the performance evaluation and compensation system does not cover all hierarchical levels of the organization
Variance Analysis	21,4%; 8,33	61,9%; 7,85	• The remaining elements (16,7%) perceive that variance analysis can be performed against the annual forecast (satisfaction level: 7,71) • Some elements of groups 1 and 2 have also mentioned that sometimes they analyse variances from the annual forecast • Variance analysis is the only process in which respondents who diagnose a TB demonstrate a higher satisfaction from members who recognize that variance analysis follows the CA

Table 8: Main Research Results and Alignment with the CA's Preconized Principles
Source: Developed by the author based on research results

4.2. Recognition of Traditional Budgeting Limitations

This subsection of data analysis intends to fulfil the purpose of inferring how far the respondents recognize the limitations of TB. Although the level of recognition of each negative aspect of a TB is always, on average, higher then 5, average results are not very high in a zero to ten scale, showing an overall average of 6,3. This is in line with the work of Sponem and Lambert (2016), which results from a survey made to 314 elements of the French professional association of accountants showed that "the overall level of criticism is fairly low".

On one hand, data analysis allows concluding that the four traditional budgeting limitations that are the least relevant for respondents are the following:

- B3: "Target setting and financial forecasting are conflicting purposes, thus, these two tasks must not be covered in the same tool." (average level of recognition: 5,50);
- B10: "Traditional budget elicits opportunistic behaviours." (average level of recognition: 5,73);
- B13: "Traditional budget is primarily a ritual." (average level of recognition: 5,88).

On the other hand, the four traditional budgeting limitations that are the most relevant for respondents, are the following:

- B5: "Traditional budget elicits conservative behaviours." (average level of recognition: 7,18);
- B11: "Traditional budget translates the predominance of short-term profitability to the detriment of long-term value creation." (average level of recognition: 6,90);
- B7: "Traditional budget introduces rigidity to the organization." (average level of recognition: 6,78);
- B2: "Traditional budget is no longer suitable in the existing context of macroeconomic uncertainty." (average level of recognition: 6,68).

When analysing answers by BU, it is possible to conclude that the Floor&Wall Coverings BU and the Composite Cork BU present, on average, the highest levels of recognition of the negative aspects of a TB. Interestingly, these are the two BUs where fewer inconsistencies with the CA were found.

By comparing the results of each hierarchical group, it is possible to infer that the group that least recognizes the negative aspects of a traditional budgeting process is group 3. In fact, the average level of recognition of all traditional budgeting downsides by this group is only 5,5 (in a scale of zero to ten). Even when analysing each group by BU, it is possible to confirm that group 3 is always the group that least recognizes the negative aspects of budgeting.

However, being the only group that answered through an online questionnaire might have influenced their answers.

It is important to denote that, when analysing averages, it is important to take into consideration the size of the sample. In fact, the size of the majority of the functional areas is not significantly representative for comparing answers.

4.3. Reasons for Changing

As it was already mentioned, a final and additional question was made exclusively to the elements of group 1, formed by the executive elements of the board of directors of Corticeira Amorim. The question was: "What were the main reasons for abandoning the traditional budgeting process in Corticeira Amorim?". This final question intended to understand, in the perspective of elements who have the power of taking such a decision, what were the main reasons that induced the abandonment of the traditional budgeting process.

The answers to this question were the following:

- Answer 1: "We have decided to abandon the traditional budgeting process because we believe that long-term value creation has more potential on a three-year basis than on an annual basis. This is achieved by focusing on more long-term goals that induce behaviour. So I think that getting away from the budget and focusing on a long-term goal puts more responsibility on us, and this model allows us to create more value than when we were guided by a rigid document."
- Answer 2: "Firstly, because major effort should not be spent defining goals or predicting results, but rather defining the actions needed to achieve our goals. In my opinion, setting targets, cascading these targets, and creating time-based action plans is the most effective way to keep the company ambitious. We should not manage by rear-view

but have a plan of action, which is what makes numbers come true. It is about stop having analysts and start having doers, stop having farmers and start having hunters, people who are looking to make things happen and not people waiting for things to come to them. Therefore, I think that in our case, the change of model has been in fact an added value for the company."

- Answer 3: "It was inadequate, no longer working. There is not a unique reason. I think one of the most damaging consequences of the budget is budgetary control. The trigger for taking this decision was when we came to the conclusion that we were comparing results to something that was no longer useful. There are still things that are not fully resolved, but at least we have eliminated this budgetary control of analysing deviations, in which we lost a lot of time in the construction of a document with which we spent hours and hours to try to draw things, and we have also eliminated the risk that arises with people being conservative by nature or sometimes opportunistic. It was a management tool that was not very valuable and did not make much sense. The question is always: Why not to change? Why not to replace it? Everybody agrees that the budget is not that powerful tool it is said to be but the problem is knowing to what we should change. And over the years we have been discovering other instruments that do some of the functions that the budget would address, and, from there, the budget itself began to be emptied until it became limited to what it is today, a lighter version that is nothing more than a financial forecast. I think that what matters is identifying what the budget is used for, which I think is clearly the main question, and based on those purposes, to analyse if the budget is, in fact, the right instrument. There may be organizations to which expenditure control is very important, and in such cases, there should be an institutionalization of expenditure control mechanisms, the instrument does not have to be the budget. For other organizations, the production planning is very relevant but it does not have to be through the budget, just create an instrument for this. Therefore, I think that what has been exaggerated over the years has been to try to give functions to a tool under a "by the way" basis. Similarly to a Swiss Army Knife, which is a pocketknife that has 10 openings but then none of them is good. Thus, I think the great limitation is not the elimination of the functions that are intended to respond, it is to try with a single tool respond to all these things, which will all be poorly answered."

By analysing the above-cited answers, it is possible to find some similarities between the reasons that the board of directors mention to justify the abandonment of budget and the negative aspects of traditional budgets that can be found in literature. In sum, we conclude that there are multiple reasons why Corticeira Amorim's top management took the decision of abandoning the traditional budgeting process, namely:

- Potentiate long-term value creation;
- Transfer the time dedicated to preparing the budget to higher value-added actions, such as developing actions for closing the gap from targets;
- Keep managers ambitious by stopping to manage by the "rear-view";
- Stop wasting time with unjustified and excessive budgetary control;
- Stop analysing variances against something that ceased to make sense;
- Avoid conservative and opportunistic behaviours;
- Improve the way management requirements are addressed by stopping to address them with the same tool.

Chapter 5

5. Findings, Discussion and Conclusions

5.1. Findings and Discussion

Understanding the main reasons for budgeting abandonment consisted in the first goal of this study. Similarly to the work of Libby and Lindsay (2010), our research suggests that the reasons for abandoning a traditional budgeting process are essentially the same as the ones identified in literature (Ekholm & Wallin, 2000; Neely et al., 2001; Sponem & Lambert, 2016).

In what concerns the case study firm, research results allowed concluding that the most important reasons are "to stop analysing variances against something that no longer made sense", "to eliminate the risk related to opportunistic behaviours", "to induce workers to became more *doers* and less *analysts*", and "to eliminate the time wasted in preparing a rigid document that became obsolete to soon". This is in line with the findings of other case studies on this topic. According to the literature, the continuously changing business environment and the inadaptability of budgets to it is one of the main reasons why firms abandon traditional budgeting (Ekholm & Wallin, 2000; Henttu-Aho & Järvinen, 2013; Libby & Lindsay, 2010; Sandalgaard & Nikolaj Bukh, 2014). Some of these authors also conclude that the resources consumed by the budgeting process is another relevant reason for budgeting abandonment (Henttu-Aho & Järvinen, 2013; Libby & Lindsay, 2010; Sandalgaard & Nikolaj Bukh, 2014). However, contrarily to our research results, some reasons such as "gaming" are not recognized as a reason for abandoning TB in other firms (Henttu-Aho & Järvinen, 2013; Sandalgaard & Nikolaj Bukh, 2014).

Nevertheless, equally to the work of Sponem and Lambert (2016), the level of recognition of traditional budgeting downsides reveals to be relatively low. Additionally, our research results showed that workers on lower hierarchical levels seem not to be so much aware of the negative aspects of a traditional budgeting process. This may be attributed to the fact that lower hierarchical level managers are less involved in the processes associated to budget and, therefore, the negative aspects are felt with lower intensity.

Secondly, this case study research aimed at understanding how the firm addresses the management requirements that were formerly covered by the annual budget and how the new management principles and processes overcome the negative aspects of traditional budgeting. The CA, described in Chapter 3, provides an explanation on how managers are supposed to address the management functions without the traditional budgeting tool. By having studied MCS as a package we try to answer the call of Malmi Brown (2008) for such studies.

During the investigation it was also possible to conclude that, although 2013 was the first year when the firm did not developed an annual budget, the changing process was gradual. As one of the interviewees explained, over the years they tried to replace some functions that were addressed by budget with alternative tools and the "budget itself began to be emptied until it became limited to what it is today". Instead of abandoning budget and replacing it with a rigid and pre-set model, Corticeira Amorim progressively adjusted its management model to its own needs (contingencies). Our investigation also permitted to understand that the model is dynamic and may evolve along with the management challenges the firm faces throughout the years.

Since the management model adopted by the firm is dynamic, being adapted during last years according to the different contingencies of the case study's firm, we can conclude that the CA supports the Contingency Theory (Otley, 1999). According to Otley (2016), "We are unlikely ever to be able to produce knowledge of the type that is generated by the physical sciences as our subject matter does not have the stability and uniformity of physical matter, nor is it amenable to controlled experimentation." (Otley, 2016, p. 55). This means that the contingencies under which the CA has been developed, namely the specificity of resources, the cultural aspects, the evolution of the firm's financial performance and the business environment in which it is inserted, make the CA customized and suitable to the reality of the firm, not applying for universally valid principles.

Moreover, Corticeira Amorim applies the *Execution Premium* principle of "target setting before planning", and totally separates forecasting from target setting, focusing its planning on closing the gap between forecast and targets. According to Bourmistrov & Kaarbøe (2013) and Henttu-Aho & Järvinen (2013), "decoupling target setting from planning" means implementing the BB principles. Therefore, there are some similarities between the BB approach and the management planning and control model that is preconized to be applied in Corticeira Amorim. However, the case study's management model differs from the BB model in some characteristics such as not having flexible targets and not adopting radical decentralization and empowerment of the firm's managers (Hansen et al., 2003). Although having not adopted all principles of the BB model, and having developed its own management model, we can conclude that the management model of Corticeira Amorim preconizes a full abandonment of traditional budgeting.

Lastly, the final goal of this master thesis consisted in understanding to what extent do the elements of the organization recognize and apply the new management model's standards and procedures (CA). By categorizing the elements according to their BU, hierarchical level and functional areas, interviews and questionnaires allowed inferring about the correlation between these variables and the level of alignment with the preconized model. This output is highly important for the organization since it allows inferring possible reasons for the existence of misalignments with the preconized model and, therefore, to direct the efforts of the management planning and control department towards a better organizational alignment.

We consider this outcome to be of interest to the literature, since extant works give too much attention to the emerging budgeting practices (Ekholm & Wallin, 2000; Hansen et al., 2003; Hansen & Van der Stede, 2004; Libby & Lindsay, 2010) and there is a lack of studies providing knowledge on how are the normative changes to management control systems (issued by management control departments) assimilated by managers.

There are some studies regarding what contributes to the adoption and diffusion of Management Accounting Innovations (MAIs), namely, the adopters' characteristics, the characteristics of the innovation itself and the intervention of consultants (Ax & Bjørnenak, 2005, 2007; Ax & Greve, 2017). However, on the ex-post side, i.e., after managers decide adopting a MAI, namely regarding budgets, few studies focus on the effectiveness of such changes in the managers' perceptions and alignment with the new model configurations, and so in its diffusion within the company (Ozdil & Hoque, 2017). Nevertheless, there is some literature regarding the assimilation of new management practices inspired in the Actor-Network theory (Alcouffe, Berland, & Levant, 2008), which defends analysing innovations within the context in which it is applied, being the context attached to the management actions and interacions within actor-networks (Alcouffe et al., 2008).

Although there are different degrees of alignment with the model (CA), research results show that, in general terms, the changes were understood and accepted by the managers of Corticeira Amorim. However, we can infer that there is some resistance to change and some misalignment between the preconized management planning and control model and the perception of managers. This demonstrates that having a set of principles and procedures that are defined and promoted by the management planning and control department is not a sufficient condition for these rules to be applied and fully understood.

In general, it is possible to identify different levels of maturity in what relates the CA in the different business units. Two of the five BUs, the Floor and Wall Coverings and the Composite Cork BUs seem to have a more mature level of adhesion to the CA than the other three BUs. The respondents of these two BUs do not even mention the word "budget" in their interviews and it is possible to conclude that, in the generality of functions, the practices revealed by the respondents of these two BUs are more congruent to what is preconized (CA). However, all interviewees from the other three BUs mention the word "budget" several times during their interviews. The use of the term "budget" can be justified by one of the two reasons: either the model has still not evolved completely from a traditional budgeting process, or there is a terminology misunderstanding and the term "budget" is being used instead of the term "forecast". Curiously, it is possible to identify two characteristics that can distinguish the two more aligned BUs from the other three. Firstly, both BUs have less dependency from the raw material, cork, than the other three. Secondly, it was possible to denote a lower degree of formalization of processes and of implementation of management tools and a predominance of cultural controls in the smallest BU, the Insulation Cork BU. Additionally, it is possible to conclude that the functional area revealed not to be a significant variable for cluster analysis. This might be explained by the fact that there was not enough representation of each functional area.

5.2. Conclusions

The present chapter aims at identifying the main limitations of this study and adopted methodology, recognizing the main contributions of this master thesis to the literature, and suggesting future research.

In what concerns the limitations of research, two aspects that have not been considered in this study can justify some differences in the results. Firstly, we did not consider the seniority of respondents in the company. This can explain some results because, being through the process of changing (which in the case of Corticeira Amorim happened about 4 years ago), may lead to a higher recognition of what the new management model principles try to overcome, when compared to a traditional budgeting process. Secondly, we did not take into consideration whether the respondents form part of the population that is covered by individual performance contracts (scorecards). Being covered by this tool might lead to a higher comprehension about the procedures that are preconized to be applied. It would be interesting to take these variables into consideration in future research. Lastly, another caveat to this study may be that having two forms of survey could lead to different results between groups 1 and 2 (which responded through interviews) and group 3 (which responded through an online questionnaire). Lastly, this study lacks research on the interdependencies that exist between the different identified controls in order to form an integrated MCS. Nevertheless, according to Otley (2016), MCS packages will always have some degree of incoherence, with informal controls playing a crucial part in the package's performance.

As already mentioned, by studying MCS as a package of different controls, this thesis aims at answering the literature gap that has been identified by Malmi and Brown (2008). Secondly, this thesis demonstrates how a package of controls, internally developed and adapted to the contingencies of the firm, can substitute the traditional budgeting process without adopting all the BB principles. This supports the contingency theory proposed by Otley (1999), by demonstrating the adaptability of the model during the years. Also, it contributes to the existing need for studying MCS as packages under the contingency theory (Otley, 2016). Lastly, by studying a contemporary issue of an organizational change, this study contributes to the lack identified by Chenhall (2006), who developed a detailed review on existing contingency theory's related studies.

Moreover, this thesis also contributes to the literature by demonstrating that it is not because there is a set of principles and norms defined and propagated by the management planning and control departments that those procedures are fully recognized and applied by managers. Literature has been too much focused in trying to understand how traditional MCS or tools, such as budgeting, could be improved or replaced by advanced management models, but there is a lack of studies that focus on understanding if managers at different hierarchical levels absorb these new practices. Moreover, although it has not been the main focus of this master thesis, we were also able to verify that the Execution Premium model developed by Kaplan and Norton (2008) can be adapted by organizations in order to rely less on budgets for strategy execution.

As a conclusion, by recognizing the advantages of following the approach suggested by Malmi and Brown (2008) of studying MCS as a package instead of focusing in single controls, we suggest future research to follow this call in order to fully understand different controls. Moreover, we suggest future case study research about firms that have challenged the use of budgets to focus on how the new management principles are recognized and applied by managers.

References

Alcouffe, S., Berland, N., & Levant, Y. (2008). Actor-networks and the diffusion of management accounting innovations: A comparative study. *Management Accounting Research*, *19*(1), 1–17. https://doi.org/10.1016/j.mar.2007.04.001

Ax, C., & Bjørnenak, T. (2005). Bundling and diffusion of management accounting innovations - The case of the balanced scorecard in Sweden. *Management Accounting Research*, *16*(1), 1–20. https://doi.org/10.1016/j.mar.2004.12.002

Ax, C., & Bjørnenak, T. (2007). Management accounting innovations: origins and diffusion. In *Issues in Management Accounting* (3rd ed., pp. 357–376).

Ax, C., & Greve, J. (2017). Adoption of management accounting innovations: Organizational culture compatibility and perceived outcomes. *Management Accounting Research*, *34*, 59–74. https://doi.org/10.1016/j.mar.2016.07.007

Bhimani, A., Horngren, C., M. Datar, S., & Foster, G. (2008). *Management and Cost Accounting*.

Bourmistrov, A., & Kaarbøe, K. (2013). From comfort to stretch zones: A field study of two multinational companies applying “beyond budgeting” ideas. *Management Accounting Research*, *24*(3), 196–211. https://doi.org/10.1016/j.mar.2013.04.001

Bunce, P., Fraser, R., & Woodcock, L. (1995). Advanced budgeting: a journey to advanced management systems. *Management Accounting Research*. https://doi.org/10.1006/mare.1995.1017

Cardos, I. R. (2014). New trends in budgeting - A literature review, *II*(2), 483–490.

Corticeira Amorim, S.G.P.S., S. A. (2016). *Annual report and accounts 2016*. Retrieved from https://www.amorim.com/en/for-investors/annual-report/

Ekholm, B. G., & Wallin, J. (2000). Is the annual budget really dead? *European Accounting Review*, *9*(4), 519–539. https://doi.org/10.1080/09638180020024007

Ekholm, B. G., & Wallin, J. (2011). The impact of uncertainty and strategy on the perceived usefulness of fixed and flexible budgets. *Journal of Business Finance and Accounting*, *38*(1–2), 145–164. https://doi.org/10.1111/j.1468-5957.2010.02228.x

Ferreira, A., & Otley, D. (2009). The design and use of performance management systems: An extended framework for analysis. *Management Accounting Research*, *20*(4), 263–282. https://doi.org/10.1016/j.mar.2009.07.003

Gill, J., & Johnson, P. (2013). *Research Methods for Managers*. (SAGE, Ed.), *Journal of Chemical Information and Modeling* (Vol. 53). https://doi.org/10.1017/CBO9781107415324.004

Golyagina, A., & Valuckas, D. (2012). Reviewing literature on rolling forecasts , benchmarking and customer profitability A management accounting perspective. *Master Thesis in International Business NORGES*.

Hansen, S. C., Otley, D. T., & Van der Stede, W. A. (2003). Practice developments in budgeting: an overview and research perspective. *Journal of Management Accounting Research*, *15*(1), 95–116. https://doi.org/10.2308/jmar.2003.15.1.95

Hansen, S. C., & Van der Stede, W. A. (2004). Multiple facets of budgeting: An exploratory analysis. *Management Accounting Research*, *15*(4), 415–439. https://doi.org/10.1016/j.mar.2004.08.001

Henttu-Aho, T., & Järvinen, J. (2013). A Field Study of the Emerging Practice of Beyond Budgeting in Industrial Companies: An Institutional Perspective. *European Accounting Review*, *22*(4), 765–785. https://doi.org/10.1080/09638180.2012.758596

Hope, J., & Fraser, R. (2003). *Beyond budgeting: how managers can break free from* *the annual performance trap*. Harvard Business Press.

Kaplan, R. (2010). Conceptual Foundations of the Balanced Scorecard. *Harvard Business School*, 1–36. https://doi.org/10.1016/S1751-3243(07)03003-9

Kaplan, R., & Norton, D. (2001). Transforming the balanced scorecard from performance measurement to strategic management : Part II. *Accounting Horizons*, *15*(2), 147–160. https://doi.org/10.2308/acch.2001.15.2.147

Kaplan, R., & Norton, D. P. (2008). *The Execution Premium*. *GetAbstract*. Harvard Business Press. https://doi.org/10.2308/accr.2010.85.4.1475

Kothari, C. (2004). *Research methodology: methods and techniques*. *Vasa*. https://doi.org/http://196.29.172.66:8080/jspui/bitstream/123456789/2574/1/Research%20Methodology.pdf

Liang, Y., & Ordasi, C. (2014). Analysing the Role of Rolling Forecast from a Broad Perspective.

Libby, T., & Lindsay, R. M. (2010). Beyond budgeting or budgeting reconsidered? A survey of North-American budgeting practice. *Management Accounting Research*, *21*(1), 56–75. https://doi.org/10.1016/j.mar.2009.10.003

Lorain, M.-A. (2010). Should rolling forecasts replace budgets in uncertain environments? In *Performance Measurement and Management Control: Innovative Concepts and Practices* (pp. 177–218). Emerald Group Publishing Limited.

Lyne, S. R. (1988). The Role of the Budget in Medium and Large UK Companies and the Relationship with Budget Pressure and Participation. *Accounting and Business Research*, *18*(71), 195–212. https://doi.org/10.1080/00014788.1988.9729367

Malmi, T., & Brown, D. A. (2008). Management control systems as a package-Opportunities, challenges and research directions. *Management Accounting Research*, *19*(4), 287–300. https://doi.org/10.1016/j.mar.2008.09.003

Merchant, K., & Stede, W. (2007). *Management Control Systems Performance Measurement,Evaluation and Incentives*.

Neely, A., Sutcliff, M., & Heyns, H. (2001). Driving Value Through Strategic Planning and Budgeting. *Accenture*, 52.

O'Grady, W., & Akroyd, C. (2016). The MCS package in a non-budgeting organisation: a case study of Mainfreight. *Qualitative Research in Accounting & Management*, *13*(1), 2–30. https://doi.org/10.1108/QRAM-09-2014-0056

Olesen, A., Larsson, D., Player, S., Röösli, F., & Bogsnes, B. (2016). The Beyond Budgeting principles. *Beyond Budgeting Round Table*, 11–13. Retrieved from http://bbrt.org/the-beyond-budgeting-principles/

Østergren, K., & Stensaker, I. (2011). *Management control without budgets: A field study of "Beyond Budgeting" in practice*. *European Accounting Review* (Vol. 20). https://doi.org/10.1080/09638180903487842

Otley, D. (1999). Performance management: a framework for management control systems research, (September), 363–382.

Otley, D. (2006). Trends in budgetary control and responsibility accounting. In *Contemporary issues in management accounting* (pp. 291–307).

Otley, D. (2016). The contingency theory of management accounting and control: 1980-2014. *Management Accounting Research*, *31*, 45–62. https://doi.org/10.1016/j.mar.2016.02.001

Ozdil, E., & Hoque, Z. (2017). Budgetary change at a university: A narrative inquiry. *British Accounting Review*, *49*(3), 316–328. https://doi.org/10.1016/j.bar.2016.09.004

Rosanas, J. M. (2016). *Budgeting Beyond Budgeting* (Vol. WP-1139-E).

Sandalgaard, N., & Nikolaj Bukh, P. (2014). Beyond Budgeting and change: a case study. *Journal of Accounting & Organizational Change*, *10*(3), 409–423. https://doi.org/10.1108/JAOC-05-2012-0032

Simons, R., & Dávila, A. (1998). How high is your return on management?

Harvard Business Review, *76*(February), 70–80. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=16943&site=ehost-live

Sivabalan, P., Booth, P., Malmi, T., & Brown, D. A. (2009). An exploratory study of operational reasons to budget. *Accounting and Finance*, *49*(4), 849–871. https://doi.org/10.1111/j.1467-629X.2009.00305.x

Sponem, S., & Lambert, C. (2016). Exploring differences in budget characteristics, roles and satisfaction: A configurational approach. *Management Accounting Research*, *30*, 47–61. https://doi.org/10.1016/j.mar.2015.11.003

Yin, R. K. (2003). Case study methodology R.K. Yin (2003, 3rd edition). Case Study Research design and methods. Sage, Thousand Oaks (CA)..pdf. In *Case Study Research: design and methods* (pp. 19-39-106).

Yin, R. K. (2009). *Case study research : design and methods / Robert K. Yin*. *Applied social research methods series: 5*. https://doi.org/10.1097/FCH.0b013e31822dda9e

Appendices

Appendix A – Interview's Part I Structure

Part I of the interview: Traditional Budget Functions

A. What is the procedure adopted in defining the overall targets of the organization and of the various functional areas?
B. What is the procedure adopted in the definition of the operational plans and consequent accountability for them?
C. What is the procedure adopted to carry out the resources allocation?
D. What is the procedure used to forecast financial results?
E. What is the procedure adopted for authorizing expenses?
F. What is the procedure used to coordinate the different firm's activities?
G. What is the procedure adopted to manage and control the costs incurred during the year?
H. What is the methodology used to evaluate performance?
I. What kind of benchmarks (e.g.: budget, planned, homologous, etc.) are used for variance analysis?
J. What mechanisms / tools are used in order to encourage/incentivize performance?

Note: Additionally to the above-mentioned questions, the following question was made to the 3 elements that form part of the executive board of directors of Corticeira Amorim: "What were the main reasons for abandoning the traditional budgeting process in Corticeira Amorim?". This question was made after part II was answered.

Appendix B – Interview and Online Questionnaire's Part II Structure

In the beginning of the second part of the online questionnaire, the following text was displayed:

> The second part of the questionnaire that is now starting aimed at understanding the degree of agreement / recognition of each of the 13 negative aspects arising from the use of the budget. The following 13 negative aspects identified in the literature are associated with the use of the traditional annual "planning + budgeting" process, which implies about 2/3 months of preparation, the extensive use of variance analysis, performance evaluation against budget and a set of other purposes such as target setting, coordinating activities, allocating and predicting resources, etc..

To each negative aspect of the traditional budgeting process the following question was made: "In a 0 to 10 scale, where 0 represents "don't agree" and 10 represents "totally agree", how far do you agree with each of the following 13 traditional budget limitations?".

- B1. The traditional budgeting process covers an annual timeframe that is no longer suitable to the firm's business cycle.
- B2. The traditional budgeting process is no longer suitable in the existing context of macroeconomic uncertainty.
- B3. Target setting and financial forecasting are conflicting purposes, thus, these two tasks must not be covered in the same tool.
- B4. The traditional budgeting process is not only a ceiling but also a floor for costs.
- B5. The traditional budgeting process elicits conservative behaviours.
- B6. The traditional budgeting process impedes innovation.
- B7. The traditional budgeting process introduces rigidity to the organization.
- B8. The traditional budgeting process deters cooperation between areas.
- B9. The traditional budgeting process imposes a culture of control rather than a culture of engagement.
- B10. The traditional budgeting process elicits opportunistic behaviours.
- B11. The traditional budgeting process translates the predominance of short-term profitability to the detriment of long-term value creation.
- B12. The traditional budgeting process takes too much time for little value.
- B13. The traditional budgeting process is primarily a ritual.

Appendix C – Online Questionnaire's Part I Structure

In the beginning of the online questionnaire, the following text was displayed:

> The present questionnaire aims at collecting the different perceptions that exist in the organization about the procedures that are adopted in the 5 Business Units that form part of Corticeira Amorim. Therefore, I ask you to be the most sincere in your answers, reflecting the reality that you present in the Business Unit you work.
>
> The reference in this questionnaire to "budget" is relative to the traditional process of annual planning and budgeting, which provides for its preparation in the period from September to December of each year, activity monitoring and performance evaluation based on it (through an extensive variance analysis during the year), and that tries to address in a single tool various company's activities such as target setting, financial forecasting and resources allocation.

Then, it was asked the first and last names of the individual attending the questionnaire, the BU in which he/she works and his/her area of activity (Purchasing, Industrial Operations, Research and Development, Projects Engineering, Quality Management, Product Management, Market Segment Management, Marketing and Sales, Transportation and Logistics, and Administrative and Financial).

The first part of the online questionnaire was formed by the following questions:

A1. What is the basis for building the organization's annual targets? Choose only one option.

A. Annual targets are defined on the basis of what is budgeted to be possible, taking into account a forecast of what is likely to occur over the year under consideration. i)
B. Annual targets are defined on the basis of what is aimed to happen, taking into account an ambitious vision of a longer-term strategic orientation.ii)

i) If answer A was chosen, the following question would be showed:

Taking into consideration that the targets are defined based on what is predicted to occur, on a scale of 0 to 10, to what extent do you consider that the adopted procedure meets the needs inherent to target setting?

ii) If answer B was chosen, the following question would be showed:

Taking into consideration that the organization's targets are not built on the basis of the budget, on a scale of 0 to 10, to what extent do you consider the currently used procedure more or less appropriate to a budget-based methodology for setting targets?

A2. In terms of the hierarchical flow, how would you characterize the target setting process? Choose only one option.

A. Targets are proposed by the various team elements (bottom-up process).
B. Targets are imposed by the top hierarchical levels (top-down process).

A3. What is the level of detail of the organization's targets? Choose only one option.

A. Targets are delineated with a high level of detail (e.g.: sales goal of each person detailed by product, market, customer, etc.).
B. Targets are delineated at a global level and are subsequently deployed for each person in charge.

A4. What is the degree of understanding of the defined targets by the elements of the organization? Choose only one option.

A. The defined goals are understood by the organization.
B. The defined targets are not fully understood by the organization.

A5. Is there a review of the targets during the period for which they are supposed to be applied?

A. Yes, over the period for which targets are expected to apply, these targets are reviewed and adapted according to the evolution of the business.
B. No, targets are not revised or adapted over the period for which they are expected to apply, except in unexpected situations where the assumptions for goal setting change.

B1. What is the purpose of the existing operational plans? Choose only one option.

A. The operational plans serve to achieve what is defined in the budget or forecast.[i)]
B. The operational plans serve to achieve the established targets. [ii)]

i) If answer A was chosen, the following question would be showed:

Considering that the operational plans serve to achieve what is defined in the budget or the forecast, on a scale of 0 to 10, to what extent do you consider that the procedure adopted responds adequately to the management need of defining operational plans?

ii) If answer B was chosen, the following question would be showed:

Considering that the operational plans serve to achieve the defined targets, on a scale of 0 to 10, to what extent do you consider the procedure currently used more or less adequate when compared to a definition of responsibilities in order to attain budget?

B2. How much are hierarchical superiors involved in the definition of operational plans? Choose only one option.

A. The definition of the operational plans and consequent accountability is performed in collaboration between the manager and the collaborator.
B. The definition of the operational plans and consequent accountability is performed autonomously by the heads of each area.

B3. What is the periodicity used for monitoring the operational plans? Choose only one option.

A. The monitoring of operational plans is performed on a monthly basis.
B. The monitoring of operational plans is performed on a quarterly basis.
C. The monitoring of operational plans is performed on a yearly basis.

C1. How often is resource allocation carried out? Choose one or more options.

A. The allocation of resources is carried out every year.
B. The allocation of resources is carried out with a frequency smaller than one year.
C. The allocation of resources is carried out whenever considered necessary.

C2. What is the degree of flexibility of the allocation of resources? Choose only one option.

A. The allocation of resources is flexible and, therefore, adaptable to eventual unexpected events.
B. The allocation of resources should be as similar as possible to the predefined one.

C3. What is the basis for the forecast and allocation of core raw materials (e.g.: cork)? Choose one or more options.

A. The forecast and allocation of core raw materials are made on a budgeting basis (with line-by-line detail and annual periodicity).[i)]
B. Forecasting and allocating core raw materials are based on the annual forecast (less detailed than budget and based on historical values).[ii)]
C. The forecast and allocation of core raw materials are made based on the annual targets of the organization. [ii)]
D. The forecast and allocation of core raw materials are done based on rolling plans/forecasts. [ii)]

i) If answer A was chosen, the following question would be showed:

Considering that the forecast and allocation of core raw materials are made on a budgeting basis, on a scale of 0 to 10, to what extent do you consider the adopted procedure adequately responds to the need of forecasting and allocating this type of resource?

ii) If answer A was not chosen, the following question would be showed:

Considering that the forecast and allocation of core raw materials are not made on a budgeting basis, on a scale of 0 to 10, to what extent do you consider the procedure currently used more or less appropriate than allocating this type of resource on a budgeting basis?

C4. What is the basis for the forecast and allocation of other raw materials (e.g.: non-cork materials)? Choose one or more options.

A. The forecast and allocation of other raw materials are made on a budgeting basis (with line-by-line detail and annual periodicity).[i)]
B. Forecasting and allocating other raw materials are based on the annual forecast (less detailed than budget and based on historical values). [ii)]
C. The forecast and allocation of other raw materials are performed based on the annual targets of the organization. [ii)]
D. The forecast and allocation of other raw materials are performed based on rolling plans/forecasts. [ii)]

i) If answer A was chosen, the following question would be showed:

Considering that the forecast and allocation of other raw materials are made on a budgeting basis, on a scale of 0 to 10, to what extent do you consider the adopted procedure adequately responds to the need of forecasting and allocating this type of resource?

ii) If answer A was not chosen, the following question would be showed:

Considering that the forecast and allocation of other raw materials are not made on a budgeting basis, on a scale of 0 to 10, to what extent do you consider the procedure currently used more or less appropriate than allocating this type of resource on a budgeting basis?

C5. What is the basis for the forecast and allocation of industrial capacity? Choose one or more options.

A. The forecast and allocation of industrial capacity are made on a budgeting basis (with line-by-line detail and annual periodicity).i)
B. Forecasting and allocating industrial capacity are based on the annual forecast (less detailed than budget and based on historical values). ii)
C. The forecast and allocation of industrial capacity are made based on the annual targets of the organization. ii)
D. The forecast and allocation of industrial capacity are done based on rolling plans/forecasts. ii)

i) If answer A was chosen, the following question would be showed:

Considering that the forecast and allocation of industrial capacity are made on a budgeting basis, on a scale of 0 to 10, to what extent do you consider the adopted procedure adequately responds to the need of forecasting and allocating this type of resource?

ii) If answer A was not chosen, the following question would be showed:

Considering that the forecast and allocation of industrial capacity are not made on a budgeting basis, on a scale of 0 to 10, to what extent do you consider the procedure currently used more or less appropriate than allocating this type of resource on a budgeting basis?

C6. What is the basis for the forecast and allocation of other variable resources (e.g.: direct labour, energy, transports and subcontracting)? Choose one or more options.

A. The forecast and allocation of other variable resources are made on a budgeting basis (with line-by-line detail and annual periodicity).[i)]
B. Forecasting and allocating other variable resources are based on the annual forecast (less detailed than budget and based on historical values). [ii)]
C. The forecast and allocation of other variable resources are made based on the annual targets of the organization. [ii)]
D. The forecast and allocation of other variable resources are performed based on rolling plans/forecasts. [ii)]

i) If answer A was chosen, the following question would be showed:

Considering that the forecast and allocation of other variable resources are made on a budgeting basis, on a scale of 0 to 10, to what extent do you consider the adopted procedure adequately responds to the need of forecasting and allocating this type of resource?

ii) If answer A was not chosen, the following question would be showed:

Considering that the forecast and allocation of other variable resources are not made on a budgeting basis, on a scale of 0 to 10, to what extent do you consider the procedure currently used more or less appropriate than an allocating this type of resource on a budgeting basis?

D1. How often is the financial forecasting (revenues and costs) made? Choose only one option.

A. The forecast of the company's results is made annually without any revision during this period.
B. The forecast of the company’s results is made annually, being reviewed with a periodicity higher than monthly (ex: quarterly / four-monthly / biannually) throughout the year.
C. The forecast of the company's results is made monthly.

D2. Where is the company's forecast supported? Choose one or more options.

A. The forecast of the company's results is supported in the annual forecast.
B. The forecast of the company’s results is supported in the budget.
C. The forecast of the company's results is supported in the Rolling Plan / Forecast.

D3. How are the company’s results forecast? Choose only one option.

A. The company results' forecast is a history adjusted for continuous improvement and for events with a high probability of occurring and corrected from non-recurring events of the year that has been completed.
B. The company results' forecast consists on a reflection of what we envisage as possible to occur in the following year, through a negotiation between the several areas and an effort is made in order to guarantee some ambition, approximating the forecast to the targets.

D4. What is the purpose of forecasting the company's financial results? Choose one or more options.

A. The forecast of the company's results is used to monitor the activity of the following year through the variances analysis between actual values and forecasted values.
B. The forecast of the company's results is used to determine the gap between current status and established targets.
C. The forecast of the company's results is used to negotiate the performance intervals that will form the basis for the performance evaluation of the various areas.
D. The forecast of the company's results serves as the basis for defining the targets of the organization.

D5. What is the level of detail of the forecast of the company's results (revenues and costs)? Choose only one option.

A. The forecast of the company's results has a high level of detail, predicting for instance sales detailed by article, customer, market, etc.[i)]
B. The forecast of the company's results has a level of detail that is lower than the one used in a traditional budgeting process, by predicting only the "big numbers" in terms of revenues and costs for the following year.[ii)]

i) If answer A was chosen, the following question would be showed:

Considering that the forecast of company's results has a high level of detail, on a scale of 0 to 10, to what extent do you consider that the procedure adopted for financial forecasting is appropriate?

ii) If answer B was chosen, the following question would be showed:

Considering that the forecast of company's results has a lower level of detail than the traditional budgeting process, on a scale of 0 to 10, to what extent do you consider the current procedure more or less adequate?

E1. What is the procedure adopted to authorize investment expenses? Choose only one option.

A. Based on the investment plan that is defined annually but with the need of approval in detail while expenses are incurred. [ii)]
B. Based on the investment plan defined annually in the budgeting process, considering automatically approved any expenses included. [i)]
C. Through a case-by-case evaluation throughout the year. [ii)]

i) If answer B was chosen, the following question would be showed:

Considering that the authorization of investment expenditure is carried out according to the budget, on a scale of 0 to 10, to what extent do you consider that the procedure for approving expenditure is appropriate?

ii) If answer B was not chosen, the following question would be showed:

Considering that the authorization of investment expenditure is carried out on the basis of the budget, on a scale of 0 to 10, to what extent do you consider the procedure used more or less adequate than the expenditure authorization based on the budget?

E2. What is the procedure used to authorize expenses (other than investments)? Choose only one option.

A. Based on the expenses plan defined annually in the budgeting process, considering automatically approved any expenses included. [i)]
B. Based on the expenses plan that is defined annually but with the need of approval in detail while expenses are incurred. [ii)]
C. Through a case-by-case evaluation throughout the year. [ii)]

i) If answer A was chosen, the following question would be showed:

Considering that the authorization of expenses is carried out according to the budget, on a scale of 0 to 10, to what extent do you consider that the procedure for approving expenditure is appropriate?

ii) If answer A was not chosen, the following question would be showed:

Considering that the authorization of expenses is carried out on the basis of the budget, on a scale of 0 to 10, to what extent do you consider the procedure used more or less adequate than the expenditure authorization based on the budget?

F1. What is the periodicity used to coordinate the different activities of the company? For example, to align sales and installed industrial capacity. Choose only one option.

A. The coordination of firm's activities is done annually, being supported in the Budget.
B. The coordination of firm's activities is carried out with a periodicity of less than one year (ex: quarterly, quarterly, or monthly).

F2. How flexible is the coordination of the company's activities? Choose only one option.

A. The coordination of firm's activities is rigid/stable, according to what is previously specified for the year in the budgeting process. i)
B. The coordination between the different activities is flexible/adjustable, being carried out permanently throughout the year. ii)

i) If answer A was chosen, the following question would be showed:

Considering that the coordination of activities is done according to what is specified in the budgeting process, on a scale of 0 to 10, to what extent do you consider that the procedure adopted to coordinate the different activities is adequate?

ii) If answer B was chosen, the following question would be showed:

Considering that the coordination of activities is carried out in a permanent and flexible manner, on a scale of 0 to 10, to what extent do you consider the procedure used more or less adequate than the coordination of the different activities through what is specified in the budget?

G1. What is the benchmark used to manage and control the costs incurred during the year? Choose only one option.

A. In order to exercise the management and control of costs, the costs incurred in a given month are preferably compared to that provided for in the Budget. i)
B. In order to exercise management and control of costs, the costs incurred in a given month are preferably compared to that provided in the Forecast. ii)
C. In order to exercise management and control of costs, the costs incurred in a given month are preferably compared with actual

periods (ex. Month of the previous year or last month of the current year). ii)

i) If answer A was chosen, the following question would be showed:

Considering that the management and control of the costs incurred during the year is done by comparing with the Budget, on a scale of 0 to 10, to what extent do you consider that the procedure adopted for controlling costs is appropriate?

ii) If answer A was not chosen, the following question would be showed:

Considering that the management and control of costs incurred over the year is not done by comparison with that stipulated in the Budget, on a scale of 0 to 10, to what extent do you consider the procedure more or less adequate than the control of costs based on the annual budget?

H1. What is the benchmark used for performance evaluation?

A. The performance evaluation is done by comparing the achieved performance to target performance, according to the performance ranges defined in the individual performance scorecard. ii)
B. The performance evaluation is done by comparing the performance achieved with the one stipulated in the budget. i)
C. The performance evaluation is made by comparing the performance achieved with the one stipulated in the forecast. ii)
D. The performance evaluation is made by the comparison between the achieved performance and what had been agreed between the manager and the employee. ii)

i) If answer B was chosen, the following question would be showed:

Considering that the performance evaluation is performed by comparing the achieved performance with the performance stipulated in the Budget, on a scale of 0 to 10, to what extent do you consider that the procedure adopted for the performance evaluation is adequate?

ii) If answer B was not chosen, the following question would be showed:

Considering that the performance evaluation is not performed by comparing the performance achieved with the performance stipulated in the Budget, on a scale of 0 to 10, to what extent does the procedure used look more or less appropriate than performance evaluation taking into account what is stipulated/foreseen in the budget?

H2. What is the periodicity used to evaluate performance?

A. Annual periodicity.
B. Periodicity smaller than annual (ex: monthly).

I1. What kind of variance analysis benchmarks are used in order to monitor activity throughout the year (e.g.: to monitor each company's income statement or contribution margin for each area of responsibility)? Choose one or more options.

A. Variance analysis from real periods (homologous periods or previous periods). [ii)]
B. Variance analysis from values stipulated in budget. [ii)]
C. Variance analysis from values stipulated in the annual forecast. [i)]
D. Variance analysis from the stipulated targets for the period being considered. [i)]

i) If answer B was chosen, the following question would be showed:

Considering that variance analysis from the budget are carried out in order to monitor activity, on a scale of 0 to 10, to what extent do you consider the types of deviation analysis to be adequate?

ii) If answer B was not chosen, the following question would be showed:

Considering that variance analysis from the budget are not carried out in order to monitor activity, on a scale of 0 to 10, to what extent do you consider the procedure used more or less appropriate than variance analysis in comparison to the budget?

I2. How often is variance analysis performed? Choose one or more options.

A. Monthly
B. Quarterly
C. Quarterly
D. Annually

J1. What mechanisms/tools are used to incentivize (reward) performance? Choose one or more options.

A. Through a variable monetary remuneration component according to the achieved performance.
B. Through a non-monetary component depending on the performance achieved (for example, by offering company shares or material assets).

C. Through the feedback/congratulation from the manager for the good performance.
D. Through pre-established career progression, depending on the achieved performance.

J2. What is the comparison benchmark that serves as a basis for rewarding performance? Choose only one option.

A. The award depends on the achieved performance compared to the pre-established in the Budget. [i)]
B. The award depends on the achieved performance in relation to that achieved in previous periods. [ii)]
C. The award depends on the achieved performance compared to what was foreseen in the Annual Forecast. [ii)]
D. The award depends on the achieved performance against the targets stipulated for the period being considered. [ii)]

i) If answer A was chosen, the following question would be showed:

Considering that performance reward is associated with reaching the budget, on a scale of 0 to 10, to what extent do you consider that the procedure used to encourage performance is efficient?

ii) If answer A was not chosen, the following question would be showed:

Considering that performance awards are not associated with achieving the budget, on a scale of 0 to 10, to what extent do you consider the procedure used to encourage more or less adequate performance than a procedure dependent on the fulfilment of the stipulated in budget?

Appendix D: Survey and Interview Results - Adopted Procedures

		Target Setting		Action Plans		Resouce Allocation		Forecasting		Authorizing Expenses		Coordination of Activities		Costs Management			Performance Evaluation			Performance Incentivizing		Variance Analysis		
		TB	CA	TB	CA	TB	CA	TB	CA	TB	CA	TB	CA	TB	AF	CA	TB	N/A	CA	TB	CA	TB	AF	CA
Count of answers		**9**	**33**	**3**	**39**	**14**	**28**	**20**	**22**	**3**	**39**	**2**	**40**	**11**	**4**	**27**	**0**	**1**	**41**	**3**	**39**	**9**	**7**	**26**
% / Total		**21,4%**	**78,6%**	**7,1%**	**92,9%**	**33,3%**	**66,7%**	**47,6%**	**52,4%**	**7,1%**	**92,9%**	**4,8%**	**95,2%**	**26,2%**	**9,5%**	**64,3%**	**0,0%**	**2,4%**	**97,6%**	**7,1%**	**92,9%**	**21,4%**	**16,7%**	**61,9%**
Average level of satisfaction		**7,33**	**7,88**	**3,67**	**7,92**	**6,57**	**8,00**	**7,40**	**7,95**	**7,00**	**7,90**	**3,00**	**8,08**	**7,27**	**8,25**	**7,70**	**-**	**5,00**	**8,34**	**6,33**	**7,89**	**8,33**	**7,71**	**7,85**
Business Unit	**Raw Materials**	1	5	0	6	4	2	5	1	0	6	0	6	3	0	3	0	0	6	1	5	4	0	2
	%	16,7%	83,3%	0,0%	100,0%	66,7%	33,3%	83,3%	16,7%	0,0%	100,0%	0,0%	100,0%	50,0%	0,0%	50,0%	0,0%	0,0%	100,0%	16,7%	83,3%	66,7%	0,0%	33,3%
	Cork Stoppers	3	10	1	12	7	6	11	2	1	12	2	11	4	1	8	0	1	12	2	11	4	1	8
	%	23,1%	76,9%	7,7%	92,3%	53,8%	46,2%	84,6%	15,4%	7,7%	92,3%	15,4%	84,6%	30,8%	7,7%	61,5%	0,0%	7,7%	92,3%	15,4%	84,6%	30,8%	7,7%	61,5%
	Floor & Wall Coverings	1	7	0	8	0	8	0	8	0	8	0	8	1	1	6	0	0	8	0	8	0	2	6
	%	12,5%	87,5%	0,0%	100,0%	0,0%	100,0%	0,0%	100,0%	0,0%	100,0%	0,0%	100,0%	12,5%	12,5%	75,0%	0,0%	0,0%	100,0%	0,0%	100,0%	0,0%	25,0%	75,0%
	Composite Cork	1	7	0	8	1	7	1	7	2	6	0	8	0	2	6	0	0	8	0	8	0	2	6
	%	12,5%	87,5%	0,0%	100,0%	12,5%	87,5%	12,5%	87,5%	25,0%	75,0%	0,0%	100,0%	0,0%	25,0%	75,0%	0,0%	0,0%	100,0%	0,0%	100,0%	0,0%	25,0%	75,0%
	Insulation Cork	3	1	2	2	2	2	3	1	0	4	0	4	3	0	1	0	0	4	0	4	1	1	2
	%	75,0%	25,0%	50,0%	50,0%	50,0%	50,0%	75,0%	25,0%	0,0%	100,0%	0,0%	100,0%	75,0%	0,0%	25,0%	0,0%	0,0%	100,0%	0,0%	100,0%	25,0%	25,0%	50,0%
	Holding	0	3	0	3	0	3	0	3	0	3	0	3	0	0	3	0	0	3	0	3	0	1	2
	%	0,0%	100,0%	0,0%	100,0%	0,0%	100,0%	0,0%	100,0%	0,0%	100,0%	0,0%	100,0%	0,0%	0,0%	100,0%	0,0%	0,0%	100,0%	0,0%	100,0%	0,0%	33,3%	66,7%
Hierarchical Group	**1**	0	3	0	3	0	3	0	3	0	3	0	3	0		3	0	0	3	0	3	0		2
	%	0,0%	100,0%	0,0%	100,0%	0,0%	100,0%	0,0%	100,0%	0,0%	100,0%	0,0%	100,0%	0,0%	0,0%	100,0%	0,0%	0,0%	100,0%	0,0%	100,0%	0,0%	0,0%	100,0%
	2	3	12	1	14	5	10	8	7	0	15	0	15	4		11	0	0	15	0	15	4		9
	%	20,0%	80,0%	6,7%	93,3%	33,3%	66,7%	53,3%	46,7%	0,0%	100,0%	0,0%	100,0%	26,7%	0,0%	73,3%	0,0%	0,0%	100,0%	0,0%	100,0%	30,8%	0,0%	69,2%
	3	6	18	2	22	9	15	12	12	3	21	2	22	7		13	0	1	23	3	21	5		15
	%	25,0%	75,0%	8,3%	91,7%	37,5%	62,5%	50,0%	50,0%	12,5%	87,5%	8,3%	91,7%	35,0%	0,0%	65,0%	0,0%	4,2%	95,8%	12,5%	87,5%	25,0%	0,0%	75,0%

Labels:

TB: Traditional Budgeting Process; CA: Corticeira Amorim's Preconized Process; AF: Annual Forecast; N/A: No formal procedure

		Target Setting		Action Plans		Resouce Allocation		Forecasting		Authorizing Expenses		Coordination of Activities		Costs Management			Performance Evaluation			Performance Incentivizing		Variance Analysis		
		TB	CA	TB	CA	TB	CA	TB	CA	TB	CA	TB	CA	TB	AF	CA	TB	N/A	CA	TB	CA	TB	AF	CA
Functional Area	**Administrative and Financial**	2	4	0	6	2	4	4	2	0	6	0	6	1	0	5	0	0	6	0	6	1	1	4
	%	33,3%	66,7%	0,0%	100,0%	33,3%	66,7%	66,7%	33,3%	0,0%	100,0%	0,0%	100,0%	16,7%	0,0%	83,3%	0,0%	0,0%	100,0%	0,0%	100,0%	16,7%	16,7%	66,7%
	Sourcing and Procurement	0	1	0	1	1	0	1	0	0	1	0	1	0	0	1	0	0	1	0	1	0	0	1
	%	0,0%	100,0%	0,0%	100,0%	100,0%	0,0%	100,0%	0,0%	0,0%	100,0%	0,0%	100,0%	0,0%	0,0%	100,0%	0,0%	0,0%	100,0%	0,0%	100,0%	0,0%	0,0%	100,0%
	Project Engineering	1	1	0	2	1	1	1	1	0	2	1	1	1	1	0	0	1	1	0	2	1	0	1
	%	50,0%	50,0%	0,0%	100,0%	50,0%	50,0%	50,0%	50,0%	0,0%	100,0%	50,0%	50,0%	50,0%	50,0%	0,0%	0,0%	50,0%	50,0%	0,0%	100,0%	50,0%	0,0%	50,0%
	Product Management	0	1	0	1	0	1	1	0	0	1	0	1	1	0	0	0	0	1	0	1	0	0	1
	%	0,0%	100,0%	0,0%	100,0%	0,0%	100,0%	100,0%	0,0%	0,0%	100,0%	0,0%	100,0%	100,0%	0,0%	0,0%	0,0%	0,0%	100,0%	0,0%	100,0%	0,0%	0,0%	100,0%
	Market Segment Management	0	2	0	2	0	2	0	2	0	2	0	2	0	0	2	0	0	2	0	2	0	0	2
	%	0,0%	100,0%	0,0%	100,0%	0,0%	100,0%	0,0%	100,0%	0,0%	100,0%	0,0%	100,0%	0,0%	0,0%	100,0%	0,0%	0,0%	100,0%	0,0%	100,0%	0,0%	0,0%	100,0%
	Research and Development	1	1	0	2	1	1	2	0	0	2	0	2	2	0	0	0	0	2	2	0	2	0	0
	%	50,0%	50,0%	0,0%	100,0%	50,0%	50,0%	100,0%	0,0%	0,0%	100,0%	0,0%	100,0%	100,0%	0,0%	0,0%	0,0%	0,0%	100,0%	100,0%	0,0%	100,0%	0,0%	0,0%
	Transports and Logistics	0	2	0	2	0	2	0	2	0	2	0	2	0	1	1	0	0	2	0	2	0	1	1
	%	0,0%	100,0%	0,0%	100,0%	0,0%	100,0%	0,0%	100,0%	0,0%	100,0%	0,0%	100,0%	0,0%	50,0%	50,0%	0,0%	0,0%	100,0%	0,0%	100,0%	0,0%	50,0%	50,0%
	Marketing and Sales	2	4	2	4	3	3	2	4	1	5	0	6	1	2	3	0	0	6	0	6	1	3	2
	%	33,3%	66,7%	33,3%	66,7%	50,0%	50,0%	33,3%	66,7%	16,7%	83,3%	0,0%	100,0%	16,7%	33,3%	50,0%	0,0%	0,0%	100,0%	0,0%	100,0%	16,7%	50,0%	33,3%
	Industrial Operations	2	7	1	8	5	4	6	3	1	8	1	8	4	0	5	0	0	9	1	8	2	0	7
	%	22,2%	77,8%	11,1%	88,9%	55,6%	44,4%	66,7%	33,3%	11,1%	88,9%	11,1%	88,9%	44,4%	0,0%	55,6%	0,0%	0,0%	100,0%	11,1%	88,9%	22,2%	0,0%	77,8%
	Human Resources	0	3	0	3	0	3	1	2	1	2	0	3	0	0	3	0	0	3	0	3	1	0	2
	%	0,0%	100,0%	0,0%	100,0%	0,0%	100,0%	33,3%	66,7%	33,3%	66,7%	0,0%	100,0%	0,0%	0,0%	100,0%	0,0%	0,0%	100,0%	0,0%	100,0%	33,3%	0,0%	66,7%
	Cross-Functional	1	7	0	8	1	7	2	6	0	8	0	8	1	0	7	0	0	8	0	8	1	2	5
	%	12,5%	87,5%	0,0%	100,0%	12,5%	87,5%	25,0%	75,0%	0,0%	100,0%	0,0%	100,0%	12,5%	0,0%	87,5%	0,0%	0,0%	100,0%	0,0%	100,0%	12,5%	25,0%	62,5%

Labels:
TB: Traditional Budgeting Process; CA: Corticeira Amorim's Preconized Process; AF: Annual Forecast; N/A: No formal procedure adopted

Appendix E: Survey and Interview Results - Budget Limitations I

		Size	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	Average
Total		**40**	**6,48**	**6,68**	**5,50**	**6,00**	**7,18**	**6,25**	**6,78**	**5,95**	**6,35**	**5,73**	**6,90**	**6,20**	**5,88**	**6,30**
Business Unit	Raw Materials	6	5,50	6,00	4,08	4,92	6,08	5,25	6,25	5,00	4,92	5,08	6,08	5,33	4,92	**5,34**
	Cork Stoppers	12	5,33	5,17	4,83	5,17	7,00	6,33	7,00	4,50	5,67	5,50	6,50	5,50	5,67	**5,71**
	Floor & Wall Coverings	7	8,00	8,00	6,86	7,57	8,00	7,29	7,86	6,71	7,14	6,00	8,14	6,71	6,43	**7,29**
	Composite Cork	8	7,25	7,13	6,13	6,75	8,25	7,63	7,25	7,13	7,50	6,00	6,63	6,88	6,00	**6,96**
	Insulation Cork	4	6,00	6,50	6,00	6,50	7,25	5,00	6,00	6,50	6,75	6,25	7,50	6,50	6,25	**6,38**
	Holding	3	7,67	8,33	7,00	5,67	7,00	5,67	5,67	7,00	8,00	6,67	8,00	7,67	8,00	**7,10**
Functional Area	Administrative and Financial	6	7,67	7,83	7,67	8,50	9,00	6,67	7,67	6,83	7,33	7,17	7,67	8,17	7,83	**7,69**
	Sourcing and Procurement	1	1,00	1,00	2,00	1,00	1,00	1,00	2,00	1,00	1,00	3,00	1,00	1,00	3,00	**1,46**
	Project Engineering	2	7,00	8,00	1,50	7,50	10,00	8,50	8,50	8,50	9,50	5,00	9,50	7,00	8,00	**7,58**
	Market Segment Management	2	8,50	8,50	9,00	7,50	9,00	10,00	8,50	7,50	8,50	7,50	8,50	6,50	5,50	**8,08**
	Research and Development	2	3,00	3,00	5,50	5,00	4,50	3,50	4,00	3,50	3,50	4,50	5,50	5,00	3,50	**4,15**
	Transports and Logistics	2	5,50	5,50	4,00	1,50	4,00	5,00	5,00	4,50	2,00	3,50	7,00	5,00	3,50	**4,31**
	Marketing and Sales	5	5,60	6,00	3,80	5,00	6,40	5,80	6,20	7,20	6,00	5,40	5,80	5,20	5,00	**5,65**
	Industrial Operations	9	6,67	7,00	4,44	5,78	7,00	6,56	7,11	5,11	5,44	5,56	7,11	5,78	5,56	**6,09**
	Human Resources	3	6,67	5,67	4,67	5,67	8,00	5,67	7,67	5,67	8,00	4,33	6,67	5,33	6,00	**6,15**
	Cross-Functional	8	7,00	7,38	7,38	6,38	7,25	6,25	6,63	6,13	7,38	6,50	6,88	7,13	6,38	**6,82**
Group	1	3	7,67	8,33	7,00	5,67	7,00	5,67	5,67	7,00	8,00	6,67	8,00	7,67	8,00	**7,10**
	2	17	7,27	7,73	6,73	7,73	8,40	7,20	7,60	6,33	7,33	7,07	7,53	7,53	6,80	**7,33**
	3	20	5,77	5,73	4,45	4,86	6,36	5,68	6,36	5,55	5,45	4,68	6,32	5,09	4,95	**5,48**

Note: B1, B2,…, B13 correspond to the negative aspects of a traditional budgeting process, as identified in Appendix B.

Appendix F: Survey and Interview Results - Budget Limitations II

Group	BU	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	Average
2	Raw Materials	7,33	7,33	5,00	8,00	8,67	8,00	8,33	5,00	6,33	7,33	7,33	7,00	6,00	7,05
	Cork Stopers	5,33	7,00	6,33	5,67	6,67	7,00	7,33	5,67	6,00	6,00	6,67	5,67	5,00	6,18
	Floor&Wall Coverings	8,67	9,00	8,33	9,67	9,67	8,00	8,67	7,67	8,67	8,67	8,33	9,33	8,67	8,72
	Composite Cork	9,67	9,00	7,67	7,67	9,67	8,67	8,00	6,67	9,00	7,00	7,33	9,00	8,00	8,26
	Insulation Cork	5,33	6,33	6,33	7,67	7,33	4,33	5,67	6,67	6,67	6,33	8,00	6,67	6,33	6,44
3	Raw Materials	3,33	3,00	4,67	2,33	5,33	4,67	5,67	4,00	5,00	3,67	5,67	4,00	5,33	4,36
	Cork Stopers	5,56	5,67	3,33	4,67	5,89	4,67	5,89	4,78	4,56	4,78	5,89	5,22	4,89	5,06
	Floor&Wall Coverings	7,50	7,25	5,75	6,00	6,75	6,75	7,25	6,00	6,00	4,00	8,00	4,75	4,75	6,21
	Composite Cork	5,80	6,00	5,20	6,20	7,40	7,00	6,80	7,40	6,60	5,40	6,20	5,60	4,80	6,18
	Insulation Cork	8,00	7,00	5,00	3,00	7,00	7,00	7,00	6,00	7,00	6,00	6,00	6,00	6,00	6,23

Note: B1, B2,…, B13 correspond to the negative aspects of a traditional budgeting process, as identified in Appendix B.