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Conception of a holistic framework to study a case of Management Accounting change after an acquisition

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Abstract:

This study of a Portuguese chemical company acquired by a multinational, and, thus going through an integration process, aims to understand the process of a Management Accounting (MA) change. Over three decades, the mentioned company was subject to several changes in ownership and external context, regarding economic and regulatory conditions. Following its last acquisition, the company had to comply with new requirements and targets from the parent company, namely in terms of value creation. Hence, control mechanisms, including stricter KPIs, were set. A hybrid framework was, therefore, developed to analyse the case thoroughly.

Keywords: Management Accounting Change, Case Study, Influential forces, Hybrid Framework.

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1. Introduction

This study examines a Portuguese chemical company's Management Accounting (MA) change after acquisition by an English multinational company in 2020. Within the scope of this research is the analysis of MA changes in the past, paying particular attention to the last implemented change.

This company is a noteworthy case due to several changes in its ownership structure over the years, which has had an impact on its business strategies, goals, and, consequently, MA practices. It started as part of a multinational enterprise; then, it became a family business and, twenty years later, it joined a multinational, again. Along the way, external pressures prompted MA changes, and institutional factors, at the micro-level, both facilitated and constrained its implementation. The interviewed employees have worked for the company since the beginning, allowing a retrospective approach and reconstitution of its evolution. New MA systems, online portals, new budget approaches, new MA tools, and a more extensive range of KPIs were introduced to keep up with the new requirements of the management board and comply with external demands.

Against this backdrop, this paper focuses on understanding the factors that prompted the change, the predisposition of an organisation to succeed, the process structure, and the advancing forces for and barriers to change. Since the frameworks existent in literature are not enough to explain the complex reality of an MA change, a new hybrid framework was developed to ensure a complete and holistic analysis. This framework addresses specific institutional features at both the macro and micro level, acknowledging their strong dependence on organisational contingencies. It is built upon extensive literature and the analysis of a range of case studies portraying MA changes. The case presented above will, then, be analysed in light of this hybrid framework. It is expected to be a useful tool to identify the real-life forces that affect an MA change, enabling scenario outcome prediction. Through a pre-evaluation, change leaders will be able to envisage the issues that will require more attention and the key organisational strengths that should be powered to facilitate the MA change.

2. Literature Review

2.1 Institutional Theory

Institution theorists have thoroughly studied the MA change process. In the 1990s, many researchers drew on New Institutional Economics (NIE) to explain MA changes (Scapens, 2006). At the time, literature tended to evaluate MA practice by relying on two neo-classical requirements: efficiency improvement and optimal outcome assurance (Speklé, 2001). However, theories that claimed efficiency as the key driver of decision making began to lose credibility (Tolbert, 1997). Scapens (1994 in Scapens, 2006) suggested looking beyond the economic dimension. Production should be perceived as 'an outcome of an institutional ensemble of habits and routines which are part of the community experience, past and present' (Veblen, 1919 in Hodgson, 1993a, p 394).

To overcome the drawbacks of NIE, researchers proposed the New Institutional Sociology theory (NIS). NIS invites academics to look beyond technical efficiency and brought attention to the observable similarity of practices within the same organisational field. The organisations that collectively 'constitute a recognised area of institutional life (i.e., key suppliers, resource and product consumers, regulatory agencies, organisations that provide similar services)' tend to adopt similar approaches (DiMaggio and Powell, 1983, p1 48). NIS researchers set out to find a suitable answer to 'why do organisations look similar, and what are the pressures and processes that shape them?' (Scapens, 2006, p 11).

The resulting answer was grounded on the idea that within mature fields, organisations develop a mutual awareness of the dominant structures and patterns, i.e., 'social and legal rules, cultural elements, obligations, and expectations' (Scott and Meyer, 1991 in Dambrin et al., 2007, p 173). According to NIS, organisations end up incorporating the prevalent field institutions ‘the ways of thought or action of some prevalence and permanence embedded in the routines of a group’ (Burns and Scapens, 2000, p 5). Their motivation is the need to increase compatibility with the conditions of their external environment and comply with the standard requirements to survive. This homogenisation process is called isomorphism and assumes three characteristics depending on its origin: **coercive**, if it comes from political influence or regulation; **mimetic**, when the motivation is to replicate the conduct of success; and **normative**, when it arises by adaptation to the norms of society and professional bodies (DiMaggio and Powell, 1983).

Notwithstanding, isomorphism is not an automatic and linear process. Organisations who engage in taken-for-granted practice merely for external validation and do not safeguard organisational efficiency are likely to end up in the 'ceremonial conformity' status (Tolbert and Zucker, 1996, p 95). This means that some organisations come to understand that established, validated practices do not suit them and cannot introduce them into their day-to-day activities (Meyer and Rowan, 1977). As a result, these organisations become loosely associated with the institutionalised rules, adopting them only formally for external validation.

Based on this observation, NIS shows that organisations are shaped by their external environment and tend to converge toward the sector's standard. Nevertheless, it only partly addresses the different ways in which practice is implemented within an organisation (Tolbert and Zucker, 1996 in Dambrin et al., 2007). To that end, it is essential to understand the factors that ‘shape the actions and thoughts of individual human agents’ (Scapens, 2006, p 11): what motivates organisations only to adopt practices on a ceremonial basis, as described above (Meyer and Rowan, 1977)? Conversely, what prompts employees to implement, internalise, and put a new procedure into practice in their routine (Kostova and Roth, 2002 in Dambrin et al., 2007)?

In this context, the Old Institutional Economics theory (OIE) sheds light on the relationship between an organisation's internal 'package' and the way it reacts and introduces new practices. OIE proposes to examine the behaviour of economic agents when it comes to rules, routines, and institutions (Scapens, 2006). OIE researchers, like Veblen (1896), argued that a theory, to understand practice adoption and evolution in full, must acknowledge how strongly it depends on organisational contingencies and recognise that it is impossible to make a prediction fit all cases (Geoffrey Hodgson, 1996).

Thus, OIE and NIS are converging theories, as they agree that organisations tend to be shaped by the taken-for-granted rules and practices in their respective fields. However, OIE goes further in recognising that no two institutions are alike. They will vary according to each organisation's specific features (Tolbert, 1997). Three theories jointly explain the complexity of inter-related influences that shape practice in each organisation (Scapens, 2006). They address how external and internal forces influence an MA change, specifically regarding the extent to which organisations differ in their established practice, and how that affects the way an MA change is implemented in the end.

2.2 Management Accounting Practices

Establishing the scope of this paper requires a clear definition of Management Accounting Practices (MAPs). They consist of the processes whereby 'companies identify, measure, analyse, interpret and communicate information in order to achieve the organisation's goals' (Hilton and Platt, 2011 in Sunarni, 2013, p. 616). This study will focus on the MAPs that ‘meet the information requirements of business managers in a global, technology-driven world’ (Burns and Vaivio, 2001, p 389). World-class organisational leaders translate their strategies into specific goals and define performance goals to monitor corporate resources and processes (Busco, 2011). Priority goals, such as the resource waste reduction and value production increase through effective resource use, are the current trend (Kader and Luther, 2004, in

Sunarni, 2013). To comply with these goals, leaders are relying ever more on performance measurement systems (PMS) that integrate operational, financial and strategic information, as a pillar for organisational knowledge (Busco, 2003 cited in Busco, 2011).

For this paper, MA will be considered a set of routine practices (Nelson and Winter, 1982, cited in Busco 2011). It will be assumed that its rules correspond to what the collective formally recognises as 'the way things should be done,' whereas MAPs will reflect what is, in fact, used daily (Burns and Scapens, 2000, p 8). This distinction arises from the repetitive behaviour of following routine rules (i.e., taking them for granted), resulting in ‘recurrent action patterns’ (Becker, 2005, p 252). This reflects the agency-structure relationship in the process of routine human activity. In short, it means that MA practice (i.e., the change/reproduction of routines) is constrained by both structure (i.e., rules that became institutionalised) and agency (i.e., individuals) (Burns and Scapens, 2000).

2.3 Tolbert's, and Burns and Scapens' Frameworks

Tolbert, inspired by Giddens' ideas (1976; 1984), developed a model that theorises the agency-structure relationship in the process of change. Giddens' goal was to establish a link between the **institutional realm**, i.e., ‘the rules and shared models that derive from the history of interactions and achieve a status of significance and validation’, and the **realm of action**, i.e., ‘the current activities and patterns of agent behaviour in a particular setting’ (Tolbert, 1997, p 98). The fundamentals of Tolbert's framework are almost the same as Giddens'. The main difference is that the former, unlike the latter, is a dynamic model, allowing the study of both the continuity and change of practice in a continuous process (Tolbert, 1997), (See Appendix A below).

Burns and Scapens (2000) modified Tolbert's framework to the context of an MA change, in terms of the concepts and the dynamics involved in the process of change. However, in essence, little is changed. Instead of using Tolbert's term, 'scripts'–the 'observable, recurrent activities and patterns of interaction' (Tolbert, 1997, p 98)–their framework uses 'rules and routines' to refer to the same phenomena. Additionally, Burns and Scapens grouped the four stages reported in a MA change into two groups according to their recurrence: **encoding and enacting** fit into the **synchronic** processes group, as they take place at a specific point in time; **reproduction and institutionalisation** are classified as **diachronic** elements, as they result from the cumulative influence of institutions (Robert and Scapens, 2000).

According to Burns and Scapens, the MA change starts with the **encoding** of institutional principles into rules and routines (see Appendix B). It is followed by the internalisation of rules and subsequent interpretation of the appropriate behaviour to be adopted. In a second step, the **enactment**, conscious or not, of the rules and routines encoded in institutions. Subsequently, the institutionalisation level is reached by **reviewing or reproducing the rules and routines** (i.e., routinisation). The final step is institutionalisation, which occurs when behaviour patterns acquire a 'normative character and factual quality leading to the dissociation of individual actors' (Burns and Scapens 2000, p 11). Throughout this process, aspects, such as the extent to which agents recognise the rationale behind the change, and the openness of agents to 'disturb the status quo,' affect the implementation of change (Pettigrew, 1987 in Tolbert 1997, p 102). When there is no awareness of the rationale behind the new rule and routine, the tendency will be to reproduce what has been 'taken for granted' (Hughes, 1936 in Tolbert, 1997).

Both Tolbert's, and Burns and Scapens' frameworks tackle the process of change at a micro-level scope of analysis. Besides disregarding the external environment, they little emphasis on 'the role of cognitions and interpretive frames played in the institutionalisation process' (Tolbert, 1997, p 105). They do not explain the variables, such as trust and power, which affect the agent's attitude toward change (Busco et al. 2006; Nor-Aziah, 2007).

2.4 Kasurinen's Model

Given Tolbert's and Burns and Scapens' shortcomings, Kasurinen's model emerges as a promising analytic tool, providing for the factors and circumstances which may, or not, result in an effective MA change (Kasurinen, 2002). This is an amendment to the model of Cobb et al. (1995), which specifies potential problems that could pre-empt an MA change (See Appendix C).

In brief, Kasurinen's model identifies three types of change advancing forces: the **motivators,** which influence change in general; the **facilitators,** whose make the implementation of change easier; and the **catalysts**, which prompt the change directly. The momentum for change (i.e., the expectation of continuing change) and the leader's role are also identified as change-promoting variables. Leaders act as pivotal forces, playing a key role in motivating individuals and enacting new strategies. Their commitment and timely communication ensure that employees understand the need for change, possibly 'creating, sustaining, or building a momentum' (Munir et al. 2013, p. 202). In contrast, there are forces, both external and internal, that hinder change. The **confusers** generate uncertainty and disruption in the implementation of change, such as doubt about the purpose of change; the **frustraters** suppress change, such as an incompatible organisational culture; and the **delayers**, more 'technical and temporary' barriers, such as the inadequacy of existing information systems (Kasurinen, 2002, p 338).

3. Methodology

Drawing from the institutional theory, the abovementioned explanatory frameworks and the analysis of a compilation of published MA case studies (Nor-Aziah and Scapens, 2007; Munir et al., 2013; Kausurinen 2002, Cobb et al., 1995; Robalo, 2014; Busco and Scapens, 2011; Siti-Nabiha, 2005; Busco et al., 2007), a hybrid framework was created for this study. This framework intends to provide a holistic analysis of organisational change; in other words, one capable of examining the process of change in all its dimensions. As Pettigrew (1987, p. 655, cited in Alsharari [2015, p. 490]) says, the relevant framework to study an MA change must be 'historical, processual and contextual in character.' Based on that, this paper proposes a framework that takes into account the following dimensions: first, the setting of the preconditions and catalysts for change and, second, the structure of the change process, highlighting the forces that either promote or undermine its feasibility (see Appendix D).

The forces that affect change execution were mostly identified through a review of published MA change case studies (see Appendix E). An extensive range of real-life variables that positively or negatively influence the process of change were identified. The reoccurring aspects were further categorised, according to their nature and predictable impact on change. Finally, a systematic analysis of the interplay between the observed reoccurring forces in the published cases and their impact on MA change implementation was produced through a questionnaire form, here attached as Appendix F. Essentially, the questions are an outline of the framework.

The latter is then used to analyse the case of a recently acquired Portuguese company, currently going through an integration process that includes an MA change. This theoretical framework is needed to bind the analysis and ‘structure of the collection of evidence’ (Busco 2011, p 329). A retrospective analysis, assessing the company's background, was conducted based on tape-recorded interviews. Three employees who have been working in the company since its beginning were interviewed to gather an in-depth understanding of the MA change process (see Appendix G). Additionally, informal conversations provided important insights. Beyond that, presentations, excel spreadsheets, and other diverse data sources were examined to ensure the reliability of the analysis. The empirical use of this hybrid framework is also a way to test its ‘robustness and validate its adequacy’ (Alsharari, 2015, p 495).

4. The Conception of a Hybrid Framework

4.1 Organisational Preconditions and Catalyst for Change

The first step of the hybrid framework is to trace an organisational profile based on four aspects: historical background, industry sector, organisational culture and accountability practice. The purpose of this organisational profile is to assess the subject's predisposition to change successfully, given that it is recursively intersected by human agency and ongoing behavioural pattern structure (Busco, 2011). In this sense, deciphering and interpreting the dynamics of organisational learning are important to analyse, as they are part of a corporation's DNA.

Through a case study review, it was observed that organisations operating in strict, heavily regulated environments with significant external pressures tend to accept changes effortlessly (Scapens and Roberts, 1993). Furthermore, research suggests that external events can lead to questioning of ‘commonly held assumptions’ (Burns, 2000; Schein, 1999, 2003; Harris, 1994 in Siti-Nabiha, 2005, p 53). The same applies to organisations who present significant successful changes in structure, ownership, systems and practices throughout their history. This is because of their acquired know-how from constantly changing and reinventing themselves (Damanpour and Evan in Munir et al. 2013). Regarding organisational culture, it is notable that companies with a more passive culture of acceptance and a lack of action-claiming habits tend to embrace change without resistance. It is crucial to understand that, as ‘cultural manipulation is not as easy as previously theorised’ (Schein, 1992 in Busco and Scapens, 2011, p 324).

Moreover, when accounting routines are already institutionalised to some extent, an MA change tends to be well received, as procedural change is not perceived as unusual. This is explained by 'the dichotomy between revolutionary and evolutionary change' (Nelson and Winter, 1982 in Burns and Scapens, 2000, p 20). The latter implies incremental changes with minimal disruption to existing routines, which facilitates the process of change.

An example of these kinds of change is the case, described in Munir et al. (2013), of a Pakistani bank. Organisations like this bank, exposed to ever-greater competitive pressure and sector reforms, tend to develop an awareness for the need to systematically restructure their ways of working to be able to provide information for decision-making. Furthermore, employees developed a propensity to passively accept change, as they recognise their duty to banking and board directives. Their weakness, however, was its previous record of failed attempts to introduce the new practice. Despite their sense of duty, employees felt insecure about the merit of new initiatives, undermining the overall predisposition for change.

Concerning **catalysts for change** (i.e., factors directly associated with the timing of change arising before it takes place [Munir et al.,2013]), the hybrid framework relies on the NIS theory. When studying an MA change, it is important to identify the driver that prompted the process, since it will also influence the way change is received by the organisation. Burns and Scapens (2000) acknowledged that external pressures could not be ignored. Neither can **internal forces**, such as mindset and business performance changes (Busco 2011). Notwithstanding, they are often incited by external factors, like a change in ownership or the appointment of a new manager (See Nor-Aziah and Scapens, 2007; Kasurinen, 2002; Munir et al., 2013; Busco et al., 2011; Siti-Nabiha and Scapens, 2005). Hence, ultimately, MA catalysts are mostly external to organisations.

4.2 The Process of Change

Tolbert's (1997), and Burns and Scapens' (2000) change process frameworks are the backbone of this hybrid framework. This revised framework maintains Burns and Scapens' interpretation, which is identical to the previously conducted examination. The four steps are also grouped into two, according to their **synchronic** or **diachronic** nature.

As mentioned above, both Tolbert's, and Burns and Scapens' frameworks fail to tackle the aspects that prompt, drive and constrain change. The revised framework rectifies this failure and addresses them. It still relies on the Burns and Scapens' explanation, albeit, using the structure of Tolbert's framework, but replacing of the 'scripts' with 'rules and routines' to match the terminology of Burns and Scapens. The reason is simple. When incorporating the change drivers (explained below) into the developed framework, a clean diagram of Tolbert's framework makes it clearer to the readers.

In line with that, the dynamics between change and human agency are also contemplated in this hybrid framework (Hinings, 1996). To this end, a complementary analysis grounded on Kasurinen's (2002) model was added to expose the advancing forces and barriers to change efficiently. This hybrid framework advances Kasurinen's model, in that, the forces and barriers to change are grouped. Instead of grouping the forces based on their positive or negative impacts, the present study groups them according to their nature as suggested by Burns and Scapens (2000), as further explained below. The rationale for this categorisation a clearer guide for the user to follow when conducting their analysis.

4.3 The Influencing Forces

4.3.1 The First Step: Encoding and Enacting

Through the analysis of published case studies, three main aspects were identified as forces that influence encoding and enactment: the **nature of the change leader**, the **nature of the agents subject to change** and the **nature of the accounting change**. According to Kasurinen's (2002) terminology, they can act as facilitators, confusers, frustraters and delayers.

Regarding **the nature of the change leader**, it is useful to ascertain whether the leader is considered a part of the organisation, a hybrid leader (i.e., holding both financial, accounting, production and procedures knowledge); or has deciding and authoritative power over the agents subject to change. The examination of several MA change cases sheds light on a reoccurring aspect: whenever the change leader is recruited outside the company, more effort is required to conquer legitimacy. Leaders had to prove their competences, build a relationship of trust and impose their authority and decision-making power. The literature acknowledges that power can be used ‘to shape or influence an actor's perceptions and preferences, making them accept a new status quo’ (Alsharari 2015, p. 489). Agents are, then, convinced that change is necessary, ‘desirable, rational, and legitimate’ (Hardy, 1996 in Alsharari 2015, p. 489)

At that point, an assessment is carried out to check whether **the agents subject to change** recognise the need for it and whether they trust the change designers and leaders' competences. As stated in Nor-Aziah and Scapens (2007, p 20), ‘trust and control are intertwined forces that can facilitate an MA change implementation’. Regarding **the nature of the accounting change**, there are four primary considerations: Does it challenge the prevailing ways of thinking and doing things? Was the organisation subject to a diagnosis before the introduction of a new MAP? Were the tool designers close to operations? Were the system's users involved in the conception of the new MAP?

The case portrayed by Nor-Aziah and Scapens (2007) reveals the impact of the abovementioned factors. Two objectives were set up within a Modernisation Project. The first, concerning service performance, was compatible with those of prevailing service-oriented institutions. It was accepted as legitimate. In contrast, the second, related to cost reduction and financial accountability, was not aligned with existing routines and resulted in resistance and inertia toward the introduction of new rules. They were not fully compatible with the prevalent ones, causing change agents to become reluctant (Busco et al. 2006 in Van der Steen, 2009). Moreover, the authors suggest that, if the accountants (i.e., the change leaders) had demonstrated their trustworthiness to the operations managers, it would have been possible to find a middle ground between the need for improved services and the reduction of costs. On the contrary, the accountants in question were considered outsiders with lack of operational knowledge and experience, failing to create bonds and acting, instead, as frustraters. Moreover, operational managers had little involvement in the conception of the new MAPs, which added to the distrust and tension. This example affirms trust as a facilitator of change.

Conversely, a case reported by Munir et al. (2013) is an example of a change leader whose role was crucial in overcoming resistance against a new Performance Measurement System (PMS) in a bank. Despite being an outsider, he created the acceptance and momentum for change. Line-managers were involved in the change design from the start through the exchange of ideas in formal and informal meetings. Indeed, operational managers rose as change leaders thanks to their active participation. Additionally, there was a considerable amount of time spent on a diagnosis analysis, guaranteeing that the new PMS would fit the bank's needs. Similarly, in the Cobb et al. (1995) case, accountants were keen to involve managers and explain the new reports and new MAP to be rolled out to the operational divisions. In this sense, the accountants acted as facilitators.

4.3.2 The Second Step: Revision/Reproduction and Institutionalisation

The new MAP's implementation, training, technical support, task and workload assignment play a crucial role in its routinisation and consequent institutionalisation.

Once the agents have participated in the first step–internalising the rules and recognising the reasons to follow them in their day-to-day activity–, it is important to evaluate the new tools' functionality (See Cobb et al., 1995; Kasurinen, 2002; Robalo, 2014). If the new system and techniques are not fully integrated and operational, frustration can arise among users with consequent abandonment of their use. Furthermore, if training and technical support are not adequately given to agents, the success of the new system could also be jeopardised. In cases where task reassignment took place, two aspects will require attention: retaining organisational knowledge, and adequately allocating the workload. Structural rearrangements, responsibility reassignment and new means of communication lead to 'inevitable organisational confusion' (Vaivio, 1999, p 41).

Munir et al. (2013) report one case that illustrates these challenges. In it, branch and unit managers were required to collect monthly performance data, which was partly calculated and entered manually into in-house software. The same software was used to support the PMS. It was too slow and made the process of updating data tedious to users. Similarly, in the Cobb et al. (1995) case, despite the progress made in the first step of the change process, several planned changes were delayed or did not happen. The change leaders' inability to make the MAP fully operational was due to disruptive interferences in the form of new information requirements, restructuring of the financial department with loss of organisational knowledge, and the increasing number of priorities and workload. These barriers caused the ABC implementation to fail. The same situation was found in the case reported by Robalo (2014). The Portuguese postal services company completed the preliminary diagnosis and first step in MA change with success. However, the changes implied 'very time-consuming tasks' that clashed with day-to-day activities. This, and to the change leader's reluctance to recruit more human resources, added difficulty to the adoption of the new MAPs. Hence, the new MAPs remained at the initial stage of the institutionalisation process, albeit, with the potential to take the next step.

The hybrid framework is, thus, a complete tool that allows a holistic and in-depth analysis of and MA change. With a simple design and clear-cut approach, one can easily proceed to diagnose an organisation, understand whether its features could facilitate a change process and, then, evaluate how the company would behave in response to the fundamental conditions for a successful MA change. It is, therefore, the best analytical tool to examine the case at hand, as follows in sections below.

5. Case Study

This is a study of the Portuguese chemical industry company. The company started as a multinational firm and, since 1990, its shareholder structure has gone through five distinct phases–the first two lasting ten years. At the start, the main shareholder was a large German chemical company, and then, the latter was acquired by a Swiss financial company. During this period, there was always a minority Portuguese shareholder. At the beginning of the millennium, this minority holder acquired the whole business, making it a family-run enterprise. This ownership lasted 20 years (third phase) until the company was acquired by an American multinational (fourth phase). Lastly, after just one year, the latter was acquired by an English multinational (fifth and last phase).

Besides the evolution of the shareholder structure, external factors also caused the business to adjust. Two economic crises led to a drastic reduction in the Portuguese market, and the company had no alternative but to become an exporter. This change entailed the introduction of new key performance indicators (KPIs) for monitorisation, such as margins per market and unit transport costs. It is worth noting that the growing concern with environmental sustainability also meant tighter controls over resource consumption and waste production.

5.1 Ownership Evolution

The Environment & Quality (E&Q) Manager, who has worked for the company since 1991, said that, in the 1990s, *'they were not used to measure many production values or set many objectives. The prevailing norms did not even include many KPIs.'* Therefore, in the two earliest phases, the change strategies receive little MA information, relying mostly on the traditional financial MA practices, such as budgets, sales and investment plans, product costing and timely account closure. Of course, the increasing focus on financial performance under the Swiss ownership, during the second phase, implied a tighter control of finances. That meant that, even without an extensive change in MAPs, the new vision challenged the organisational taken-for-granted ways of working.

Even so, the management board assumed a generally receptive and cohesive position without resistance to those new ideas. As the plant manager said: *'As managers, we had "to absorb" the guidelines of the parent company.'* Concerns about investment, equipment maintenance and research were put on hold, which ended up threatening the business continuity. Not surprisingly, this threat materialised after five years in the sale of the business, not only in Portugal but in all European sites.

The transition to a family-run business in 2002 (third phase) coincided with the launch of ISO 9001: 2000 (the year 2000 update of an international quality management system standard), bringing about a significant change. Firstly, there was a drastic cut in decision-making lead-time and a greater involvement of management staff. Additionally, thanks to the new CEO's long experience as chairman of several financial companies, the rigour of the financial metrics was kept. Moreover, as the E&Q manager referred, with ISO 9001: 2000, organisations started to include goals and targets in their MAPs. At the time, the goals and targets were for areas, such as product quality, defective products, and complaints. Later, with the increase of environmental legislation, the company established a new set of KPIs and limits in that area.

In addition, the IT system (i.e., the Enterprise Resource Planning, SAP) used under the previous ownerships was kept the same to ensure that control and accuracy in procedures were maintained. Keeping it was then taken as a priority, leading to a larger initial investment as well as maintenance costs related to the required licenses and upgrades. Still in the third phase, closer to the following sale, conflicts began to emerge. Most notably, the diverging interests of the increasing number of family shareholders. Decision-making got more fastidious, especially regarding investment. Since the third phase presented an excellent business performance, the company attracted several interested buyers (see Appendix H).

In 2018, the American ownership took over (fourth stage), and their first step was to homogenise practice in all branches. However, according to the interviewed plant manager, it failed to analyse the existing structure. In retrospective, it is clear that, at that time, the shareholders' main goal was to present good financial and stock market results for the best possible sale. This pressure on financial performance, particularly on ratios, such as the working capital, meant that certain practices, like raw material stock management and price flexibility, could no longer stay in place.

In less than two years, the company entered the fifth stage: English ownership. The English mother-company has a record of mergers and acquisitions, meaning it was not used to building units from scratch, but rather to acquire them across the world. The multinational has been surveying practice from all its sites: very different computer systems, management and sales practices, quality and safety perceptions. To deal with this amalgam of practices, the mother-company had to develop a global management model with the goal of consolidating a common knowledge– ‘the brand's way.' This model contemplates two main areas: Manufacturing Excellence (MANEX), and Safety, Health and Security (SHE). Its implementation in the Portuguese branch began immediately after the acquisition with the homogenisation and standardisation of procedures.

When comparing the fifth stage to the third, the E&Q Manager says that, as far as KPIs, the concept remains almost the same. She claims the main difference is that both the fourth and fifth mother-companies were listed on the stock market. This is corroborated by the Engineering and Maintenance (E&M) Manager: '*the introduction of new KPIs and metrics is not innocent. There is an obligation to collect data and present it to the market and those who finance the company.'* Hence, this multinational is setting the same metrics to run its business and homogenise practice and processes across 25 sites worldwide.

5.2 Change Implementation

Since the last ownership transition, the management model integration included a self-diagnosis (SAQ) as its first step. At this stage, those responsible for the model and its designers guide the management board in their self-assessment, asking questions to ensure an accurate company evaluation. Based on the responses, the company is awarded gold, silver or bronze status. The goal is to 'look at where they are to develop a strategy.'

Nevertheless, this SAQ took place under extraordinary conditions: the COVID-19 pandemic. All its processes were carried out online, rather than occurring on site. For the E&Q and E&M managers, these restrictions hindered the process as the scheduled meetings never happened.

The strategy, based on the diagnosis, developed into a meaningful plan for the team, with subsequent execution. Afterwards, it will be resubmitted for a new diagnosis and strategy. During this continuous process, the results delivered are monitored and improved for extra value. Several MA tools allow the continuity of this process and, consequently, the achievement of strategic goals (see Appendix I). A change management software is also available to ensure that change and its consequences, in all dimensions (i.e., organisational, equipment, process, procedures), is accounted for.

5.3 Repercussions

When the company was 100% Portuguese, the decision-making was much faster. Decisions that were previously in the hands of the Plant Manager are now subject to the approval of the division's vice-president. The conception of an annual budget, for instance, was previously a bottom-up process; it is, now, prepared in a centralised, top-down way.

At other stages, many employees assumed dual functions, working in different areas, because one job did not take an entire workday, and it was not possible to hire two different people. As a multinational, this coexistence of functions is made difficult for two main reasons: the volume of international requests and the long decision-making lead-time (decisions were previously coordinated with other tasks and that is no longer possible). The Plant and E&Q Managers feel the last two multinational owners demonstrate reluctance in analysing this issue because they cannot see why there should be a barrier to change in the first place. On the other hand, when asked about whether these structural changes had an impact on decision power, autonomy, and workload, the E&M Manager shows a slightly different perspective. He said he had much autonomy to run their divisions. Now, he is on the fourth or fifth line of decision-making (see

Appendix J). He went on to say that the change may have been felt differently by some of his peers, namely the Plant Manager. The latter used to belong to the Executive Board and have a say in all decisions. He and now is '*only in charge of the operations*.' The E&M manager agrees that there are more pressure and work, but he sees it as a consequence of a centralised management *'that is inevitable when running many branches.'*

Yet, the company is at an early stage of the change implementation, and it is not perfectly integrated. This is another barrier to the delivery on the parent company's requests for information. The number of required KPIs is high, and often the variables used to calculate them are not readily available. Currently, there is more than one kind of software in use, leading to confusion and parallel reporting. All three respondents corroborated that situation, which is also easily verifiable in the literature (Munir et al., 2013; Kasurinen, 2002; Cobb et al., 1995; Robalo, 2014). The three managers share the feeling that when all the IT systems are integrated, and everyone has access to data and results, the analysis and feedback will flow.

In essence, the values and taken-for-granted practices in the fifth stage are not too different from those of the third and fourth stage, (see Appendix K). In other words, there has been little organisational resistance. A good example of that, said the Plant Manager, was the SHE programme training session, where there was '*a very positive spirit with everyone wanting to improve our safety ratios.'* Still, some respondents reported acceptance discrepancy in certain divisions. According to the respondents, salespeople resisted the introduction of SHE practices, as they saw it as a threat to the company's output and, consequently, to the success of their sales.

5.4 Discussion

Throughout the fifth stage, the MAP change motivators were the external: changes in ownership, unstable economic and market conditions, and the rise of stricter environmental regulation. In fact, the catalyst for the last MAP rearrangement was the change in ownership.

Moreover, as both the E&Q and E&M Managers stress, being quoted on in the stock market also exerts more pressure on the need to collect data to show shareholders.

Regarding the company's **predisposition to succeed** in the remainder of the MA change, the company has a successful track record of significant changes throughout its history. Besides, the chemical industry itself demands constant compliance with changing and strict directives. Furthermore, the management board has been the same through all these transitions, and it has always adopted a receptive posture, without resistance. Lastly, the company has shown a culture of accountability since the beginning, and it did not wane during the third (family-run) phase. This background allowed it to adjust constantly to changing external requirements. New, stricter standards were never a problem; it was always a matter of adjustment to the new prevailing mindset (i.e., evolutionary change).

Concerning **the process of change**, because the Management Board was kept, the change leaders were company insiders. They are, therefore, at an advantage, unlike outsider change leaders mentioned in the case studies reviewed above, who had to go the extra mile to attain legitimacy, power, and trust. Besides their insider status, the Plant and E&Q Managers–the main change leaders– are also what is known in the field as 'hybrid managers' (managers who have operational experience), that is, engineers with extensive financial knowledge. By working for the company since practically the beginning, they have earned decision power, authority and trust in their competences among the employees. There was no need to gain legitimacy or trust.

Regarding **the agents subject to change**, the employees, from management to the shop floor, are used to comply with new requirements that emerge from both changing ownerships and other external forces. Notwithstanding, the MA change is not 100% consensual. One issue raised by the Plant Manager was that the sales department expressed some discomfort toward the new practices and how they could affect their job performance. Similarly, the E&M

manager, when asked about losing decision power over his division, acknowledged the loss of autonomy but denied any feeling of loss or demotivation. He does, however, lift the veil about other staff members, namely the Plant Manager. He says his peer is likely to have taken the change harder, as he was more involved in the business before and, now, is 'only in charge of the operations.' This is an indication of potentially camouflaged discontent, which must be addressed by an effective and persuasive communication from the parent company to ensure that all staff members are comfortable with their new positions. Otherwise, the discontent can become a hindrance.

Regarding **the nature of the accounting change**, this MA's last change matches the prevailing ways of thinking and doing things. Unfavourably, the tool designers were not close to the company's operations and were not involved in the conception of the new MAP. As stated, an MA change occurs through an integration process into an already established programme. Since the plan is to homogenise practice across business sites, the focus of the change process was on adapting to already-established rules, practices, and systems. Nonetheless, this aspect was supposed to be mitigated through a pre-diagnosis, which, as explained above, was compromised by the COVID-19 pandemic. Even so, its goal was partly met, as the abovementioned three dimensions indicate that the company would be able to do reasonably well in the encoding and enacting of the new MAP.

As to the drivers of **reproduction and institutionalisation**, the MANEX and SHE programmes are well-documented, and established systems; all their stages are planned and scheduled, including the training sessions. However, they exhibit technical failures, which are corrected only when reported by the branches. As noted, this is a problem because the new reporting systems are not yet fully integrated. In addition, the workload and task reassignment were not perceived as being adequately done by the three managers. They alerted to the potential loss of expertise and inappropriate allocation of tasks, i.e., disregarding the extra workload implied. In other words, importing an idea is not enough to put it in place. When an employee's responsibilities are to be changed, it is essential to evaluate their workload and capacity to take on the new functions. Ineffective integration and inadequate task allocation can act as MA change frustraters and delayers (Kasurinen, 2002; Robalo, 2014). Therefore, these issues must be carefully and closely considered to ensure that this step in MA change implementation is effectively completed.

6. Conclusion

This paper reconceptualised MA change drawing from several theories and an extensive case study review. A hybrid framework was set up, considering the various dimensions that tend to exert an influence on the process. A case study was conducted to enrich the research, adding evidence on the theoretical framework, which, in turn, guided its analysis. Among several insights, the most relevant was that companies fail to implement their MA changes, mainly in the second step of the process. The chief reasons for that are failures in the integration of MA systems in the operations. Agents may be receptive to embrace and reproduce new procedures, but lose motivation when facing the difficulty of incorporating the MA change in day-to-day activities. The selected case revealed the rising importance of MA in translating abstract strategies into meaningful, quantifiable, and measurable goals–both financial and non-financial–and linking them to specific targets monitored through performance indicators (KPIs). As highlighted, throughout the various acquisitions and new external requirements, the company increased its focus on performance evaluation, monitoring and control. Beyond presenting good business performance results, it is crucial to identify the operational value gaps where the company can do better.

This study is not without its limitations. Due to COVID-19 restrictions, visiting the company was not viable. The company's historical background was reconstructed based on documents and interviews with managers, relying on their memory and perception. Not only that but, as widely discussed in information systems literature, defining and measuring the success of an MA change is a difficult task, as it can range from improving system quality to organisational impact (Siti-Nabiha et al., 2005). Lastly, the case study only covers the initial stage of change, requiring further research. Thus, the study of cases over long periods with the possibility of visiting the company at hand is welcome. That research would allow a deeper understanding of the dynamics of an integration process and the conceptualised framework's validity.

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8. List of Abbreviations

ABC	Activity- Based Costing
CEO	Chief Executive Officer
E&M	Engineering and Maintenance
E&Q	Environmental and Quality
ERP	Enterprise Resource Planning
IT	Information Technology
KPI	Key Performance Indicator
MA	Management Accounting
MANEX	Manufacturing Excellence
MAP	Management Accounting Practice
NIE	New Institutional Economics
NIS	New Institutional Sociology
OIE	Old Institutional Economics
PMS	Performance Measurement Systems
SAP	Systems Applications and Products in Data Processing
SAQ	Self-Assessment Questionnaire
SHE	Safety, Health and Security

9. Appendices

Appendix A

Tolbert's Framework

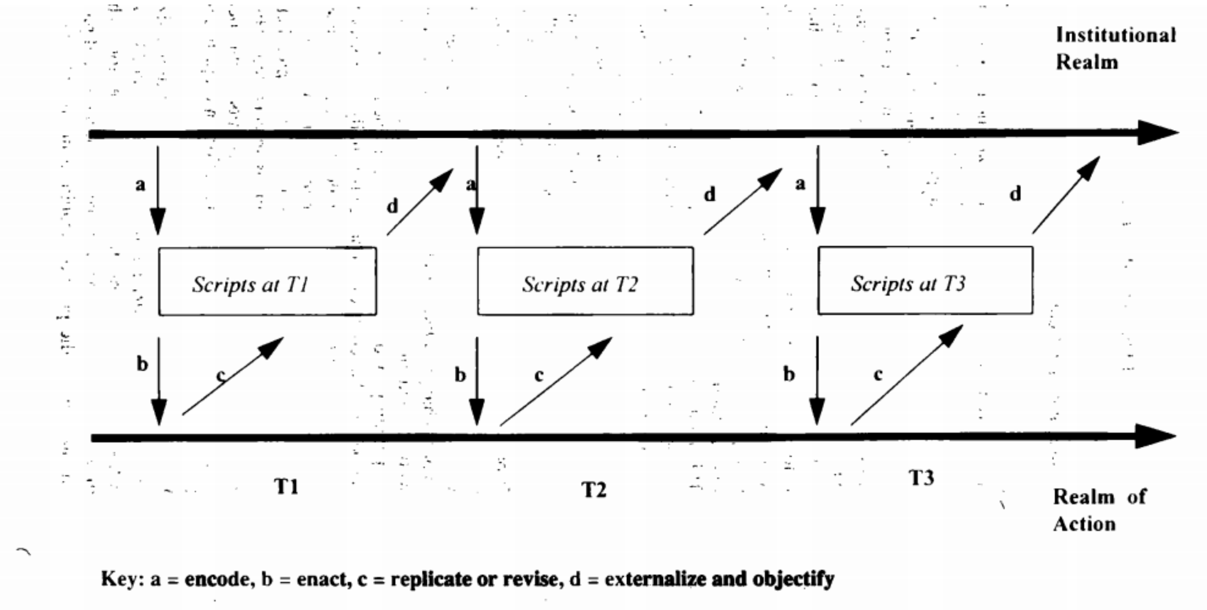
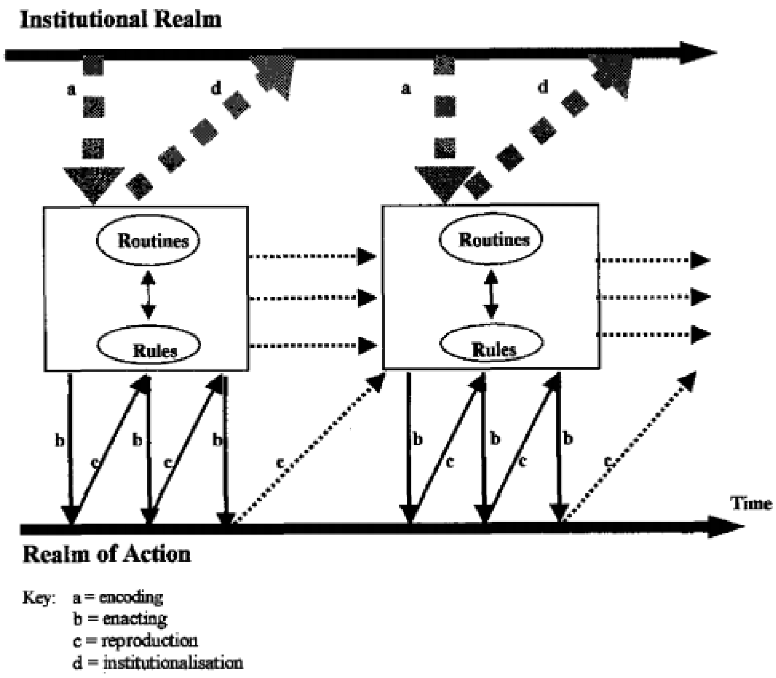


Figure 2. A Sequential Model of Institutionalization

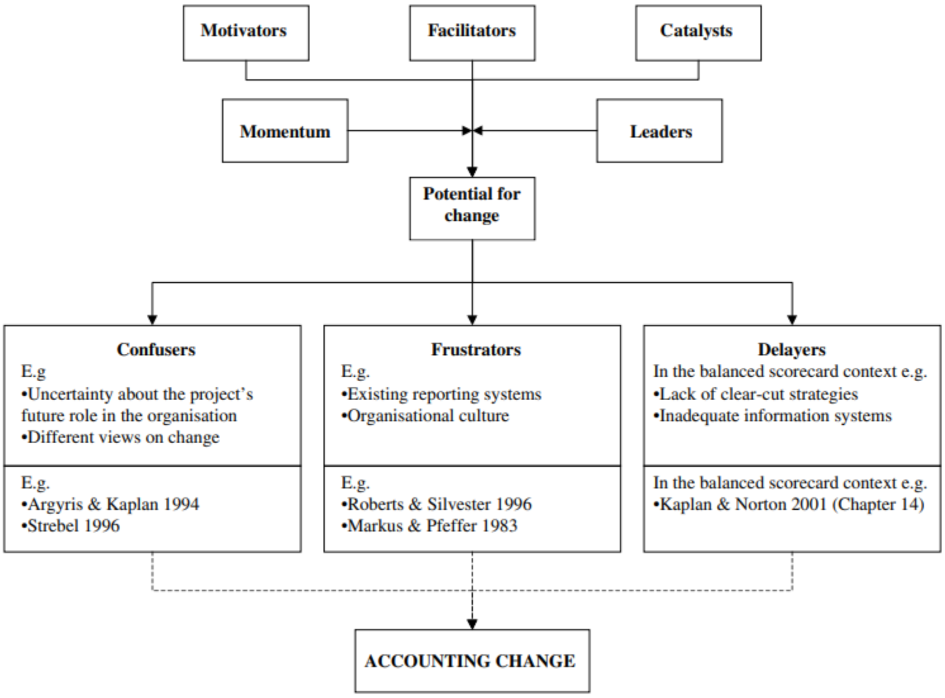
Appendix B

Burns and Scapens' Framework



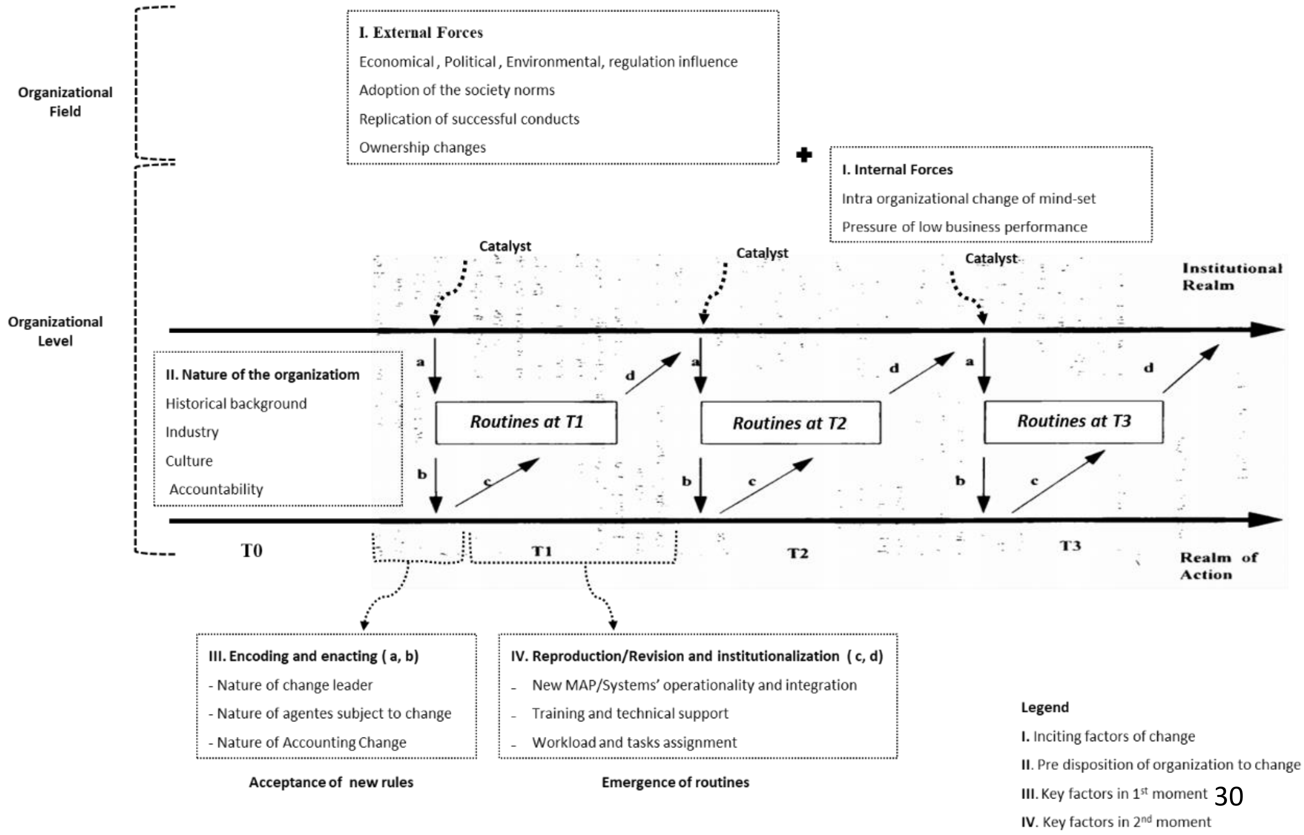
Appendix C

Kasurinen's Model



Appendix D

Hybrid Framework



Appendix E

Analysis of Nor-Aziah and Scapens, 2007

Title	Author	Industry/sector	Accounting change	Accounting tool
The Role of Accounting and Accountants in a Malaysian Public Utility	Nor-Aziah and Scapens. 2007	Malaysian Public Utility	• To increase the monitoring and controlling of the behaviour of operations managers, especially at the State level; • Accountants become involved in the approval of overtime costs, the verification of additional budget requests; and the submission of monthly variance analysis reports.	• New budgeting System; • Newly created roles for accountants regarding a Modernisation project; • The recruitment of new accounting graduates; • New clear floor targets and work productivity targets;

Main goal	Drivers of change	Subject of change	Subject to change	Problems / Resistance
• To secure greater (financial) accountability. • Cost-efficiency in the provision of core services. • Greater financial efficiency in the public sector. • To instil a greater awareness of costs within operations, internal coordination mechanism within a hierarchical system of accountability. • To achieve reliable and consistent service performance.	• Change of ownership: the belief that the public sector is inefficient and only private sector MA techniques will enable the company to be 'self-financing, efficient and profitable.' • Institutional pressures of both coercive and regulative nature from the government.	State accountants hired externally	Operational Managers	• Loose coupling of budgets (the variances ended up not being reported) • Problems in the relations of trust between the accountants and the operating managers. • The accounting controls reduced the autonomy of the operations managers and gave them the impression that they were not to be trusted;

Reasons for resistance	Successful	Reasons for success	Final status
• Contradictions between the requirements of improved service levels and the control of costs. • It challenged the prevailing ways of doing things. • Contradictory institutional pressures • Financial literacy too low to accept the new accounting rules as intended. • State accountants were new graduates meaning gaps in seniority, work experience, age, and educational background between the two professional groups. • Accountants do not have operations experience and knowledge. • State accountants lacked power over decision-making and meanings, which, Burns (2000) argued, are important for implementing accounting change. Accountants prepared budgets in a top-down incremental fashion without Op managers considerations about the amounts --> centralised. • Lack of mutual trust in each other's competences. • Allocation of financial resources and design of financial procedures were made at a distance failing to recognise local problems and operational needs. • Interest, power, and trust were intertwined with issues of control and resistance; Op managers wanted to keep 'things as they are.' 'They think that the operational numbers are enough to manage.' • 'Accounting Procedures impede fast decisions.'	• The first objective, concerning service performance, was compatible with the prevailing service-oriented institutions and hence was accepted as quite legitimate. • The clear floor targets had a far-reaching impact, being the daily much achieve;	• The clear floor targets reflected the operational managers' concerns and were aligned with what they perceived as important. 'What is mandatory for the operations is a clear floor.' However, it is done without considering the financial consequences, for instance, the increment in the workforce.	• The intended purpose of the budgets introduced into PSP (i.e., to instil a greater awareness of costs within operations) did not materialise • Service performance accepted as legitimate but financial accountability and cost reduction were resisted;

Analysis of Munir et al., 2013

Title	Author	Industry/sector	Accounting change	Accounting tool
Performance measurement system change in an emerging economy bank	Munir et al., 2013	Banking	• More effective control systems in the current dynamic business environment. • Selection of performance measures for key business operations and management activities.	• Performance Measurement System (PMS) --> KPIS system - new performance measurement process: - an increase in the nature and types of performance measures. - the introduction of a branch profitability report.

Main goal	Drivers of change	Subject of change	Subject to change	Problems / Resistance
• Environmental changes. **• It needs to employ a more-proactive** market-based **approach, focusing on higher profit margins and** customer-oriented **businesses and sophisticated banking** technologies.	• Uncertain economic conditions, increasing competition, and pressure from stakeholders. • Financial losses experienced, major regulatory changes, and the appointment of a new board of directors and president. • Increased competition affected Anonbank's market share and profitability and made it difficult for Anonbank to compete with its existing management structure and PMS, which was largely bureaucratic and inefficient. • Many regulatory and institutional changes between 1997 and 2007 as a result of World Bank and IMF financial sector reforms.	• Bank's new Board of director • New president. • New group of heads • After it was created a performance measuremen t and budgeting department	Branch managers;	• Branch and Unit managers were confused about the way in which the system would affect their bonuses and promotions. • Many initiatives were being introduced too rapidly, thereby placing undue pressure on them to adapt to different concepts in a very short time. • Inability to understand the reasons for the change. • Past several change initiatives went wrong with subsequent abandonment, which made employees lose confidence in any changes. • The need to collect performance data monthly and some of these data were produced manually, which was time-consuming and cumbersome. • The software used to support the PMS was too slow. The time required to show the PMS on a computer screen physically made the process of keeping PMS data up to date tedious. Exacerbating this situation, a large share of the data still had to be calculated and entered manually into the spreadsheets. These spreadsheets, in a stand-alone software application, were maintained independently by the business units to manage clusters of data from different processes.

Reasons for resistance	Successful	Reasons for success	Final status
• **Confusers:** BUs' goals in conflict with those of the bank, employees' past experience and different views on PMS change; Uncertainty about the role of PMS. • **Frustraters**: More experienced employees saw no benefits in changing to a new system; they were more comfortable with the old system and who had difficulties dealing with technical aspects of the new PMS • **Delayers:** Computerisation of the PMS Integration of system of business units; Employees' behaviour and attitude towards new PMS Inadequate communication	Ended it up with the complete automation and integration of the performance measurement function. ERP system instead of Excel spreadsheets	• **Motivators** Uncertain economic conditions; Increased competition; Interference from the government and staff union; Pressure to improve performance and corporate image. • **Catalysts** Financial sector reforms High non-performing loans in the banking sector; Financial losses of the bank; Changed regulatory framework New Board of directors and bank president. • **Facilitators:** Management Committee meetings Staff training; Technological support; Taskforce Consultant; Momentum; Changing organisational and field structure; Changes in the strategic planning process; Leaders President; New group heads: top management communicated their expectations very effectively in establishing the need for change from the beginning. They created commitment of the employees for the new performance measurement system; they spent time and effort developing the new PMS system to fit Anonbank's needs; Discussion improvements in the integration of the PMS with employees.	Well implemented due to subsequent changes: complete automation and integration of the performance measurement function.

Analysis of Kasurinen, 2002

Title	Author	Industry/ sector	Accounting change	Accounting tool
Exploring management accounting change: the case of balanced scorecard implementation	Kasurinen, 2002	Multinational Finnish based metals group	• Clarifying and updating the business unit strategy. • Communicating strategies to everyone in the unit. • Following up strategic goals. • Binding the operational goals to strategies. • Learning strategic thinking	Balanced Scorecard

Main goal	Drivers of change	Subject of change	Subject to change	Problems / Resistance
The existing control system focused mostly on financial measures. Since the case unit was doing financially well, the signs of potential problems related to the maturity of products would appear only after the existing 'cash cows' had turned into 'dogs' (e.g. Porter, 1980, p. 362). Accordingly, the balanced scorecard project can be considered one way to increase future orientation in the case unit	The strategic management style in the organisation was strongly based on financial control (Goold and Campbell, 1987), and diagnostic measurement (Simons, 1995) played a significant role in the management process. However, a new division general manager, who had been appointed in 1995, had strongly emphasised the role of strategic planning.	New divisional general manager	Division and business unit managers	• The BU management was not able to deliver clear strategic signals to the employees, and reaching the project's goals (such as communicating strategies to everyone in the unit) became difficult. • The existing organisational culture, since the measurement was considered quite natural in an engineering context, the balanced scorecard was regarded as a tool combining financial and non-financial measures, not measures and strategy. This reduced the strategic focus of the project. The financial success of the case business unit also seemed to limit the motivation to make the strategies more specific; Complex project environment with lack of coordination between various projects, such as the uniform operative indicator system; resignation of the divisional general managers shortly before the implementation of the created BS ---> reduction of motivation in the unit to implement it:"

Reasons for resistance	Successful	Reasons for success	Final status
• **Confusers:** Uncertainty about the project's future role in the organisation; Different views on change. • **Frustraters:** •Existing reporting systems; Organisational cultural. • **Delayers**: In the balanced scorecard context, e.g. lack of clear-cut strategies; Inadequate information systems	Furthermore, the division and business unit managers seemed to be interested in implementing a tool, which could help in the communication of the defined strategies, and increase the focus within performance measurement; the power of divisional manager over business unit managers;	Furthermore, the division and business unit managers seemed to be interested in implementing a tool, which could help in the communication of the defined strategies, and increase the focus within performance measurement.; the power of divisional manager over business unit managers;	Accordingly, the decision to drop the project a month later was not surprising. The final straw for the decision was the organisation change which was to take place in the following January. In this change, some strategic business units (including the case unit) would be combined, and the structure of (financial) reporting changed.

Analysis of Cobb et al., 1995

Title	Author	Industry/ sector	Accounting change	Accounting tool
Management accounting change in a Bank	Cobb et al., 1995	UK Division of a large multinational bank	Both accountants and managers agreed that a major change during the period of this case study was the increased level of discussions and great informal contracts between managers and management accountants. Changes such as the new cost allocation methodology, VFM exercise, new cost reports, competitive benchmarking and more participative budgeting process all involved greater contact between managers and management accountants. In addition, the man accountants were keen to explain both the format of new reports and the monthly details to the managers. Thus, the boundary of the MAP expanded out of the office and into the operational areas of the division	Several MA techniques and Systems: new cost allocation methodology, value for money exercise, new cost reports, competitive benchmarking and participative budget process

Main goal	Drivers of change	Subject of change	Subject to change	Problems / Resistance
• To increase monitoring of new complex financial products: foreign exchange and derivative products such as forwards and options.	- Pressures such as new competitors; developments in information technology; bad debt experience, reducing profit margins and the introduction of new products) initiated the changes in management accounting systems. Environmental pressures were the primary reasons for the change. Thus, we have a picture of an organisation under pressure from its environment with a MAP which did not match the changing information needs of management. this mismatch between the MAP and its environment created a tension, a pressure, for change -a motivator (Innes and Mitchell, 1990)	• New financial Controller from a non-banking background. • New board members and the new divisional financial controller	BU managers	• Loss of certain individuals. • Many interferences in the conception of MAP

Reasons for resistance	Successful	Reasons for success	Final status
• Loss of five qualified accountants between 1989 and 1993: four of them moved to other positions within the bank. • Loss of local knowledge and expertise which affected the development of MAP and in particular changes in reports for the managers. • The number of priorities increased between 1990 and 1993: as new priorities were identified, developments which had previously been near the top for the list of priorities moved back down this list. However, these old priorities remained and were not dropped and indeed were usually reactivated later (such as possibly ABC in 1994), For the accountants, this constant change of priorities was a disruptive interference in terms of bringing new developments in the MAP to fruition so that managers could use the resulting information	During our interviews with managers, a change in attitude towards the accountants was noticed. By 1993, the managers accepted that the accountants could provide them with useful information. This continuing dialogue between managers and accountants and the much great informal contact between managers and accountants were important features of the change success; within the division, the non-banking background of the financial controller influenced the development of the MAP and in particular the reporting system; Accountants were keen to explain both format and the month details of new reports; Investment in back-office systems	• Increased competition and rate of product innovation are motivators; the pressure on margins and new board members; new CFO and Divisional Financial controller are catalysts and accounting staff and the support they gave are the facilitators.	The output of the MAP has changed from one very limited report to a range of reports aimed at giving all levels of management the information they need to manage their area of responsibility. In addition, there is much more face-to-face contact between the human elements of the MAP and managers - the boundary of MAP has expanded. However, the process of change has not been smooth and linear; many planned changes were either delayed or did not happen due mainly to changing in priorities; Failure of ABC, in this case.

Analysis of Busco, et al., 2007

Title	Author	Industry/ sector	Accounting change	Accounting tool
Management Accounting Issues in interpreting its nature and change	Busco et al., 2007	Middle East Gas and Oil Company	Translating strategy into action, making companies strategy focuses and enabling alignment and integration	Balanced Scorecard within SAP's platform

Main goal	Drivers of change	Subject of change	Subject to change	Problems / Resistance
To monitor the achievement of strategic goals: • Transform Corporate Performance; • Optimise the Corporate Portfolio; • Maximise Revenues by capturing Oil Growth opportunities; • Protect the future Market for Oil; • Leverage the Oil and Gas Resources to expand the Nacional Economy; • Prepare the Workforce for the future. • Greater integration	The government called companies to take some action to improve the local economy and increase the revenue generated for the country.	The Board	Accountants and Operational managers	• Even at the end of the process of deployment, the BSC failed to achieve what it was supposed to deliver. i.e., a greater integration; • Lack of leadership: they should have fostered support and commitment to change through effective communication; 'dealing with resistance is 50% of my time.'

Reasons for resistance	Successful	Reasons for success	Final status
• Operation managers were concerned about whether the change was good or should be resisted. Not sure if the proposed new technical solution arose in a transitory fashion or as a reflection of actual organisational needs; • Perceived as potentially disrupting for existing working practices; • The impression that were more important and valuable things to care about; • Several managers could not fully explain their origins and reasons for implementation; • Absent in practice; • BSC was imposed without taking into account the existing organisational culture and working practices.	• the BSC was constantly referred to and evoked but always absent, never achieved and always in the making --> paradox. The ability of BSC to be in present n working relationships, although absent in practice; • Accountants became business partners and experts providing innovative financial expertise rather than preparing boring budget figures, (..) they became a community made of hybrid leaders • Introduction of full cost reporting project with new current cost sheets;	• Café 2004 was a meeting that included 680 out of 8650 employees of Eng. and operations services to stimulate an internal debate; • Calendars, diaries, posters were part of the means used diffuse the idea of MEGOC as strategy focused organisation; • It was not forced, but the diffusion was in a visually and methodological engaging manner; • BSC was a system that allows a better translation of operational achievement into bottom-line results	It was not possible to build a corporate-wide scorecard. Instead, seven different divisions were scored. They take their own actions and initiatives in line with objectives; 'we missed the overall picture.'

Analysis of Robalo, 2014

Title	Author	Industry/ sector	Accounting change	Accounting tool
Explanations for the gap between management accounting rules and routines: An institutional approach	Robalo, 2014	National Postal service of Portugal	Implementation of a IS in order to increase the accountability of the organisational areas, particularly focusing on the business areas, through the introduction of negotiated internal transfer prices. Additionally, the PCO implemented the KPI based on the balanced scorecard rationale	• Income Statements • Key Performance Indicators

Main goal	Drivers of change	Subject of change	Subject to change	Problems / Resistance
• IS 'will provide monthly income statements by organisational area even for the lower levels of the organisational structure, statements which will include an internal transfer pricing model;' •KPI 'will provide a set of key performance indicators by organisational area every month, so this will allow the Board to monitor the implementation of the strategic goals of Post.'	• Increasing competition; • Ongoing process of deregulation as a consequence of the European Community opening up postal services to competition; • New technologies, because new forms of communication such as email and the Internet •new products and services	PCO managers, a group of management accountants	First and Second line managers	• Information was produced once a year instead of every month (initial target); • Managers did not acknowledge MA tools as appropriate innovations to run their daily activities. • Organisational restructuration: no coherence between the assessed organisational areas and the new ones. • Lack of enthusiasm from the operational managers.

Reasons for resistance	Successful	Reasons for success	Final status
• The new tools were not valued by the operational managers. • They acknowledge the importance of the information, but they too needed to have access to it frequently to make timely decisions to change the course of action. • New organisational structure implies new information requirements and adjustments, which is time-consuming. • Lack of human resources: number and skills: • Lack of pressure from both the Board and the op managers.	• Operational managers did not resist to the introduction of MA innovations. Even not strongly desiring them, they saw the IS and KPI as something whose usefulness they could learn more about in the future, but as not something that assisted them in managing their day-to-day activities.	• Lack of pressure was observed in both the Board and operational managers. It is justified on the grounds of trust. The Board trusted the PCO managers and had thus not pressured them to provide the information on a routine monthly basis. Of course, there were also interpersonal trust relations between the PCO managers and the members of the Board, particularly between the head of the PCO and the chair of the Board. They had known each other for over a decade. The invitation, in 1995, for her to become the (still) head of the PCO came from the very same chairman.	The PCO implemented the IS and KPI in Post. However, these management accounting innovations did not achieve an acceptable level of stability in order to guarantee the regular production of monthly information as planned and desired. There was a gap between rules and routines.

Analysis of Busco et al., 2011

Title	Author	Industry/sector	Accounting change	Accounting tool
Management Accounting Systems and Organisational Culture	Busco et al., 2011	Florence-based cast iron foundry; Oil and gas industry	• The company became immersed in a process designed to integrate it within the global ALPHA (acquirer) company. The process focused on restructuring its management systems. The process of change has been deep and intense, affecting every aspect of the business: • the reengineering of the previously or PMS accountability; •Implementation of a new measurement-based quality programme, six sigma.	Performance measurement and control, both in financial and non-financial terms; • Six sigma tools; • Budgets

Main goal	Drivers of change	Subject of change	Subject to change	Problems / Resistance
• To produce numbers and an obsessive mission to show continuous financial improvements.	Although beta had a sound profits record, alpha analysts believed there was room to improve	• ALPHA Leaders and American trainers; • External Italian researchers and professionals invited	• Engineers and project managers from several BETA divisions	Cultural shift

Reasons for resistance	Successful	Reasons for success	Final status
***Cultural shift**	• Expression of extensive commitment to the slogans and rhetoric of ALPHA leaders; the rhetoric of ALPAH's leaders, the CEO and top managers reached everyone in the company, managers and workers, accountants and engineers. They may agree or disagree, but they all know the ALPHA way to do the job and also, they will be responsible for their own activities; • With the new structure, reports, data, information, charts flow rapidly around the company in response to pressure to produce numbers, and good numbers every three months; The need for change was recognised at all levs; new credo	• Number of training courses such as finance for non-financial managers; Understanding financial fundamentals; the financial benefits of six sigma and controllership; • Exploratory meeting and group discussions with engineers and project managers from several BETA divisions; • Well done restructuring of accounting and finance departments, which included a decentralised task force within each division, who was responsible for budgeting and cost control for its projects; • Process of change reinforced by the development of an integrated information system: intranet and possibility to have data online allow to save time when computing data; • Cognitive redefinition of key concepts • the power of AL+HA's communication system and the resources invested --< "communication and training were central". CEO'S statements charismatic leadership with strong statements; •"The majority were yes-men mushroomed"	Successful implementation of MA change

Analysis of Siti-Nabiha and Scapens, 2005

Title	Author	Industry/ sector	Accounting change	Accounting tool
Stability and change: an institutionalist study of management accounting change	Siti-Nabiha and Scapens 2005	Oil and Gas- East Asia (state-owned company)	Introduction of VBM - Value-based Management by the parent company. The core of VBM was a performance evaluation system which required managers to formulate KPIs.	VBM and KPIs

Main goal	Drivers of change	Subject of change	Subject to change	Problems / Resistance
• The goal was to enhance MA control and to give operations a more strategic orientation aimed at value maximisation. The K was used for both managing director and parent company use: • VBM was seen as a tool to determine whether the company's activities were being undertaken in a value-adding manner. Additionally, they argued that economic-based earnings measurements could be used as a proxy for an open market valuation of NOC, which was not publicly quoted. • The need to secure legitimacy and search for efficiency.	Imposition by parent company	• Western consulting firm appointed to undertake a corporate review of the company's long-term direction; • The GM Finance was the custodian of the VBM System; • Coordination with the chief accountant and the Production Planning Manager; • Individual Managers	Operational Managers	• Within Eagle there did not seem to be any recognition of a need to change its systems of accountability and performance evaluation, at least not in this way;

Reasons for resistance	Successful	Reasons for success	Final status
• VBM's potential impact in Eagle could have been quite revolutionary; VBM and KPIs were designed to change the way in which decision-making is undertaken in Eagle and to facilitate other changes, including the way managers think about their activities. • Conflict with existing institutions within Eagle which were predominantly production orientation; the norms and values, and the financially oriented ways of thinking, which are at the heart of VBM, were in conflict with the existing institutions within Eagle: • Within Eagle, there was a general absence of financial targets, accountants had a very traditional bookkeeping role, and budgets were used in a ceremonial way. • The Chief accountant who was the most visible member of the VBM coordination team, and it has been his job to explain to managers how to construct the KPIs. However, it is the individual managers who select their indicators and set their own targets.	• NEW PMS and the new KPIs which were in accordance with the prevailing ways of thinking and the more focused production orientation	• Staff within Eagle they had to accept it, whether they liked it or not, since it was a directive of the parent company; A directive from the parent is seen as something that has to be implemented;	VMB KPIs were decoupled from day-to-day activities in order to avoid disrupting the existing production orientation within Eagle – i.e., to maintain stability. However, with the introduction of the new PMS and the operational KPIs, accounting change has taken place, but in a reshaped form that does not threaten the stability of the existing institutions

Appendix F

Questionnaire

Diagnosis of whether organisations have a predisposition to embrace change	1.1. Nature of the organisation (the one subject to changes)	The selected case at fifth stage	Malaysian Public Utility, Nor-Aziah and Scapens. 2007	Pakistan Banking, Munir et al., 2013
Historical	Major changes throughout its history with the intended results	Yes	n.a.	No
Industry	Industry subject to strict regulation and major external pressures	Yes	No	Yes
Culture	Does the organisation have a passive culture of acceptance of change, impositions, or requirements?	Yes	No	Yes
Accountability	Is the organisation already a user of accounting procedures? Does it have a culture of accountability?	Yes	No	Yes
		1	**0**	**¾**
		100%	**0%**	**75%**
Encoding and enacting	**Facilitators, confusers or frustraters?**			
Nature of change leader	Is the leader an Insider?	Yes	No	No
	Hybrid leader (finance knowledge + production and procedures knowledge)?	Yes	No	Yes
	Do they have decision power and authority?	Yes	No	Yes
Nature of agents subject to change	Do they recognise the need for change?	Yes	No	No
	Do they trust the designers and change leaders' competences?	Yes	No	Yes
Nature of accounting change	Does it converge toward the prevailing ways of thinking and doing things? Is it an abrupt change?	Yes	No	Yes
	Diagnosis of organisation before introduction	Yes	No	Yes
	Designers of tools closer to operations?	No	No	Yes
	Were the systems' users involved in the conception of the new MAP?	No	No	Yes
		7/9	0	7/9
		78%	**0%**	**78%**
Revise or Replication and institutionalisation	**Facilitator or delayer?**		Only for one of the goals*	Initially, the last three answers were 'no.' It only changed after an amendment
Nature of new MAP /systems	Were technical support and training assured?	Yes	No	Yes
	Did the change include a centralised and fully integrated system, avoiding, for instance, manual data entry and frustration among users?	No	Yes	Yes
	Is the change fully operational?	Yes	Yes	Yes
	Adequate reassignment of workload and tasks?	No	Yes	Yes
		1/2	3/4	1
		50%	**75%**	**100%**

	FINAL	**76%**	**18%**	**82%**
		In process	**Partial failure**	**Success after initial failure**

Diagnosis of whether organisations have a predisposition to embrace change	1.1 Nature of the organisation (the one subject to changes)	Multinational Finnish based metals group, Kasurinen, 2002	Management accounting change in a Bank, Cobb et al., 1995	Robalo, 2014 Portuguese Postal Services
Historical	Major changes throughout its history with the intended results	Yes	No	Yes
Industry	Industry subject to strict regulation and major external pressures	No	Yes	Yes
Culture	Does the organisation have a passive culture of acceptance of change, impositions, or requirements?	Yes	Yes	Yes
Accountability	Is the organisation already a user of accounting procedures? Does it have a culture of accountability?	Yes	No	Yes
		3/4	**1/2**	**1**
		75%	**50%**	**100%**
Encoding and enacting	**Facilitators, confusers or frustraters?**			
Nature of Change leader	Is the leader an Insider?	No	No	Yes
	Hybrid leader (finance knowledge + production and procedures knowledge)?	Yes	Yes	Yes
	Do they have decision power and authority?	Yes	Yes	Yes
Nature of agents subject to change	Do they recognise the need for change?	No	Yes	Yes
	Do they trust the designers and change leaders' competences?	Yes	Yes	Yes
Nature of Accounting change	Does it converge toward the prevailing ways of thinking and doing things? Is it an abrupt change?	Yes	Yes	Yes
	Diagnosis of organisation before introduction	No	No	No
	Designers of tools closer to operations?	Yes	Yes	Yes
	Were the systems' users involved in the conception of the new MAP?	Yes	Yes	No
		2/3	7/9	7/9
		67%	**78%**	**78%**
Revise or Replication and institutionalisation	**Facilitator or delayer?**			
Nature of new MAP /systems	Were technical support and training assured?	No	Yes	No
	Did the change include a centralised and fully integrated system, avoiding, for instance, manual data entry and frustration among users?	No	No	No
	Is the change fully operational?	No	No	No
	Adequate reassignment of workload and tasks?	n.a.	No	No
		0	1/4	0
		0%	**25%**	**0%**
	FINAL	**53%**	**59%**	**65%**
		Failure	**Failure**	**Failure**

Diagnosis of whether organisations have a predisposition to embrace change	1.1 Nature of the organisation (the one subject to changes)	ALPHA BETA Company Busco and Scapens, 2011	MEGOC company, Busco et al., 2007	Eagle oil and gas company, Nabiha, 2005
Historical	Major changes throughout its history with the intended results	Yes	No	No
Industry	Industry subject to strict regulation and major external pressures	Yes	Yes	Yes
Culture	Does the organisation have a passive culture of acceptance of change, impositions, or requirements?	Yes	n.a.	Yes
Accountability	Is the organisation already a user of accounting procedures? Does it have a culture of accountability?	No	Yes	Yes
		3/4	**1/2**	**3/4**
		75%	**50%**	
Encoding and enacting	**Facilitators, confusers or frustraters?**			
Nature of Change leader	Is the leader an Insider?	No	Yes	no
	Hybrid leader (finance knowledge + production and procedures knowledge)?	Yes	Yes	No
	Do they have decision power and authority?	Yes	No	Yes
Nature of agents subject to change	Do they recognise the need for change?	No	No	No
	Do they trust the designers and change leaders' competences?	Yes	No	Yes
Nature of Accounting change	Does it converge toward the prevailing ways of thinking and doing things? Is it an abrupt change?	No	No	No
	Diagnosis of organisation before introduction	Yes	No	No
	Designers of tools closer to operations?	Yes	Yes	Yes
	Were the systems' users involved in the conception of the new MAP?	Yes	Yes	Yes
		2/3	4/9	4/9
		67%	**44%**	**44%**
Revise or Replication and institutionalisation	**Facilitator or delayer?**			*New PMS (reshaped)
Nature of new MAP /systems	Were technical support and training assured?	Yes	yes	Yes
	Did the change include a centralised and fully integrated system, avoiding, for instance, manual data entry and frustration among users?	Yes	no	Yes
	Is the change fully operational?	Yes	yes	No
	Adequate reassignment of workload and tasks?	n.a.	n.a.	Yes
		3/4	1/2	3/4
		75%	**50%**	**75%**
	FINAL	**71%**	**47%**	**59%**
		Success	**Failure**	Success after failure

Appendix G

Interviews

The average length of each interview was of 60 minutes. They were tape-recorded and transcribed. The interviews were semi-structured, allowing interviewees to participate and bring new ideas and perspectives. The interviews were prepared based on a review of previous ones and the data collected from the documents made available.

Participant	**Department**	**Position within fifth Stage Selected Company**	**Years in the company**	**Type of interview**	**Length**
1	Plant	Manager	29	Written	4 Open-ended Questions
				Face-to-Face	~ 60 min
2	Environmental and Quality	Manager	29	Online via Teams	~45 min
3	Engineering and Maintenance	Manager	29	Online via Teams	~70min

Appendix H

Business performance up to the fourth stage

	2015	**2016**	**2017**
Sales (M €)	49,8	45,8	53,5
Volume (Thousand tons)	38,5	39,5	41,54
Net result (M €)	1,72	2,28	2,79
Growth	-	**33%**	**22%**

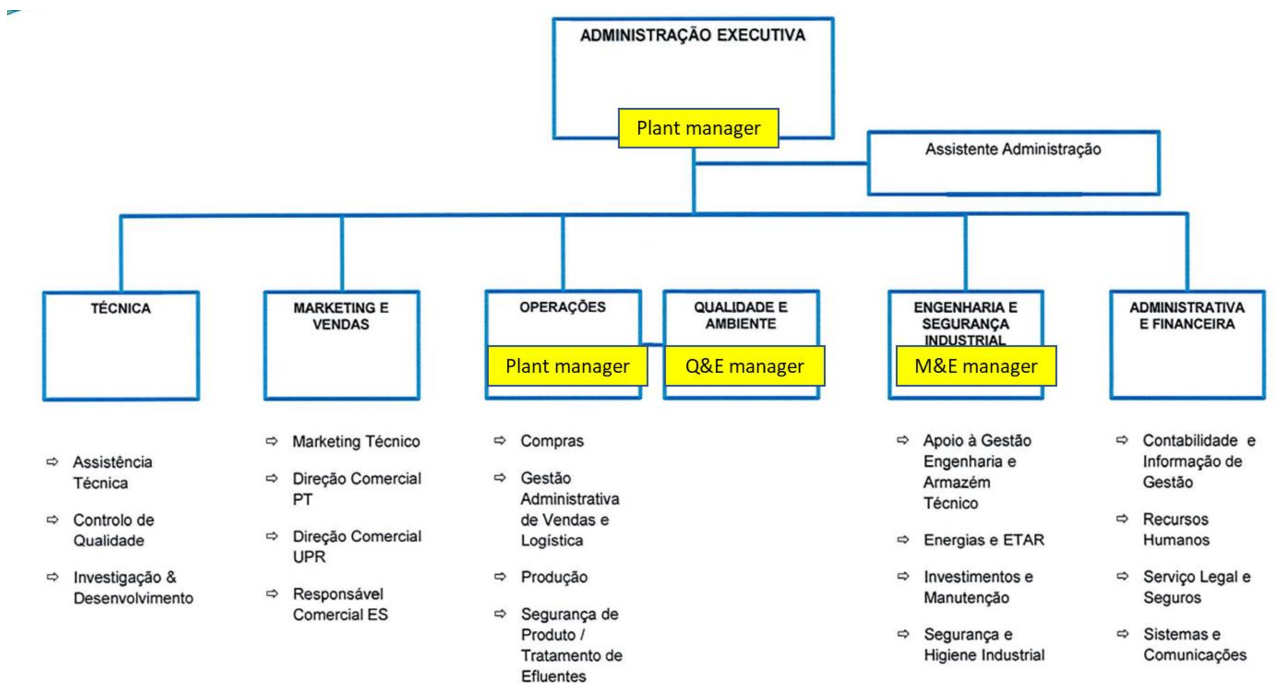
Appendix I

Some good examples of MA tools and practices that are being implemented in the fifth stage are the operational value gap, the OPEX Budget, the Annual Capital and Resource Plans, Key Result Areas (KRAs) and their annual targets; SMART objectives; Key Performance Indicators (KPIs) with monthly review; lean tools and techniques and problem-solving tools.

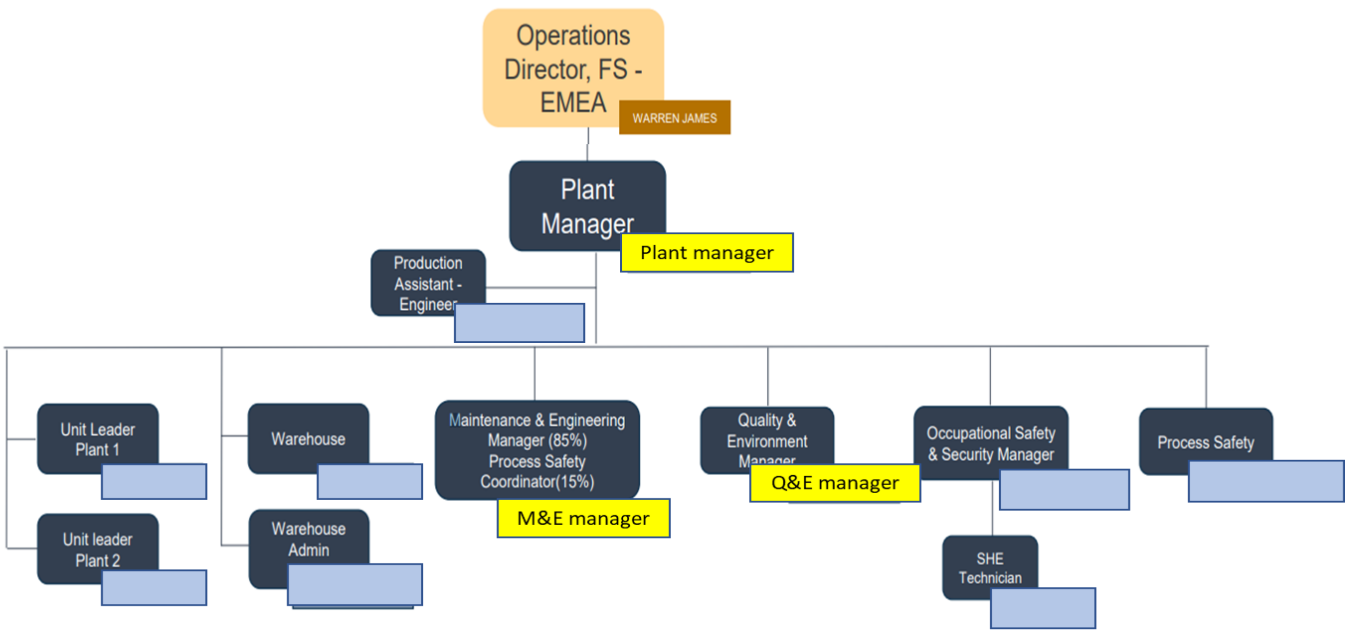
New MA tools and practices	Concept
Operational Value GAP	Wide range of financial improvement a branch can implement. The achievable value gap through opportunities available must be set for a 1-2-year horizon. Branches must outline their total value opportunity from the best available top-down information to identify the value gap.
New Budgeting System	OPEX Budget, Annual Capital and Resource Plans. Change from the bottom-up approach to a system where the top designs a budget with some insights from managers.
New KRAs, SMART objectives and KPIs	KRAs are areas where strong positive results must be attained to move toward long-term success. A balanced set of operational SMART objectives are assigned to each KRA and expected to be met within the terms of the operating plan. Then, the progress towards achieving each objective is measured and reported through Key Performance Indicators (KPIs). The monthly review of each KPI and the measurement of value earnt allow the evaluation of performance.
Lean tools and measures - Six Sigma Tools	• 8 type of waste: to identify and eliminate Value Gap and create more value in all processes; • Kaizen Concept: continuous improvement; • 5S & Visual Factory: workplace organisation to improve efficiency; • Gemba Walk: Actual process observation; • Value Stream Mapping: end-to-end process mapping to identify and eliminate value gap in processes and improve overall process lead time; • Activity Analysis Tools: Step-by-step work analysis to identify and eliminate the value gap and improve cycle time. Also used for workload analysis.

Appendix J

Third stage organisational chart



Fifth stage organisational chart



Appendix K

Core Values of the Third, Fourth and Fifth stages

	Companies		
	Third Stage	**Fourth Stage**	**Fifth Stage**
Core values	• Customer • Trust • Innovation •Accuracy	• Security • Agility • Integrity •Responsibility	• SHE- Security, Health and Environment • Accountability • Integrity •Innovation •Teamwork