ISCTE ⊗ Business School
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FROM BALANCED SCORECARD TO PROJECT BENEFITS MANAGEMENT

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ABSTRACT

Through recent literature and several indicators, it was concluded that more than two-thirds of the companies perform their strategic plan based on random or ad-hoc scenarios. Hence, there is no concrete correlation between the strategy and projects' portfolio.

The objective of this study is to propose a connection between the companies' strategy and its project portfolio with an assessment of benefits through the Pereira Diamond framework. This allows a great rationalization of the investment so that this could be channeled for other projects with an increased impact.

This study aims to guide the companies and give a contribution to the academic knowledge demonstrating how does the selection of the right projects assists the execution of the planned strategy.

To achieve the objectives, it was collected data through in-depth interviews with companies in Portugal. The collected data was transcribed, analyzed and interpreted. Through a descriptive analysis, it was possible to underline three main topics to evolve, namely, assessment, methodology, and measurement. Those clusters were the starting point for the discussion.

Also, it is presented a conceptual model based on the literature's good practices and difficulties companies demonstrated since the strategy definition until its measurement.

RESUMO

Foi concluído, através da literatura e vários indicadores, que mais de três terços das empresas executam o seu plano estratégico baseados em cenários aleatórios ou *ad-hoc*. Desta forma, não existe uma correlação concerta entre a estratégia e o portefólio de projetos das empresas.

O objetivo deste estudo é propor que a ligação entre a estratégia das empresas e o seu portfólio de projetos seja feita através de uma avaliação de benefícios usando a *framework* do *Pereira Diamond*. Desta maneira, é possível uma melhor racionalização do investimento de forma a que este seja canalizado para outros projetos com um impacto elevado.

Este estudo tem como finalidade guiar as empresas e contribuir para o conhecimento académico demonstrando de que maneira é que a seleção dos projetos certos auxilia a execução da estratégia planeada.

Para alcançar os objetivos do estudo, foram recolhidos dados através entrevistas em profundidade a profissionais da área de estrétegia de empresas em Portugal. Os dados recolhidos foram transcritos, analisados e interpretados. Através de uma análise descritiva foi possível destacar três tópicos principais para desenvolver, nomeadamente, aferição, metodologia e medição. Estes tópicos foram o ponto de partida para a discussão.

Além disso, foi apresentado um modelo conceptual baseado nas boas práticas da literatura e nas dificuldade reveladas pelas empresas desde o momento da definição da estratégia até à sua medição.

Palavras-chave: Estratégia, Gestão de Portfólio de Projetos, Gestão de Benefícios, Sucesso de projetos

Classificação JEL:
L1: Estratégia de empresas;
M10: – Administração de empresas

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LIST OF ABBREVIATIONS

BM – Benefits Management

BSC – Balanced Scorecard

CSF – Critical Success Factor

IRR – Internal Rate of Return

KPI – Key Performance Indicator

NPV – Net Present Value

PM – Project Manager

PP – Project Progress

PPM – Project Portfolio Management

R&D – Research and Development

ROI – Return On Investement

I.   LITERATURE REVIEW

1.1.Balanced Scorecard

1.1.1. Definition

Balanced Scorecard was launched in 1992 by Robert S. Kaplan and David P. Norton in order to revolutionize conventional thinking about performance metrics.

There are several definitions of the Balanced Scorecard given by different authors:

Definition of Balanced Scorecard	Author
"A set of measures that gives top managers a fast but comprehensive view of the business"	Kaplan & Norton (1992)
"The Balanced Scorecard is intended to provide managers with a tool not simply for reporting but also for managing performance"	Bento, Bento & White (2013)
"The BSC is an adequate tool to select a balanced set of indicators and objectives that reflect the strategic vision of the organization, helping organizations to meet their stakeholders' expectations, to articulate and communicate strategic objectives and to evaluate their implementation"	Quesado et. al (2017)
"The BSC aims to address a major concern of managers to monitor and ensure that the objectives of the organization's strategy will be implemented and achieved"	Gomes & Romão (2014)
"It is a methodological approach to revealing problem areas within the business and pointing out areas of improvement"	Stewart (2001)

"The BSC approach refocus the way that projects are managed, fine-tuning an organization's projects and internal business processes to align with and meet the core values and practices of the organization"	Stewart (2001)
"It is a medium to translate the vision into a clear set of objectives"	Mooraj et. al (1999)
"… is a way of changing communication about strategy since this will no longer be restricted to financial measures"	Norreklit (2000)

Table 1. Balanced Scorecard definitions and respective authors. Self-constructed

The scorecard translates the vision and strategy of a business unit into objectives and financial and non-financial measures in four different areas: the financial, the customer, the internal-business-process and the learning and growth perspectives (Kaplan and Norton, 1996a). "The purpose was to create a management system where measures of past financial events (lagging indicators) complement operational measures which are the drivers of future financial performances (leading indicators)" (Lueg, 2015).

Each of the categories answers to a different question: The financial perspective – how do we look to stakeholders?; The customer perspective – how do customers see us?; The internal-business-process perspective – what must we excel at?; The organizational learning and growth perspective – Can we continue to improve and create value? (Kaplan and Norton, 1992). The authors of the Balanced Scorecard assume a causal relationship between the four perspectives (Kaplan and Norton, 1996), as demonstrated in Figure 1.
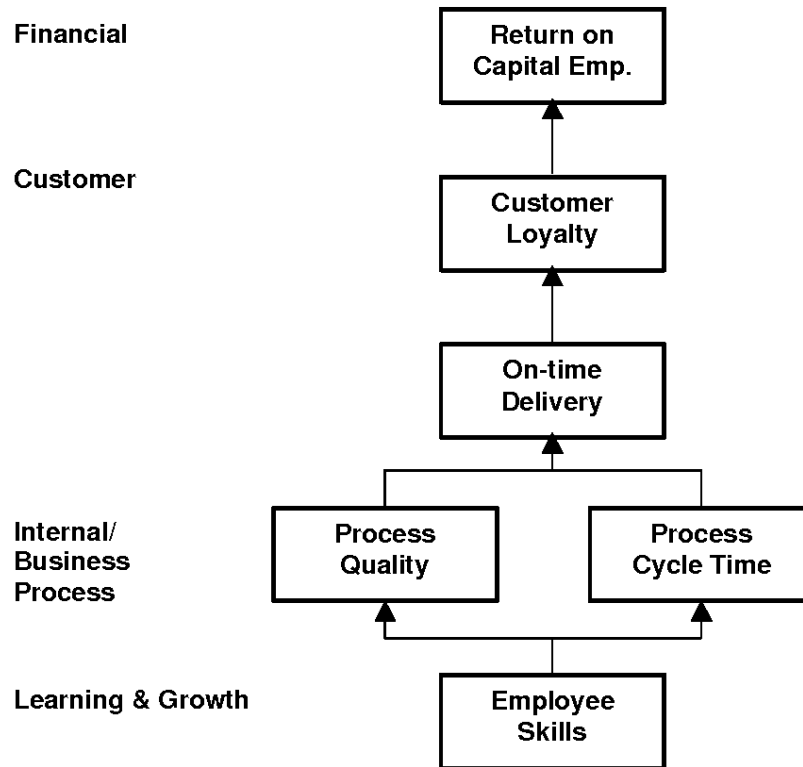
Figure 1. Example of cause and effect relationships through the four Balanced Scorecard perspectives. Source: Kaplan & Norton, 1996

1.1.2. BSC Evolution

At first, Balanced Scorecard started to be utilized as a frame for processes like resource allocation, budgeting and planning, goal setting, and employee learning. The main purpose to develop the BSC was the need to perceive the value creation derived from an organization's intangible assets, thus, it was developed as a performance measurement tool.

After that, BSC had evolved into an effective tool to implement direct strategies in entire organizations as the authors introduced new management processes to link strategic objectives to actions. Thus, this way, BSC became a strategic performance management system. As Kaplan and Norton were gaining more experience with BSC, they were making reviews and improvements to its concept (Bible, Kerr & Zanini, 2006). Therefore, in 20 years, BSC has transformed itself from merely a performance measurement system to a strategic performance measurement system (Shutibhinyo, 2013).

It is expected in the second decade since conception, the concept of the BSC would have matured and its application easily replicated across organizations, which is not the case according to Awadallah & Allam (2015). Furthermore, despite three conceptual revisions and three generations of the BSC, the concept still attracts a lot of studies criticizing its concept and application.

The latest modification of the BSC introduced the strategy map, depicting an organization's business model, to translate, communicate and measure strategy (Kaplan & Norton, 2004). They suggest that all strategic objectives need to come directly from the strategy map to illustrate how business is conducted to achieve strategic goals, while the BSC measures performance outcomes. This way, strategy maps expose gaps between strategy formulation and execution, direct attention to flaws in the BSC and enable top management to reformulate strategies if necessary (Lueg, 2015). Bento, Bento & White (2013) also see strategy maps as a plus since they allow managers to undergo double-loop learning through a re-evaluation of the strategy itself.

Gomes, Romão & Caldeira (2013) look at strategy maps as a communication tool used to tell a story of how the value is created in the organization. They show a logical step-by-step connection between strategic objectives in the form of a cause-and-effect chain, simplifying the complex causal relations which the BSC is built upon (Lueg, 2015).

As Lueg (2015) stated, the BSC has no direct link to the external environment, thus, strategy maps need to establish the market-strategy-BSC relationship or the BSC cannot be an effective control system. The same author concludes that users of BSCs with strategy maps are better at quantifying the achievement of targets and perceive their choices to be more successful than managers who are simply presented with a balanced set of measures where the causal links are already given.

One of the main controversy themes in the BSC literature is the assumption that there is a cause-and-effect relationship between the four perspectives of the scorecard (Gomes & Romão, 2014).

This relationship is essential because it allows the measurements in non-financial areas to predict future financial performance (Gomes, Romão & Caldeira, 2013). The flaw in the

process of cause-and-effect relationship is crucial because invalid assumptions in a feed-forward control system will make individual organizations anticipate the performance indicators results which are actually faulty, resulting in dysfunctional organizational behavior and sub-optimal performance (Gomes, Romão & Caldeira, 2013).

Norreklit (2000) argues that the relationship existent between the scorecard perspectives is logical and not causal justifying that "when Kaplan and Norton point out that a large market share with highly profitable customers is the driver behind a good financial result, then the relationship to which they point is a logical one. It is inherent in the concepts that a profitable turnover produces a financially profitable result". To be capable of investing in research and development, organizations need satisfactory results, but they equally need research and development to be able to produce satisfactory results. The reasoning is circular. So, instead of a cause-effect relationship, the relationship between the areas is more likely to be one of interdependence (Norreklit, 2000).

Bryant, Jones & Widener (2004) tested whether each BSC perspective influenced performance in only the next perspective in the hierarchy (Kaplan and Norton, 1992) or whether outcome measures in the lower-level perspectives drove outcomes in all higher-level perspectives. Although their study had a lot of limitations, the authors were only could find considerable direct effects of market share (a customer perspective measure) on profits (a financial measure). There were no relevant direct effects of the learning and growth perspective and of the internal perspective on the financial perspective. However, this relation holds only for firms that use both financial and nonfinancial measures in their performance measurement system.

A study from Bento, Bento & White (2013) also tested the relationships between the BSC perspectives and found that all of the non-financial BSC perspectives do have a direct - rather than indirect - effect on financial results. They argued that organizations that invest more in employee skills and in R&D are more likely to experience improved financial performance. Also, organizations with higher market shares and lower accounts receivables balances are more likely to outperform others in the financial perspective.

1.1.3. Limitations

The balanced scorecard has been an object of many critics and reviews for the last 20 years (Hoque, Z., 2013).

Pessanha & Prochnik (2006) criticize Kaplan and Norton suggestions' for the selection of strategic objectives and performance measures do not take into account several interests of important stakeholders. They argue that the conception of the BSC only concerns the interests of the shareholders while ignoring the interests of other key stakeholders such as suppliers, government, local communities, and the environment, which can be decisive for many organizations.

Voelpel et al. (2005) consider BSC rigid as a measurement tool. The key success factors are defined on the basis of the four performance measurement categories that form BSC, which tends to force indicators to fit in one of them. With this rigidity, BSC limits the view of an organization leaving no room for cross-perspectives that have a combined effect on strategy execution (Awadallah & Allan, 2015). Also, the indicators that do not fit, or cannot be categorized, within the given framework of the four dimensions are in danger of being neglected (Voelpel et al., 2005).

Voelpel et al. (2005) also regard that the external innovative connectivity of an organization is hampered by the BSC, criticizing the exclusion of the external environment and linkages. The BSC framework, the four perspectives, focuses mainly on a firm's internal processes without considering the interlinked and networked business environment. Rillo (2004) comments that it is quite critical in many cases that the external environment should be scanned more frequently.

Another limitation is the Balanced Scorecard's strategic control model that is a hierarchical top-down model not rooted in the organization and in the environment (Norreklit, 2000) which makes it an invalid strategic management tool. Therefore, a gap must be expected between the strategy planned and the strategy expressed in the actions actually undertaken.

Limitation	Author
The selection of strategic objectives and performance measures of the Balanced Scorecard do not take into account several interests of important stakeholders	Pessanha & Prochnik (2006)
The Balanced Scorecard is a rigid measurement tool	Voelpel et al. (2005) Awadallah & Allan (2015)
The external innovative connectivity of an organization is hampered by the Balanced Scorecard	Voelpel et al. (2005)
Balanced Scorecard's strategic control model that is a hierarchical top-down model not rooted in the organization and in the environment	Norreklit (2000)
The assumption that there is a cause-and-effect relationship between the four perspectives of the scorecard	Norreklit (2000)

Table 2. Balanced Scorecard's limitations and respective authors. Self-constructed

1.1.4. Implementation

The process of implementing a management concept is complex. Madsen & Stenheim (2014) stated that the post-adoption phase is where most of the problems arise. Awadallah & Allan (2015) espouse that, within a decade of its inception, an estimated 85% of the organizations experienced problems during implementation.

On the other hand, the fact that the BSC is widely adopted, implemented and used in practice is an indication that the concept is useful and may have potential benefits (Madsen & Stenheim, 2014).

The BSC enhanced managerial focus in the organizations since managers are forced to focus on what is important in the long run and can prioritize and make decisions more clearly. Also, it gives to the organization a balanced and holistic view of its performance (Madsen & Stenheim, 2014).

This tool is valuable because it enables organizations to have a common language and a common frame of reference, facilitating discussions and communication within the organization and avoiding dispersion. It also allows aligning goals, making sure that everyone is working toward the same purpose and giving the employees more awareness of the organization's long-term goals, clarifying how day-to-day actions affect not only the short-term (Quesado, Guzmán & Rodrigues, 2017).

Moreover, BSC can change the way an organization operates. Madsen & Stenheim (2014) believe that implementing this tool capture the attention of the members of the organization and can be a source of motivation by having more precise targets and incentives. Also, being a well-known management concept, BSC label can be used to drive organizational change processes.

The problems that organizations face in the BSC implementation range from conceptual and technical issues to social and political issues (Madsen & Stenheim, 2014):

Conceptual issues are related to understanding and interpreting the concept, the BSC model is a general one that may be difficult to customize to fit the organizations. The understanding of the causal relationships can also be a trigger. Technical issues may arise when developing a technical infrastructure to support the BSC, having problems with data gathering and automation. Social issues are related to the lack of commitment from central actors in the organization and to the lack of participation in the implementation process, delaying or blocking it. Political issues can emerge related to the resources and time consumption of the process, to the continuity that can be threatened by turnover and to the members' resistance to the implementation process.

1.2.Project's Portfolio

Nowadays organizations face strategic challenges since environments are constantly changing. At the portfolio perspective, and through PPM processes, the patterns of emergence come out, and influence the ongoing (re)formulation of intended strategy (Kopmann et al., 2018).

PPM is often viewed as a bridge between strategy formulation and its implementation (Meskendahl, 2010).

The priority and purpose of the projects can be altered or become obsolete by the modification of strategic objectives and the impact of a unstable environment can. This makes the concurrent reprioritization of projects in the portfolio and the allocation and reallocation of resources to projects according to the current priority an important part of PPM's managerial activities (Blichfeldt and Eskerod, 2008).

Shenhar et al. (2001) emphasize that projects and especially project portfolios are "powerful strategic weapons" as they can be considered as a central building block in implementing the intended strategy.

Usually, organizations do not have sufficient resources to cover all of the necessary investments. Thus, it is essential to select the projects that should be implemented according to the organization's priorities. (Dutra, Ribeiro and Carvalho, 2014).

A project is defined as a temporary endeavor undertaken to create a unique product, service, or result (PMBoK, 2017). "Projects are undertaken to fulfill objectives by producing deliverables. An objective is defined as an outcome toward which work is to be directed, a strategic position to be attained, a purpose to be achieved, a result to be obtained, a product to be produced, or a service to be performed. A deliverable is defined as any unique and verifiable product, result, or capability to perform a service that is required to be produced to complete a process, phase, or project. Deliverables may be tangible or intangible."

Martinsuo and Lehtonen (2007) showed that successful single project management is a necessary but not sufficient condition for successful project portfolio management.

1.2.1. Definition

Acher and Ghasemzadeh (1999) defined project portfolio as "a group of projects that are carried out under the sponsorship and/or management of a particular organization". Also, the authors added that projects within the portfolio have to compete for limited resources in terms of budget, personnel and time.

Turner and Muller (2003) defined project portfolio as "an organization (temporary or permanent) where projects are managed together to coordinate interfaces, prioritize resources between projects, and thereby reduce uncertainty". In their study, the authors enhanced that the efficient utilization of the resources is one of the reasons to manage the projects together.

Portfolio decisions (which projects to embody in the portfolio, at what priority, and with which resources) help balance the wide range of conflicting goals of an organization (Project Management Institute, 2017). Martinsuo and Lehtonen (2007) stated that successful portfolios are characterized by clear objectives for projects and formalized decision processes.
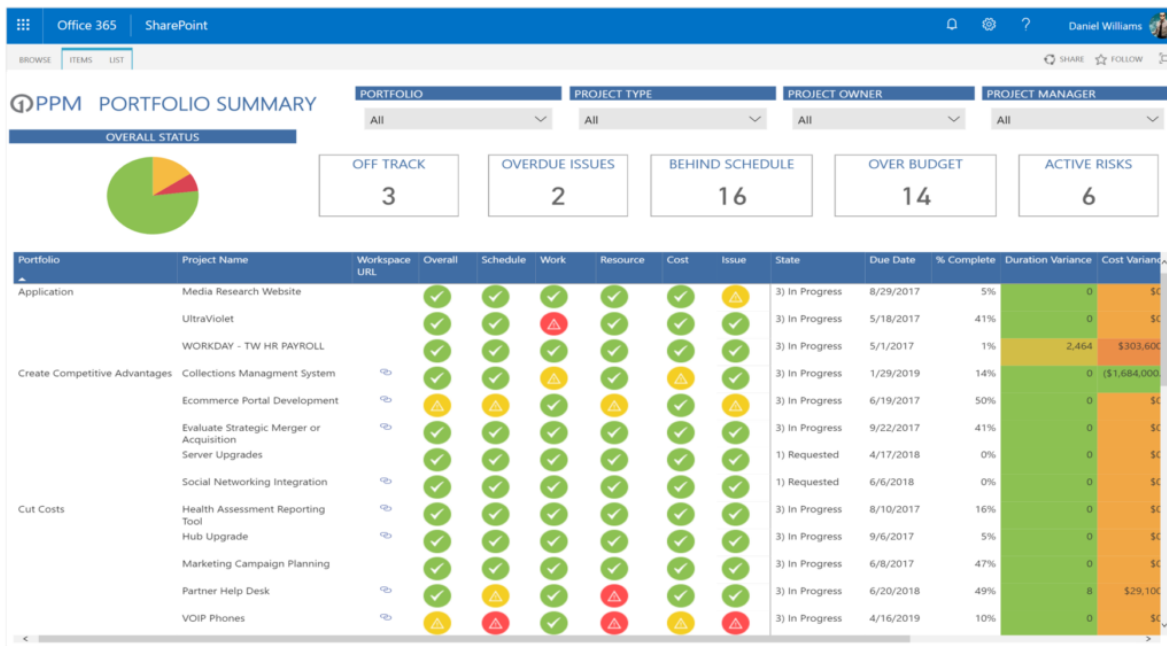
Figure 2. Project portfolio status. Source: Wicresoft

According to Figure 2., it is possible to observe – in detail – an example of how a project portfolio is managed.

Some authors highlight the link between project portfolio and the organization's strategy considering the strategy alignment the main reason to coordinate multiple projects.

In PMBoK (Project Management Institute, 2017), a portfolio is defined as "a collection of projects or programs and other work that are grouped together to facilitate effective management of that work to meet strategic business objectives".

For Kodukula (2014), a portfolio is a collection of projects that (1) are aligned with the organization's strategy, (2) help the organization achieve its objectives and (3) generate value for the stakeholders.

Blomquist, Martinsuo, and Muller's (2008) study showed that successful organizations have an organization-level practice of selecting and prioritizing projects in line with the strategy.

An effective portfolio contains the right combination of projects with the potential to generate value. It invests the right resources in the right projects to achieve the right goals achieving a consistent balance among them while holding alignment with organizational strategy (Kodukula, 2014).

Project portfolio management (PPM) deals with the coordination and control of multiple projects seeking the same strategic objectives and competing for the same resources, which are prioritized to achieve strategic benefits (Martinsuo, 2012).

The main processes of portfolio management are: identify, categorize, monitor, evaluate, integrate, select, prioritize, optimizing, balance, authorize, control and terminate portfolio components (Project Management Institute, 2017).

Blichfeldt and Eskerod (2008) stated that the management of a project portfolio is accountable for the prioritization of projects and the respective allocation of scarce resources to select the projects that bring a greater benefit for the organization.

Koduluka (2014) sees project portfolio management as the process that will help managers convert the company strategy into desired results.

PPM can provide benefits that would not occur if the projects were managed independently (Teller & Kock, 2013). An example is a clear alignment, organizational change management, value creation, and balancing, long-term risk management, better communication, reduction of redundancies and efficient resource allocation (Kodukula, 2014).

Portfolio management is about effectiveness – doing the right projects – and project management is about efficiency – doing the projects right: faster, cheaper and better. (PMBoK, 2017; Kodula, 2014).

1.2.2. *Portfolio Management Importance*

The external business environment is constantly changing for a lot of reasons (economic conditions, competitions, customer needs, technology advances, new markets, legislative controls or other causes) or the changes can be internal to the organization. In order to tackle the changes, managers revise the company strategy and formulate organizational goals (Kodukula, 2014).

Project portfolio management is a way to understand and capture external information to influence decisions and actions and, thus, adjust the portfolio to the existent situation (Petit and Hobbs, 2010; Petit, 2012)

Kaiser, Arbi and Ahlemann (2014) stated that the continuous evaluation of existing projects, using the same criteria used for their selection, is crucial for successful PPM.

Cooper, Edgett & Kleinschmidt (1997) consider project portfolio management a dynamic decision process where a list of active projects is constantly updated and revised.

Many changes and unforessen situations lead to inevitable unpredictability. This highlights the need to examine project portfolios in their actual dynamic context, instead of assuming a stable context (Martinsuo, 2012). Project portfolio management needs to be applied appropriately to each situation, it is not something that can be considered static (Blomquist and Muller, 2006).

Thus, information availability arose as the most significant factor for contributing to portfolio management efficiency both directly and through project management efficiency in Martinsuo and Lehtonen's (2007) study.

1.3. Project's Success

"Success is time-dependent: as time goes by, it matters less whether the project has met its resources' constraints; in most cases, after about one year of it is completely irrelevant. In contrast, after project completion the second dimension, impact on customer and customer satisfaction, becomes more relevant" (Shenhar, Levy & Dvir, 1997)

Defining success is not an easy task and it depends on the view of the stakeholder, the project type, the temporal perspective and the organization (Besteiro et al., 2015).

Despite the fact that Pinto and Slevin's (1987) diagnostic behavioral instrument is the most cited tool for assessing the perception of project success (Davis, 2016), is not enough to measure project success

1.3.1. Project Success vs. Project Management Success

De Wit (1988) was the first author who made the distinction between the success of the project and the success of project management since the two concepts are often confused.

The same author considers that the success of project management is assessed based on the traditional "iron triangle" (cost, time and quality).

Project success can be understood as the success of the management being in charge of the project (Albert, Balve and Spang, 2017). As soon as a project has been executed successfully in terms of time, budget and performance, project management success are reached. Shenhar and Dvir (2007) use the terminology project efficiency when to refer to project management success.

Besteiro et al. (2015) argued that the success of a project may have an impactful viewpoint with time, since the project management success may be seen at the end of the project.

The success of a project itself is related to the achievement of the overall goals of the project (de Wit, 1988). Besides the traditional aims, the focus of project success is set on the achievement of company goals, the project purpose, and the customer's satisfaction with the

product. (Albert, Balve and Spang, 2017). According to Shenhar and Dvir (2007), project success is associated with the achievement of the strategic objectives of the investing organization.

In terms of time, project success may be postponed in months or years after the end of the project (Besteiro et al., 2015).

It may be possible for the right project to succeed with poor project management, but successful project management can enhance its success. There is a significant positive relationship between project management practices and project success (Serrador and Turner, 2015) since successful project management leads to a successful project (Sebestyen, 2017).

When project management is done, short-term orientation can be unsuccessful, but long-term outcomes can be successful, because a wider set of goals are satisfied, instead of narrow subset which project management consists of (Munns and Bjeirmi, 1996).

Serrador and Turner (2015) stated that time, budget and scope are essential to project success; they are necessary conditions but not sufficient conditions. Project management success is one of the elements of project success because project success is almost never achieved without it (Davis, 2014).

"There are many cases where projects are executed as planned, on time, on budget and achieve the planned performance goals, but turn out to be complete failures because they failed to produce actual benefits to the customer or adequate revenue and profit for the performing organization" (Dvir, Raz and Shenhar, 2003).

Zwikael and Smyrk (2012) divide project success into project management success and project investment success. Project management success concentrates on the efficiency of a project in terms of delivering results of the right scope on time within budget. Project investment success is the interest of the project sponsor, who wants to know if the project is worth investing in or not.

Project investment success is operationalized in terms of return on investments and the successful realization of the desired benefits (Serra and Kunc, 2015).

In financial terms, there are many techniques to evaluate an investment: and Return on Investment (ROI), Net Present Value (NPV) and Internal Rate of Return (IRR).

ROI is the easiest and most common formula to employ in practice (Badewi, 2015). The return on investment calculation uses the net benefits divided by the project costs. The net benefits are the project benefits minus the costs. In the formula, the ROI of a project becomes

$$ROI\ (\%) = \frac{Net\ Project\ Benefits}{Project\ Costs} \times 100 \quad \text{(I)}$$

ROI is a crucial business measure that describes in a single metric the success of an initiative in economic terms (Phillips and Phillips, 2016).

Relating to the financial side, all the profit and all the costs incurred are taken into account to measure success. Stakeholders all agree that their activity in a project is only acceptable if the returns of their activities in the project are higher than their costs (Sebestyen, 2017).

1.3.2. *Success Criteria vs. Critical Success Factors*

Muller and Jugdev (2012) and Albert, Balve, and Spang (2017) make a distinction between project success factors and project success criteria. Project success factors are similar independent variables that contribute to the likelihood of success, and project success criteria are assessed and utilized to decide if the project was a success or a failure.

1.3.2.1. Success Criteria

Albert, Balve, and Spang (2017) consider that the project success criteria should be divided into two categories: Hard criteria and Soft criteria. Hard criteria are objective and measurable. As hard criteria, the authors include the measurement of time, cost, performance, economic success, and quality. Soft criteria are subjective and difficult to evaluate. As soft criteria, the

authors considered the satisfaction of the stakeholders: company satisfaction, line-manager satisfaction, customer satisfaction, end-user satisfaction, and supplier satisfaction.

Bourne and Walker (2004) also make the difference between hard criteria, in the shape of controlling and managing schedule, cost and scope; and soft criteria, in the form of aspects of relationship management.

The importance of hard criteria declines with increasing duration after project completion. While a project is being planned and executed, the assessment focus is more on project efficiency. After the termination of a project, soft criteria such as customer satisfaction or the contribution to business success are increasingly gaining importance (Albert, Balve and Spang, 2017).

Muller and Turner's (2007) study show that the type of project (complexity, importance and contract type), the sector of industry (private, public or voluntary) and the personal excellence and parameters of the project manager (age, gender, qualification, nationality, etc) have to be taken into account to identify the success criteria of a project.

Davis (2017) suggests that success criteria should be agreed upon and defined among stakeholders before the project starts. Turner and Zolin (2012) stated: "one needs to consider the views of multiple stakeholders over multiple time frames". The authors prove that stakeholders have distinct perceptions of success criteria because their evaluations of project success are inherently subjective, so they will focus on factors related to the criteria they perceive as most important, under or overestimating project success. Also, the perception of each stakeholder can change over time. McLeod et al. (2012) asserted that a project can be perceived as successful by one stakeholder and a failure by another. This highlights a need to assess a project from multiple perspectives instead of focusing on the operational level (Jugdev and Muller, 2005).

1.3.2.2. Critical Success Factors

Rockart (1982) defined Critical Success Factors as the limited number of areas in which result, if favorable, will ensure the competitive performance of the organization, for any business.

Milosevic and Patanakul (2005) defined Critical Success Factors from a project management point of view as the characteristics, conditions or variables that, when correctly sustained, preserved, or managed, can have a relevant impact on the success of the project.

Sebestyen (2017) suggested the extension of the traditional triangle criteria with the idea of value creation and value transfer: the project is successful if it keeps to the schedule and the budget if it is of the expected quality and if it transmits value to the stakeholders.

Cooke-Davies (2002) identified factors connected to continuous and consistent sustaining project success, avoiding the neglection of long-term success that often happens. Three studies of different authors (Hyvrari, 2006; Andersen et al., 2006; Christenson, 2008) indicated communication as the most important factor to implement the project since with no information, it is not possible to guide decisions regarding projects (Besteiro et al., 2015).

According to Bourne and Walker (2004), project managers are accountable for the successful delivery of completed projects. The project manager is not responsible only for time, cost and quality management, but also integration, scope, human resources, communication, risk, and procurement management (PMBoK, 2017), so PM is the most responsible person for project success.

According to Dvir and Lechler (2004) and Turner (2014), the way the issue of success factors is approached is too static. Despite project planning, the extent and frequency of changes can ruin the prospects of success that were planned.

Researchers are still trying to found the ideal number of CSFs. Some authors believe that the identification of a narrow set of CSFs makes the success model more accurate (Hussein et al., 2015). Other researchers, try to maintain a broader set of CSFs, arising with solutions that can handle many factors but the size of the model makes the problem uncontrollable (e.g. de Wit's framework) (Sebestyen, 2017).

1.4. Benefits Management

Benefits Management is a recent matter in the project management field. Therefore, the literature review on this theme, presented in this thesis, is brief.

When searching in b-On – Online Knowledge Library - for articles analyzed by the pears, published in academic journals and with "Benefits Management" in the title, we get 85 results as is possible to observe in Figure 3. Comparatively, when searching for articles in the same conditions but with "Balanced Scorecard" in the title, we get 2.936 results.

Figure 3. Search result. Source: b-On

There is some evidence in the success rate of the projects. Serra and Kunc (2014) found that 60% to 80% of companies do not deliver the expected benefits of their projects. Also, according to Teixeira and Pereira (2015), "up to 70% of change initiatives fail to deliver on the benefits that they set out to achieve".

A project benefit is defined as "an outcome of actions, behaviors, products, services, or results that provide value to the sponsoring organization as well as to the project's identified beneficiaries". (PMI, PMBok, 2017).

There exist many definitions of benefit, perceived by different authors, that can be found summarized in Table 3.

Definition of "benefit"	Author
"A measurable advantage owned by a group of stakeholders incurred by changing the current state through project management mechanisms"	Ward & Daniel (2006)
"The flows of value that arise from a project"	Zwikael & Smyrk (2012)
".. is an outcome of change perceived as positive by a stakeholder"	Bradley (2016)
".. is a result that a stakeholders perceives to be of value"	Mossalan & Arafa (2015)
"a measurable advantage owned by a group of stakeholders incurred by changing the current state through project management mechanisms"	Badewi (2015)

Table 3. Definition of Benefit and respective authors. Self-constructed

APM Benefits Management SIG (Specific Interest Group) study showed statistics that prove that benefits thinking has weak focus inside the companies (Pereira et al., 2017). The efficiency still is the only thing that organizations take into account to evaluate the projects instead of the benefits it delivers (Zwikael & Smyrk, 2012). In this light, Ward and Daniel (2006) enhance that the main motive for an organization to invest in an initiative is its benefits, hence, the focus should be on their realization. In line with this, there is missing a procedure to evaluate those benefits achievement. From a strategic perspective, the creation of value to the business depends on projects delivering the expected benefits (Gomes, Romão & Caldeira, 2013).

Benefits Management, initially, was used with the ultimate goal of increasing success in IT projects, but later has spread to other industries (Mossalan & Arafa, 2015).

"The purpose of the Benefits Management (BM) process is to improve the identification of the achievable benefits and to ensure that decisions and actions are taken over the lifetime of the investment lead to realizing all the feasible benefits" (Ward & Daniel, 2006).

Ward and Daniel (2006) suggest a model for the Benefits Management in stages (see Figure 4): (1) identify and structure benefits; (2) plan the realization of benefits; (3) execute benefits plan; (4) review and evaluate the benefits; and, (5) identify potential for further benefits.
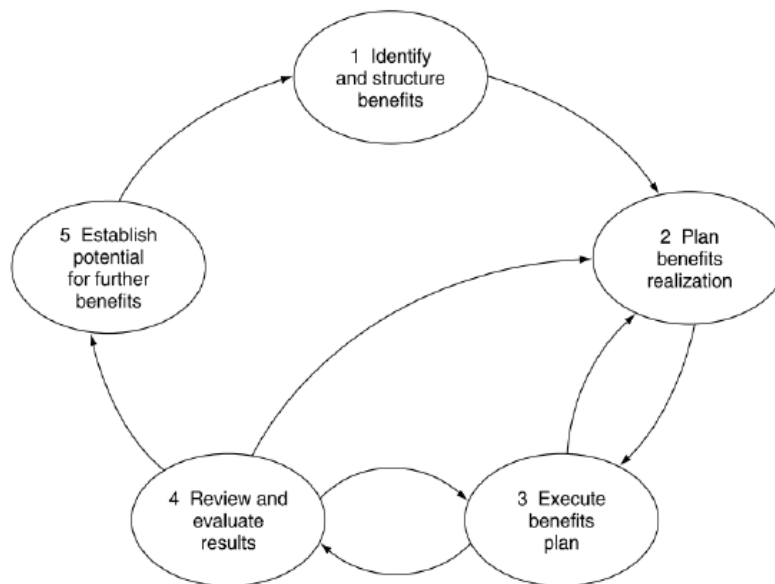
Figure 4. Benefits Management model in stages. Source: Ward & Daniel (2006)

BM allows the sponsor to have the right information for the investment feasibility studies, emphasizing the way to deliver the expected benefits (Gomes, Romão & Caldeira, 2013; Gomes & Romão, 2016). Also, it avoids spending resources on projects that would not deliver benefits, increasing the probability of the expected benefits to be achieved from investments made (Gomes & Romão, 2015).

Ownership for the realization of each benefit must then be assigned to a certain person or department, made responsible for realizing them; without an owner, there will be no interest

in capture the benefit and it will never be accomplished (Gomes & Romão, 2015; Badewi, 2015).

There are many types of benefits: tangible and intangible benefits, end and intermediate benefits, qualitative and quantitative benefits, planned or emergent benefits and long and short-run benefits.

A project can result in target (planned) benefits and in fortuitous (emergent) benefits. The firsts are the ones established before the project beginning, which the project sponsor pursue when investing in a project; the seconds, are the ones not taken to account when identifying the project benefits and that may emerge during the project (Zwikael et. al, 2018)

Gomes and Romão (2013) considers both short and long term business benefits. Long term benefits take time and may only show up after the project has closed. These kind of benefits can result in less commitment and enthusiasm. "Assessing the benefits is an on-going process because some benefits may not be immediate and will only appear at a later stage when the system has been fully integrated into the running of the organization by all of its users". (Caldeira, Serrano, Quaresma, Pedron & Romão, 2012).

Project benefits can be reflected by key performance indicators (KPIs) (Gomes & Romão, Caldeira, 2013). Tangible benefits are of a quantitative nature thus, they can be measured and estimated before the starting of a project and intangible benefits may either be measurable or non-measurable. Intangible benefits usually deploy qualitative metrics and are hard to measure (Badewi, 2015).

"A large group of organizations claims that project benefits are very hard to measure" (Zwikael & Smyrk, 2012). According to Bradley (2016), people find the measurement of benefits the most difficult in Benefits Realization Management. The author also believes that the difficulty with measurement is related to the late application of the Benefits Realization Management framework or to the no application at all. Figure 5 can enlighten the pattern of analysis.
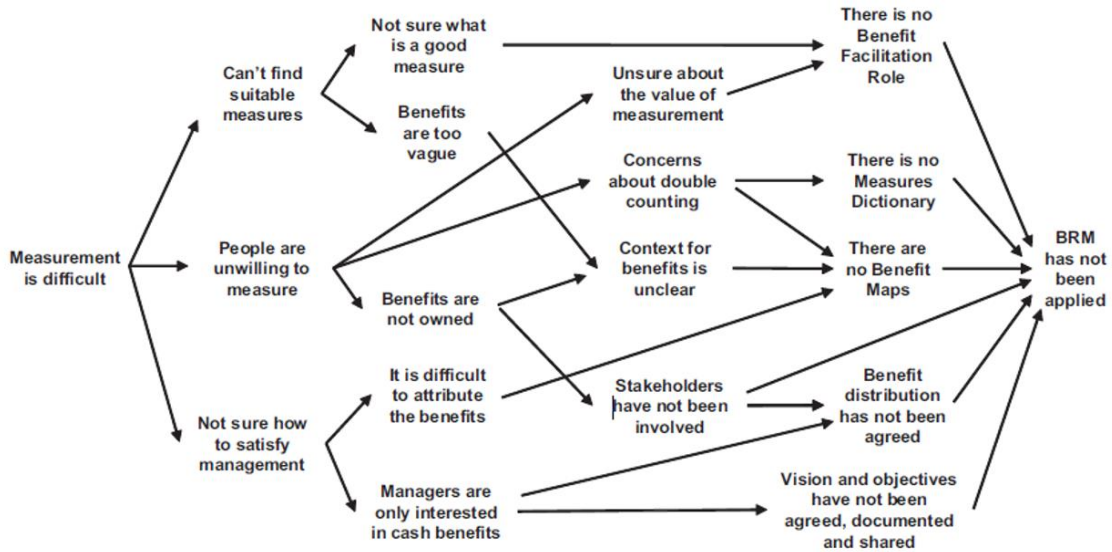
Figure 5. Why measurement can be difficult. Source: Bradley (2016)

Quantifying the benefits is crucial for manage, monitor and control their realization (Badewi, 2015). That is, "what cannot be measured, cannot be managed". Bresse et al. (2015) stated there is a lack of agreement between professional groups on how to classify and measure benefits.

Pereira et al. (2017) stated that "there is a lack information about how to formulate the initiatives benefits in a more detailed and guided way which is critical to assure the correct benefits' quantification leveraged by the future project".

From a strategic perspective, the creation of value to the business depends on projects delivering the expected benefits (Gomes, Romão & Caldeira, 2013).

1.4.1. Pereira Diamond Framework

Gomes, Romão, and Caldeira (2013) stated that "different perspectives using the same criteria can evaluate the same project as a success and as a failure". Thus, from here arise the necessity of a reliable assessment model to select the projects that will deliver the greater return on investment (Teixeira and Pereira, 2015).

The Pereira Diamond Model presents the four types of benefits – on the first level (Figure 6) – that an initiative may have and then, consider different scenarios – on the second level (Figure 7) – depending on the problem that will resolve or mitigate within each type of benefit.

Figure 6. Pereira Diamond, 1st Level. Source: Teixeira & Pereira (2015)

The framework's authors consider that the benefits identification and estimation should be based on the economic impact generated rather than on a financial perspective.
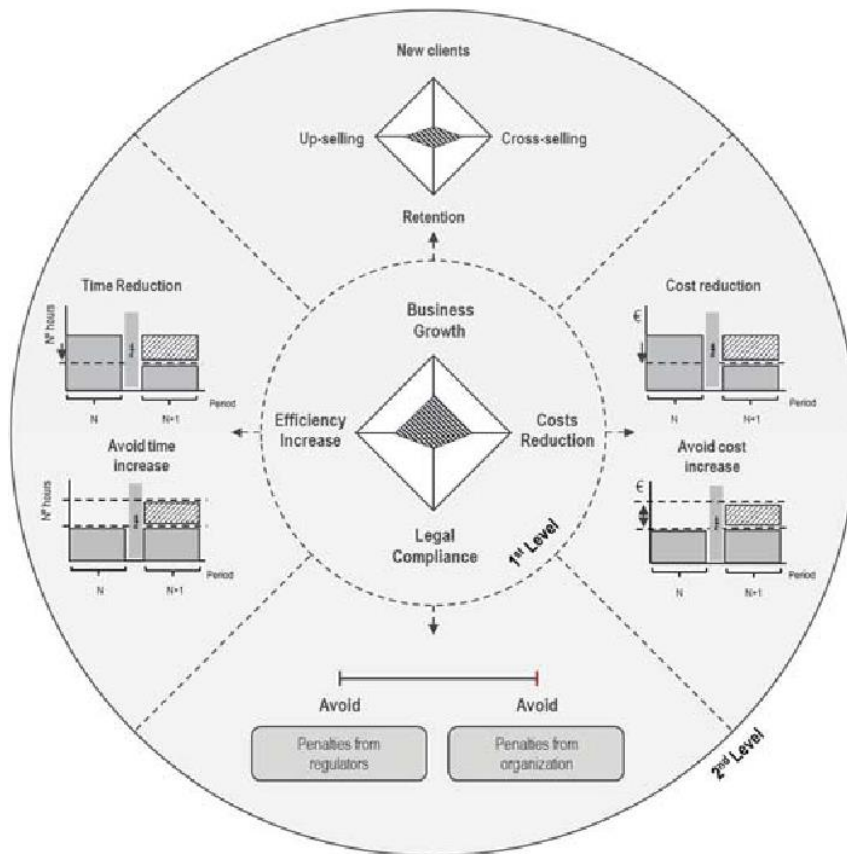
Figure 7. Pereira Diamond, 1st and 2nd Levels. Source: Teixeira & Pereira (2015)

According to Teixeira and Pereira (2015), there should be considered several scenarios to each dimension:

1. Business Increase – its inherent goal is to increase the company's results, on the revenue side, through the:
   - Increase market share by portfolio diversification or new geographic areas. The purpose is increasing sales volume by attracting new customers.
   - Increase cross-selling. The objective is increasing sales volume through the satisfaction of current customers.
   - Increase up-selling. The goal is increasing sales volume through the satisfaction of current customers.
   - Increase customer loyalty. The intention is to increase the time the customer stays in the company by retaining them for longer.

2. Cost Reduction – its inherent goal is to obtain an effective decrease in the expenses account of the company, by:
   - Decreasing the costs in the existing organization
   - Avoiding costs in the future as a result of this initiative implementation
3. Efficiency Increase – its inherent goal is to release time by optimizing the processes, by:
   - Reducing the time of a particular process
   - Taking projects that will prevent a future increase in the time of a process
4. Legal compliance – its inherent goal is to comply with the regulators entities and/or policy group instructions, by:
   - Avoiding penalties from regulators
   - Avoiding penalties from the organization

To make the Pereira Diamond Model valid, Teixeira and Pereira (2015) challenged 22 companies across different sectors to follow the model while selecting their projects portfolio and observed the results: 2 projects were unsuccessful based on the negative ROI achieved, which represents 9% of all the projects taken.

II.   METHODOLOGY

This chapter is intended to present and describe the methods and principles applied to fulfill the overall goals of the study.

This study is a dissertation since it has a component of context and critical debate of the relevant literature and a theoretical or experimental exercise, in order to prove the author's point of view, as well as a conclusion and a future research recommendation.

2.1. Research Paradigm and Objectives

Nowadays, business managers find themselves cornered: the market globalization is forcing organizations to rationalize and optimize their resources while they have the duty of handing successful results in order to create sustainable wealth for the organization's stakeholders. Consequently, the budgets are being reduced but there is still a need to make the organization grow. Therefore, it is crucial that the organizations select the most valuable initiatives or projects in order to get the most valuable benefits (return on investment).

This study seeks to be an input to organizations to do a greater rationalization of their investment and channel this investment for the best projects that will bring an increased impact on the organization. Thus, the purpose of the study is to ensure that actions that companies take along the investment life-cycle lead to expected benefits realization according to its strategy.

Therefore, this study will represent a valuable academic contribution to the literature in project and benefits management connected with strategy, and also, a future discussion in the corporate world.

2.2. Research questions

To accomplish the objective of this dissertation, the research questions that are going to be addressed are:

RQ1: Do the companies evaluate the predicted impact of the projects in their strategy?

RQ2: Do the companies quantitatively calculate the benefits?

RQ3: Do the companies measure strategy implementation?

2.3. Research Approach

According to Saunders et al. (2009), there are 3 different approaches regarding the conduct of research:

- The *deductive approach* that is related to "testing of theory": deducing hypothesis, testing them and examining the outcome.
- The *inductive approach* that is related to "building theory": understanding the nature of the problem, collect and analyzing data and formulating a theory.
- A combination of *deductive* and *inductive approaches* that are "used to make logical inferences and build theories about the world" and "involves the researcher selecting the best explanation from competing explanations or interpretations of the data*".*

This way, to this study, the chosen approach is the inductive method. The main goal in this thesis is to collect data, analyze it, find common patterns and relationships between the findings and formulate a theory, moving from specific observations to broad generalizations.

2.4. Research Design

In order to analyze the different strategy practices in the corporate world, the target of this research is to have the opinion of specialists in the area, from companies in Portugal. Thus, the target population in this study comprehends professionals with significant roles in the strategy area of the companies.

According to Saunders et al. (2009), is possible to distinguish two types of sampling techniques:

- *Probability samplin*g – the probability of each case being selected from the population is known and usually equal for all the cases; the process is identifying a

sampling frame, decide the sample size, select the sample and check that the sample is representative of the population

- *Non-probability sampling* – the probability of each case being selected from total population is not known, selects samples based on your subjective judgment

The sampling technique used in this study was a non-probability one since it was prepared a list of companies to select the target population whose opinion is considered valuable in strategy matters. A judgmental sampling was the one used in the research, which is a type of non-probability sampling, where the main goal is to identify a sample that can be illustrative of the population (Lavrakas, 2008).

The selected sample was a list composed of 34 companies – which can be found in appendix B - which gave rise to 36 invitations sent to strategy specialists or to elements responsible for the company's strategy to give their contribution to this study. The invitations were made by e-mail. From the invitations sent, 12 demonstrate their availability and interest in participating in this research, which represents a 33% response rate. The final sample contained 12 interviews from 12 different companies, which is more detailed in appendix A.

As a study guided by an inductive approach was conducted qualitative research through semi-structured in-depth interviews. According to Saunders et al. (2009), the in-depth interview is a technique designed to get the participant's perspective on the research topic. Therefore, it was the chosen process to collect primary data since one of the main objectives of this study was to understand the specialists' perspective on these matters.

2.5. Data Collection

To achieve the overall objective of the study it was collected primary and secondary data. The difference between both data is that secondary data is information already collected for some other purpose and by someone other than the user, while primary data is new information collected specifically for that purpose and by its user (Saunders et al., 2009).
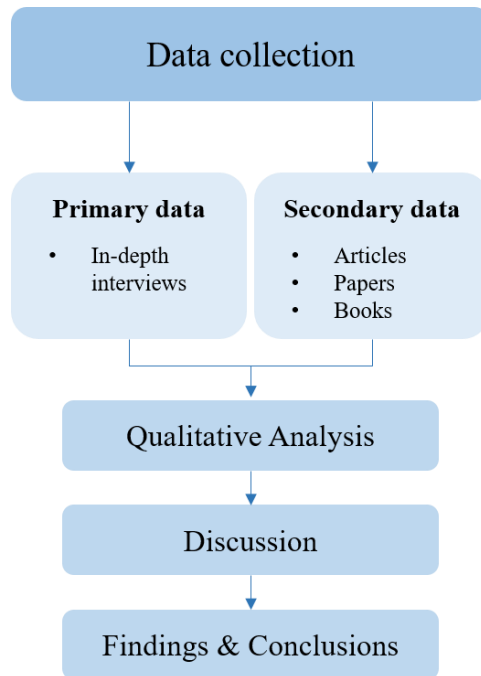
Figure 8. Data Collection. Self-constructed

At first, it was collected secondary data through scientific articles published in academic journals, papers, and books in order to gain deeper knowledge and understanding in the research topics. According to Saunders et al. (2009), this kind of data corresponds to documentary data (written materials), which is a type of secondary data. To have access to this kind of data, it was used three main research tools: b-On - the online knowledge library -, ProQuest and Google Scholar.

The primary data collected in this study was through semi-structured in-depth interviews. The interviews' intended duration was between 30 and 45 minutes. There were conducted 12 interviews, date and local chosen by the respondents. Half of the interviews were done by Skype and, the other half in person and all of them were audio-recorded. The interviews had three phases: (1) an introduction done by the interviewer in order to get the participants to know more about the purpose of the study, (2) a section of questions about the interviewee profile and the company and (3) specific questions regarding the topic under analysis.

For guide the interviews, a script was created based on the literature – that can be found in appendix C - containing seven open questions, designed to understand how project

management support, in the right way, the achievement of companies' planned strategy. As Saunders et al. (2009) stated a questionnaire should be tested for its reliability. Therefore, the script's testing was made by interviewing the tutor of this thesis, on March 15th of 2019 which resulted in the elimination of one question and the revision of another question. The questionnaire was improved and the questions were considered pertinent as well as their sequence.

The main intention in choosing this method to collect primary data was to perceive the specialists' perception in the research topics as well as give them space to focus the interview in what they consider to be the most critical practices.

After, the collected data was transcribed accordingly and, subsequently analyzed and interpreted.

In the qualitative analysis, it was used the MAXQDA® software that is a software package for analyzing qualitative data that can be used for content analysis. It has some advantages, such as: providing insights into qualitative data sets without suggesting interpretations; provides a broader choice of tools to facilitate the data analysis; allows easy sorting, structuring and analyzing of large amount of text and facilitate the management of resulting interpretations and evaluations (MAXQDA, 2019).

The analysis was conducted question by question in order to find patterns and relationships between the answers, some statistics arose and some conclusions were taken when relating the interview's findings with the literature. After, it was possible to point out three main topics: assessment, methodology, and measurement. These topics were the starting point of the discussion chapter, where were answered the research questions and the researcher developed her findings and conclusions, reinforced with the data collected.

The findings of primary data collection can be found, in detail, in chapter III – Data Analysis as well as the consequent discussion relating all the data collected, in the chapter IV – Discussion.

In order to guarantee the assured confidentiality of the respondents and respective companies involved in the study, their designation will not be published in this dissertation.

III.   DATA ANALYSIS

This chapter is dedicated to presenting the findings collected throughout the conducted interviews. A description of the interviews will be provided as a basis for discussion that will add value to the literature under this matter.

All answers were analyzed, decomposed and simplified through content analysis in order to identify common opinions and explore possible patterns. The results gathered through the interviews generated valuable information to address the research questions of this study.

This chapter is organized into two sections: the respondents' and companies' profiles, the presentation and examination of the results produced by the interviews.

3.1. Respondents'   and   companies'   profile

3.1.1. Interviewee's position

In this research, in-depth interviews were conducted with companies. The professionals interviewed hold significant positions related to the strategy of the companies, who accepted the invitation to take part in this study. There were conducted 12 interviews with partners, directors, managers, and heads of unit.
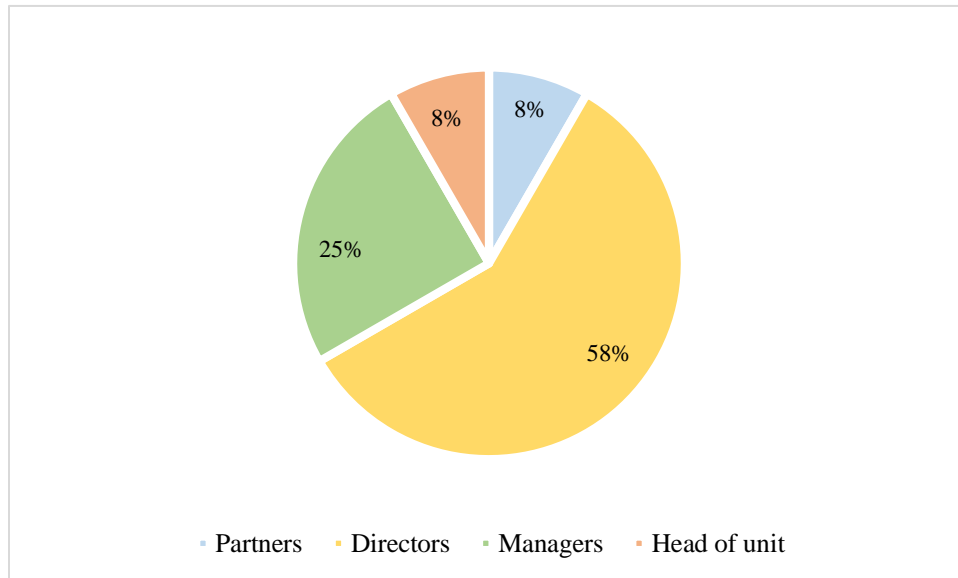
Figure 9. Interviewee's positions. Self-constructed

According to Figure 9, at the time that the interviews were conducted, 58% of the respondents had the position of Directors (specifically: strategy implementation director, planning and management control director and, strategy & business development director), 25% had the position of managers (portfolio and program managers), 8% had the role of Head of unit and 8% hold the position of partners.

3.1.2. Business activity

As stated before, the intention of this study is to interview companies from different sectors to have a broader sample with differentiated perspectives about the themes. Thus, the interviews were made with companies in the sectors of information technology (IT), Information and communication, financial and insurance, consulting, manufacturing and wholesale and retail.
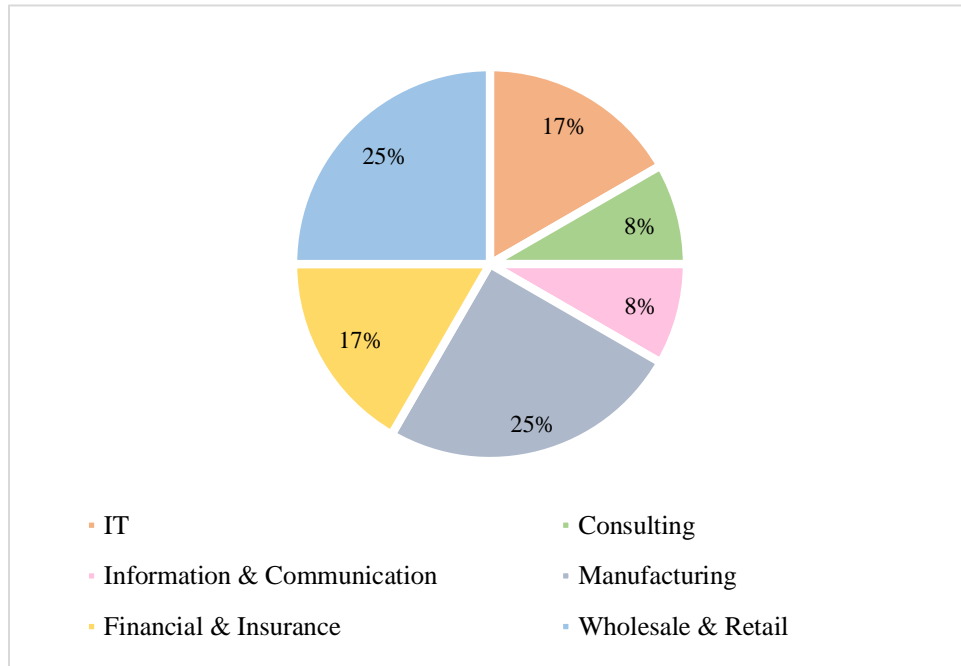
Figure 10. Business activity of the companies. Self-constructed

As is possible to see in Figure 10, 25% of the respondents have manufacturing businesses and wholesale and retail businesses (same percentage for each sector), 17% are companies in IT and Financial & Insurance sectors (same percentage for each sector), and, 8% of the companies belong to the information & communication and to the consulting sectors (same percentage for each sector).

3.1.3. Number of employees

With the purpose of perceiving how the size of the companies influence their strategy development and dynamics, it was collected information about the number of employees of the companies.
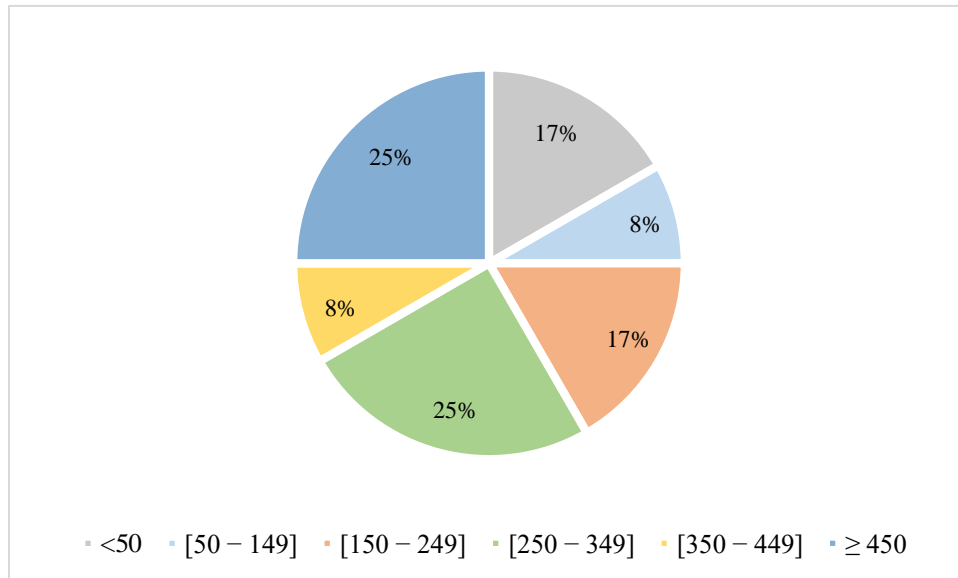
Figure 11. Number of employees of the companies. Self-constructed

By looking at Figure 11, it is possible to perceive that 17% of the companies interviewed have less than 50 employees, 8% have between 50 and 149 employees, 17% have between 150 and 249 employees, 25% of the companies interviewed have between 250 and 349 employees, 8% have between 350 and 449 employees and 25% have 450 or more employees.

3.1.4. International presence

It is also relevant to perceive the presence of companies in other markets.
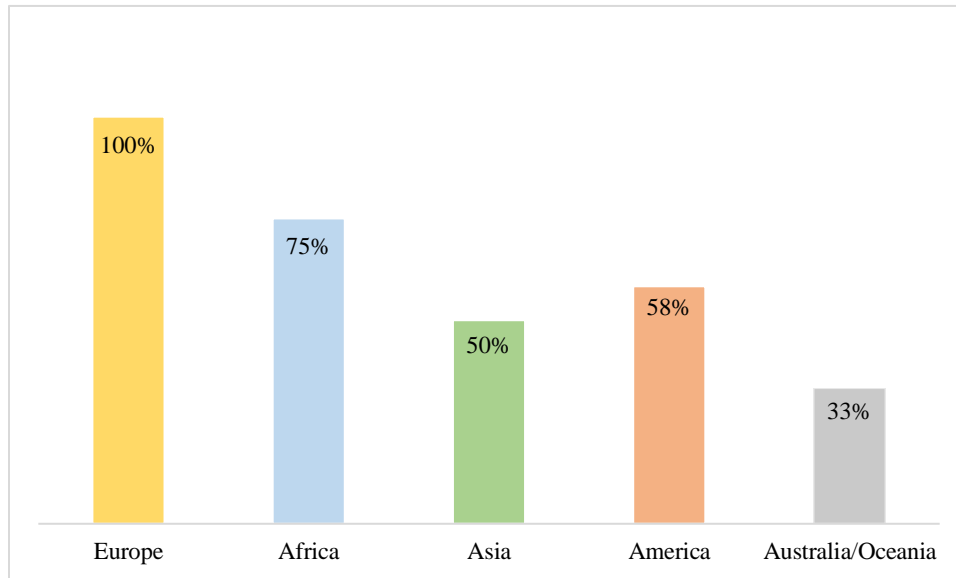
Figure 12. International presence of the companies. Self-constructed

Regarding international presence, only two of the 12 companies interviewed were revealed to have activity exclusively in Portugal. All other companies referred to having physical offices or projects in several foreign countries.

As we can see in Figure 12, 100% of the companies have physical presence in Europe of which 83% are present in Portugal and Spain. All of the companies that revealed to have physical presence in other European countries besides Portugal are present in Spain. A lot of companies take advantage of this "neighbor" relationship and expand to Iberian, avoiding costs with directors, making them director in Portugal and Spain.

Also, 75% have presence in Africa. From the 9 companies that are present in Africa, it is possible to note a strong presence in Angola (56%) and in South America, Egypt and Mozambique (44%).

The values related to Angola and Mozambique probably come from the existing agreements between Portugal and Portuguese-Speaking African countries. Also, these countries have developing markets, which makes it interesting to investing in them.

It is relevant to note that all of the IT (17%) companies are present in Africa. That is due to the stage of development of the countries, they are now having their technological breakthrough.

Additionally, 58% of the companies interviewed have physical offices in America. It is also relevant to add that, from the 7 companies that are present in America, 43% are in Brazil and 71% are in Chile. As Brazil is a Portuguese-speaking country, Portugal has special agreements with them as well as with African countries which eases the relationships.

From the 50% that are present in Asia, it is significant to observe that 83% of them are in Thailand.

And finally, 33% of the companies that were interviewed have physical presence in Australia/Oceania.

In conclusion, this study utilizes a multinational sample of companies, from different sectors of activity and with different sizes, which makes it more diversified. Also, the professionals that were interviewed from each company are from different positions and consequently, have different responsibilities within the company, which leads us to more than a standardized perspective.

3.2. Results presentation and examination

3.2.1. *How does the company define its strategy? Do you use any strategic tools?*

The first question had the objective of understanding how companies define their strategy and what strategic tools they use to do it.

First of all, it is relevant that every single company interviewed does strategy. There are companies that have a strategy department and that team is responsible for it and there are other companies that do not have a department responsible for strategy, but it is the responsibility of other departments as marketing and commercial. Also, some companies have a Project Management Officer who deals with strategy since it is strongly connected with projects.

There are only two companies (*Company A* and *Company L*) that do not define strategy annually, *Company A* defines the strategy of the company each 3 years and *Company L* defines it each 4 years. All the other companies define the strategy for each year.

Although the strategy definition process is not standardized, 92% of the companies (*Company A*, *Company B*, *Company C*, *Company E*, *Company F*, *Company G*, *Company H*, *Company I*, *Company J* and *Company K, Company L*) define strategic goals, 67% (*Company B, Company C, Company E, Company F, Company G, Company H, Company J* and *Company K*) mention projects when shaping the strategy for the company and 58% (*Company B, Company C, Company E, Company F, Company G, Company J,* and *Company K*) define Key Performance Indicators.

There are two companies (*Company B* and *Company D*) that analyze the risk when defining the strategy. Both quantify the probability of happen the risk and its impact on the company but only *Company B* adopts a strategy to deal with the threats: escalate, avoid, mitigate, transfer or accept.

Company E is the only company mentioning a project's business case when defining its strategy.

Two companies (*Company B* and *Company E*) refer prioritization and selection of projects in the moment they establish the strategy for the year but only *Company E* highlighted that the selection should be done according to the creation of value to the company.

Two companies (*Company C* and *Company E*) mentioned the evaluation of the projects' impact on the KPIs defined in the strategy and the evaluation of the benefits arising from that impact but only one *Company E* does measure and verify that benefits at the end of the projects. Also, *Company C* mentioned that there are benefits that are possible to perceive and estimate in an initial phase and there are other benefits that will emerge during the project that were not visible from the outset.

Two companies (*Company F* and *Company K*) mentioned monitoring and control at the moment of defining the strategy, but only *Company F* mentioned that it is crucial to have a monitoring plan and an action plan associated with each project. *Company L* also uses action plans.

Company H and *Company I* mentioned that the annual strategy of their companies depends on the cycle of the product. If they have new products they need more projects related to advertisement to get people to know the product but if they just have the same products as

the last year, they need to get the target customers to get in touch with the product, with more projects regarding proximity with the customer. Their strategy definition for the year depends on that.

Only *Company J* mentioned the way their company's strategy is communicated and implemented. Their strategic plan and goals are communicated to the company in a top-down manner, having employees involved in it, to guarantee that the implementation is done in a bottom-up manner.

Only *Company E* mentioned the importance of the alignment of the projects with the strategy of the company.
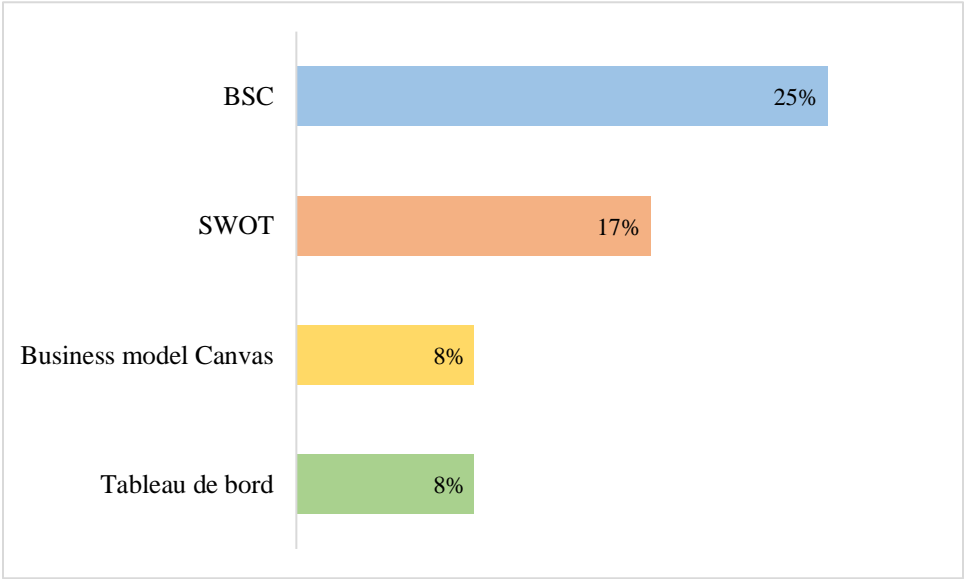
Figure 13. Strategic tools used by the companies. Self-constructed

According to the Figure 13, 25% of the companies (*Company A, Company F,* and *Company K*) use BSC to define the strategy, 17% use SWOT Analysis (*Company B* and *Company D*) and 8% use Business Model Canvas and Tableau de bord (same percentage for both).

Company D uses SWOT Analysis when to analyze the risk, Business Model Canvas to introduce new products and Tableau de Bord to define strategy itself. Only one company uses three tools to define their strategy.

There are two companies (*Company C and Company G*) that use software tools to define the strategy. *Company L* uses the "*Golden Circle*" tool highlighting the importance of focus on the mission and the vision of the company when setting its strategic objectives. Four companies (*Company A, Company H, Company J,* and *Company K*) revealed they use business plans through Microsoft Excel when defining their strategy. *Company I* is the only one that does not use any tools to define its strategy.

4.2.2. How is made the connection between the Key Performance Indicators defined in the strategy and the projects of the company?

The aim of the second question was to understand how the companies connect the projects to the Key Performance Indicators defined in the strategy.
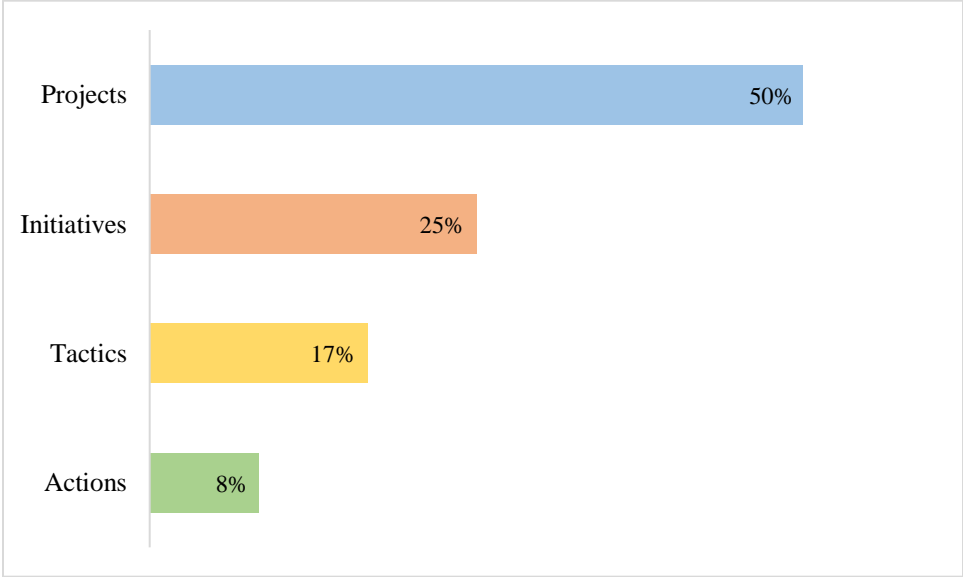
Figure 14. How companies refer to projects. Self-constructed

Many terms arise to name the same concept. 50% of the companies (*Company C, Company D, Company E, Company F, Company J* and *Company L*) refer to it as projects, 25% (*Company A, Company H* and *Company I*) as initiatives, 17% (*Company G* and *Company K*) as tactics and 8% (*Company B*) as actions. From the companies that have defined the terms

(*Company A, Company B, Company I* and *Company K*), all said that projects, initiatives, tactics, and actions are the way to accomplish the strategic objectives defined previously.

Company B does the connection between the KPI's and the projects through a planning tool while defining the project itself. *Company C* connects the projects and the KPI's through a software tool. The definition of the projects is done by the managers and then, the software is configured according to the KPI's.

Company A and *Company K* define highly ambitious KPI's in order to achieve at least two thirds. For example, when they want to a growth of 10% in sales in a year, they define and communicate to the company an indicator of 15% to a greater employees' effort.

Company D revealed that each strategic goal is indexed to a different type of project.

Three companies (*Company E, Company F,* and *Company J*) define the projects and their contribution to the KPI (their benefit for the indicator defined). *Company E* and *Company F* verify this benefit through a business case. Through these business cases, the projects in *Company E* obtain a weighting score, according to which the company decides to proceed with an initiative instead of others. *Company L* also mentions the prioritization of projects when connecting them with the KPI's.

There is only one company (*Company G*) that does not connect the projects with the KPI's because it achieves the strategic goals in an ad-hoc manner, without any planning.

Company A highlighted the importance of connecting the strategic objectives with people and then, with projects.

Company J stated that there can be several projects contributing to the same KPI and *Company B* emphasized that there can be several KPIs associated with the same project.

Only *Company J* has a KPI's map from which defines a baseline (what would happen to the indicators if the company does not take any action?) and then, design their projects above it with the respective benefit to the KPI, in order to have a clear vision of the projects contribution to the overall company.

Four companies (*Company H, Company I, Company K* and *Company L*) define global KPI's and then, design different initiatives to sales channel or product range to contribute to the

achievement of the KPI. Also, *Company K* stated that there are some projects that are not defined in the planning phase because they depend on the seasonality or on the product life cycle and may emerge during the year.

Two companies (*Company J* and *Company G*) revealed to define the KPI's according to the history of the last 3 years and to the information of the market context available.

Company G and *Company L* have a little definition of projects.

4.2.3. *Do you have a scientific process to assign the projects to the achievement of the Key Performance Indicators? i.e, does the company use trustable sources of external and internal stakeholders?*

The intention of the third question was to understand if the companies have a scientific process or a methodology to assign certain projects in order to achieve a certain KPI.

The answers to this question were completely abstract and out of the matter, perhaps for lack of knowledge in the theme. There were two companies that understood the real objective of the question.

Company E revealed that it uses a business case - to predict costs and revenues of the project - to assign a project as a contribution to a certain KPI and validates if the project brought the promised benefit at the end of the project. Company J stated that 95% of their projects follow a scientific process. They are submitted through a problem-solving process and to a cause analysis in order to understand the issues that the project may solve. Also, they revealed to have a specific framework for each type of project to handle each one the right way.

The other companies revealed not having a scientific process or even a process but gave some interesting inputs.

Company H has objectives, which are associated with KPIs, and then is created a project which, they believe, is going to be a contribution to the achievement of the indicator. However, the company does not have a way to measure that contribution. They, usually, achieve the objectives, but they do not know in what extent each project contributed to the

goal. Similarly, *Company I* revealed that is possible to measure quantitative indicators but impossible to measure the qualitative ones.

Company A stated that, when defining a KPI, they also define the target they want to achieve, how they are going to measure it and the person/team responsible for it. In the same vein, *Company K* revealed to have a SAP tool to channel the results derived for each initiative being this way, possible to measure the contribution of the projects in the achievement of the KPI.

Company F stated "the science is done behind, not ahead. Head we just confirm". To measure in the future, we have to start thinking about how are we going to measure before. Also, *Company F* revealed that a good and well-sustained calculation of the project's benefits will lead to a good evaluation thereof.

4.2.4. *How is the prioritization of projects done in the company? What are the indicators or criteria used?*

The fourth question of the interview had the purpose of understand how companies decide which projects to do and what the selecting criteria they use.

First of all, it is important to know that only one company (*Company G*) does not prioritize and select projects.

Five companies (*Company B, Company C, Company F, Company J,* and *Company L*) mentioned impact as one of the most important criteria to undertake a project instead of others.

Six companies *(Company A, Company B, Company C, Company E, Company F,* and *Company K*) mentioned the contribution of the projects to the achievement of the strategic objectives and KPIs defined in the strategy as one of the most important criteria to select a project. Only *Company F* mentioned the benefit each project brings to the company.

Four companies (*Company B, Company C, Company E* and *Company L*) mentioned that when there is a project that does not gives a great contribution to the company's objectives and does not have a great impact but compromises the activity of the company for some

reason (regulatory issues or operational issues vital for the activity), that project is a priority related to the others.

Three companies (*Company A, Company D* and *Company J*) mentioned profitability as an important criterion. For *Company A,* the most important performance measures are Return on Investment (ROI) and Payback Period. For *Company D*, Return on Investment is the only measure that matters. *Company J* gives a lot of importance to EBITDA. Also, *Company J* uses simple payback as a measure to guarantee great profitability. Every project of this company is obligated to have a payback of fewer than 5 years. That way, it is possible to assure an Internal Rate of Return (IRR) higher than 20% in each project. For these companies, the way a project impacts these performance measurements are one of their criteria to prioritize projects in the company.

Two companies (*Company C* and *Company E*) uses a software with an algorithm making the weighting and giving a score of the prioritization. In the case of *Company E*, the algorithm has the "critical to activity" criteria in consideration, so the ranking that the software gives corresponds to reality. In *Company C*, this recognition of urgency has to be done manually because the algorithm does not take into account the "critical to activity" criteria.

Two of the companies interviewed (*Company B* and *Company F*) mentioned complexity as a criterion. *Company F* gives it a lot of importance highlighting that there are two types of relevant projects: the ones with a lot of impact but low complexity, which are called the "quick-wins" and the ones with a high impact and high complexity.

Two companies (*Company H* and *Company I*) stated that the prioritization of projects is directly related to the product's cycle. If companies are launching a new product, the criteria with more relevance is different than when they are selling the same products as the last year.

Three companies (*Company H, Company J,* and *Company L*) encourage the teams to propose a prioritization according to the geographical area, to the target customers and to the range of product, since they keep a closer relationship with customers and have a greater perception of their needs, by being on the field.

Only *Company A* mentioned the alignment of the project with the strategy of the overall company as an important criterion to select projects and only *Company F* considers the benefits brought by the projects a crucial indicator when prioritizing them.

Two companies (*Company B* and *Company K*) mentioned the resources the project consumes - time and money – as an indicator. *Company A* was the only one giving some attention to the teams' motivation in executing that project.

4.2.5. *Do you control the Key Performance Indicators during the projects and at the end of them? i.e, do field measurement exists or you just measure at the end of the year?*

The aim of the fifth question was to find out if the companies control the KPI's during the projects or just at the end and how often they measure them.

It is relevant to know that facing this question, every company measure KPI's. However, *Company G* does not define KPI's to projects, only global KPI's related to the overall company.

Company B stated that when defining each KPI, they define a formula and a criterion to calculate its value and the monitoring frequency. In contrast, *Company I* stated that there are some KPI's that are impossible to measure.

Company A stated that to achieve the company's goals is necessary to have alignment and monitorization.

Three of the companies (*Company E, Company F,* and *Company L*) argued that the measurement frequency depends on the type of indicator. They stated that it should always have monitoring and control but, sometimes, in different periods of time. *Company F* gave some examples: a customer satisfaction KPI should be measured at the end of a project, an employees' satisfaction KPI should be measured annually and a sales KPI should be measured daily or weekly.

Company D and *Company E* revealed that monitoring the indicators is a recent practice in the companies. Before that, in *Company D*, the KPI's used to be discovered during the projects.

Three companies (*Company C, Company G,* and *Company H*) use software tools to control and monitor the indicators but none of them mentioned how often they do monitor them. *Company H* also controls the market and the competitors' indicators through the software.

Company K uses a Balanced Scorecard to control and monitor the indicators of the company relating to the past year, to the current month and to the beginning of the current year.

There is a monthly meeting to review all the projects in *Company J* and weekly contact with the local teams to report the progress of the current situation. Also, there is an automatic monthly gathering of all the indicators which are validated quarterly as well as the delivering of benefits from each project.

Company D does not define KPI's but measures them.

4.2.6. *In the case of the non-achievement, or predicts not to achieve, the Key Performance Indicators defined, what do you do? Add more projects, add stages to the existing projects, etc..?*

The objective of the sixth question was to understand what measures companies take if they predict they are not going to achieve the KPI defined.

All of the companies stated that the measures they decide to take are going to depend on the nature of the project and the nature of the indicator. *Company F* also stated that the contingency of the project is relevant when deciding what to do in these situations.
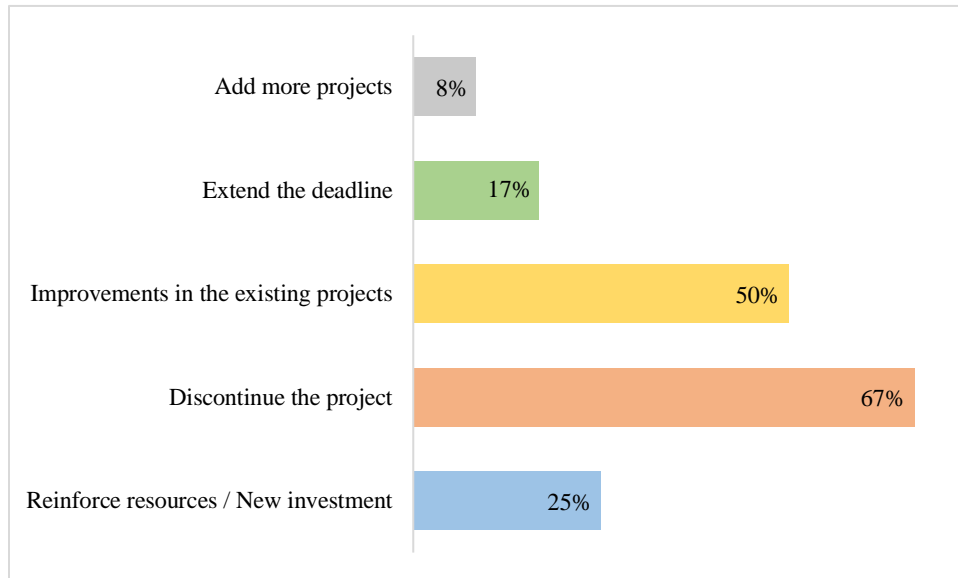
Figure 15. Actions companies take predicting the non-achievement of KPIs. Self-constructed

As it is possible to see in Figure 15., for 67% of the companies, discontinue or cancel the project is an option. *Company A* stated that there is always "on the table" the possibility of canceling the project and that assessment is done every three months. *Company C* stated that there a lot of reasons to discontinue a project as: if the project is really far from the objective that it was supposed to achieve, it does not make sense to continue it; if there is a need of a great amount of effort to achieve the objectives the project promised, it probably will not compensate in the return, so it does not make sense to go on with the project; and, when the deadline is a critical factor to the project, no longer makes sense to complete the project. *Company K* stated that when they predict to not achieve the results, they cancel the project in order to not spend more resources in it and to assure the predicted margin and, consequently, profitability.

For 50% of the companies, change the planned actions and do some modifications to the initial ideas of the project to complete it in time and within the initial budget is a possibility. *Company A* stated that they would change the project lowering the costs to their minimum, in order to assure the profitability. *Company D* stated that, in these situations, it is important to review the initial plans of the project in order to avoid the costs to soar. *Company F* stated that if the analysis indicates that the project needs modifications to achieve the results within time and budget, they would review its actions.

For 25% of the companies, attach more resources or approve a new investment to the project to complete it in time is also an alternative. *Company B* stated that they reinforce the resources of a project to complete it in time when they believe they can achieve the desired results with that boost. For *Company J*, when the factor time is crucial to the project, companies should analyze the critical path of the project to understand where it is possible to introduce more resources in order to meet the project deadline. *Company* E stated that sometimes a new investment besides the initial budget is needed to complete a project.

For 17% of the companies, extend the deadline is not an excluded possibility. *Company F* stated that they extend the deadline when they believe they can achieve the desired KPI with more time. *Company C* stated it could make sense to extend the project's time when the objectives can be achieved and the factor time is not critical to the project.

Only 8% of companies consider the option of adding more projects to achieve a certain KPI. *Company J* stated that sometimes the projects defined are not enough to reach the target, so it is necessary to add more projects to achieve the KPI.

Company A also said that in their company, they have a risk management that is monitored and that alerts for this kind of situations. With this, is possible to assess the situation and make the right decisions for each project.

Company E revealed to be in an early stage in this methodology and to make these decisions in an ad-hoc manner.

Company J was the only one highlighting the causal analysis to understand the reasons that made the project deviate from planning. They have a countermeasure culture to not accept the deviation on the promised benefit based on the PDCA methodology.

4.2.7. *How does the company evaluate the success or performance of a project?*

The finality of the last question of the interview was to understand how companies evaluate the performance of a project.
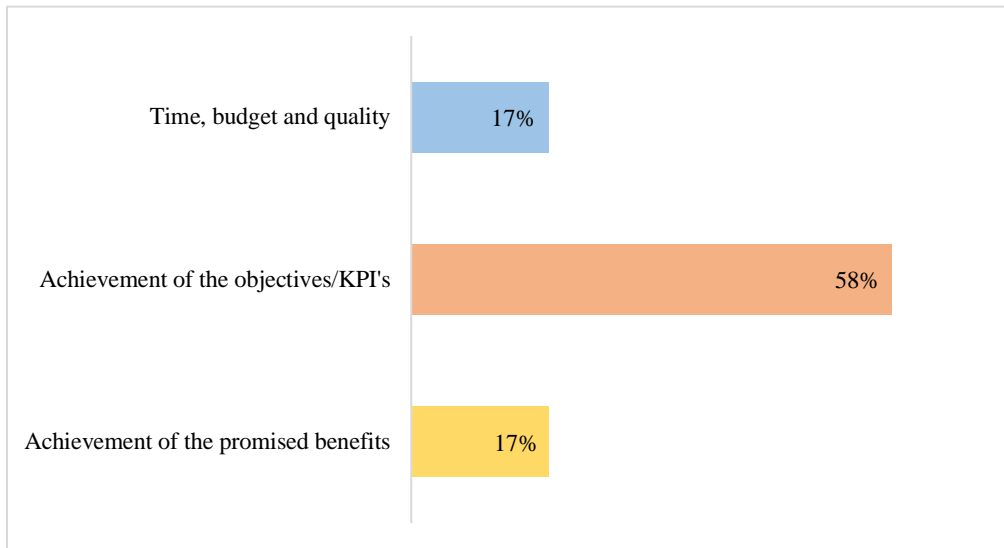
Figure 16. How do companies evaluate a performance of a project. Self-constructed

According to this figure, is possible to see that 17% of the companies evaluate the performance of a project according to if it meets the planned deadline, within the planned budget and with quality. For *Company C*, these are the only measures to consider a project a success.

58% of the companies evaluate the success of the projects based on the achievement of the objectives and the KPIs defined for the project. *Company K* stated that it have to be defined metrics to measure if an initiative is being effective.

There are companies that take to account the success of the objectives of the project as a factor of success but also consider other factors. *Company A* considers the turnover and margin and profitability as weighting factors. *Company B* verifies if the project solved the problems in the company that was supposed to.

Company F has both visions: they evaluate if a project is a success or not based on the dichotomy between execution indicators (time, budget and quality) and performance indicators (the goal of the project).

Also, *Company F* alerted for the way that companies deal with this dichotomy because it is possible to have projects that met all the execution indicators but still did not have the expected impact in the firm. *Company D* advocated a similar logic: if a project does not meet

the deadline but achieves the project's objective is considered a success; if a project meets the deadline but does not achieve the project's objective is considered a failure.

Only 17% of the companies mentioned they evaluate projects based on the benefits it brought to the company. *Company J* measures success according to the delivery of the project promised benefits.

In addition, *Company J* also takes into account a project's impact on EBITDA to classify its success.

Company E also has a double vision of project success: they verify the performance indicators such as customer satisfaction, cost performance, and schedule performance indexes but also stated that if they verify that the project brings the value it promised on the business case approved in the planning phase, it is considered a success.

Company A when defining the project also defines measures to evaluate its success at the end of it. *Company B* believes that the evaluation criterion does not have the same weight in every project and gives the example of the factor time that is crucial in some projects and it is not in others.

There are three companies (*Company G, Company H,* and *Company I*) revealing that the success of an initiative is hard to analyze. *Company H* stated there are many influential factors of success and all of them drive a project to success or failure but they cannot know responsibility each project had on the result. *Company I* defends that the quantitative metrics are possible to measure and determinate their success but the qualitative ones are impossible to measure and then, classify as success or failure.

Company A always has in mind the market's and the competitors' context when evaluating the project's performance. If the market is shrinking, an achievement of 7% of a KPI of 10%, is considered success.

IV.   DISCUSSION

In this chapter findings are discussed and a conceptual model is suggested. Also in this chapter are going to be provided the answers to the research questions of this investigation.

4.1. Data Analysis Overview

Through the data analysis, it was possible to find patterns and highlight some important findings. While analyzing the data collected with the interviews were found three main clusters – using MAXQDA® -, namely, assessment, methodology, and measurement.

The *assessment* is related with the strategy definition. Companies should define objectives and indicators to achieve and assess how each action, initiative or project are going to contribute for the achievement. The word *assessment* emerges from the lack of evaluation that companies revealed to have before undertaking any action.

The *methodology* is related with the indicators. Companies should have a model to define the positive impacts of these actions, in number. It was revealed to exist a high difficulty in quantify qualitative outcomes. The word *methodology* emerges from the need to define one to quantify the impacts since not even one company mentioned to have a way to do it. One company revealed to be impossible to measure qualitative indicators.

The *measurement* is related with the comparison between the pretended impact and the reached impact. Companies should measure the benefits promised by an action and the benefits achieved by this action. The word *measurement* emerges from the need to an agreement on how should a project's performance be measured since there are distinctive perspectives on how to do it. One company still evaluates the performance of a project according to the triple constraint and 58% assess the projects' success taking into account the goals and indicators' achievement. Only 17% of companies evaluate the performance of a project based on the delivery of the promised benefits.

All the clusters are closely linked.

From the first cluster – *assessment* – arises the need for a previous appraisal of the project's contribution to the achievement of the strategic objectives. Companies are undertaking projects that may be bringing nothing but costs to them. And how can they do that? Using a *methodology* that is able to identify and quantify the benefits resulting from the projects. And then, confirm the delivery of those benefits at the end of the project, and subsequent achievement of the overall KPIs through the *measurement* of the planned strategy implementation.

4.2. Research answers

With the information gathered in the data analyzed and the clusters found, were going to be answered the research questions.

RQ1: Do the companies evaluate the predicted impact of the projects in their strategy?

The answer to the first research question is no. As stated before, there are only three companies that assess the project's contribution to the achievement of the strategy planned. Moreover, two companies cannot calculate the extent of contribution each project gives to the achievement of the overall KPI since they revealed it to be impossible to calculate the benefits quantitatively. In this question, we can stress the presence of two of the clusters identified: assessment and methodology.

The achievement of the objectives and subsequent KPIs is not supposed to be ad-hoc, the companies should be able to assess them before undertaking a project. That assessment should be done through a methodology.

RQ2: Do the companies quantitatively calculate the benefits?

The answer to the second question was not accurate. As mentioned before, at least two companies revealed to have problems quantifying benefits. All others did not mention the problem of quantified benefits.

Two companies use business cases to assess the contribution of the projects to the planned strategy but did not have a methodology to quantify benefits.

Despite the impacts of non-achieving the planned objectives, it is not a priority for the companies to define a methodology to quantify benefits.

This process should be done according to a scientific methodology as Pereira Diamond.

RQ3: Do the companies measure strategy implementation?

The answer to the last research question is also no. Companies do measure the performance of the projects, based on different criteria, but they do not confront the planned strategy with the implemented one. Only two companies measure the success of a project as it is supposed to, according to the delivery of the promised benefits. Is not surprising that the companies that evaluate a project's performance according to the delivered benefits belong to the group of companies that assess the contribution of the projects to the KPIs.

The same companies that cannot assess the contribution of an initiative and also cannot measure benefits have significant problems in measuring the performance of a project.

Apart from the projects' performance, is also important to measure the implementation of the overall strategy which any company does.

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4.3. Conceptual Model

In light of this matter, it was designed a conceptual model based on the literature's good practices and problems that companies presented since the strategy's conception until its measurement (Figure 17). The model was conceived to a better understanding of how project management should support the achievement of the planned strategy of the companies.
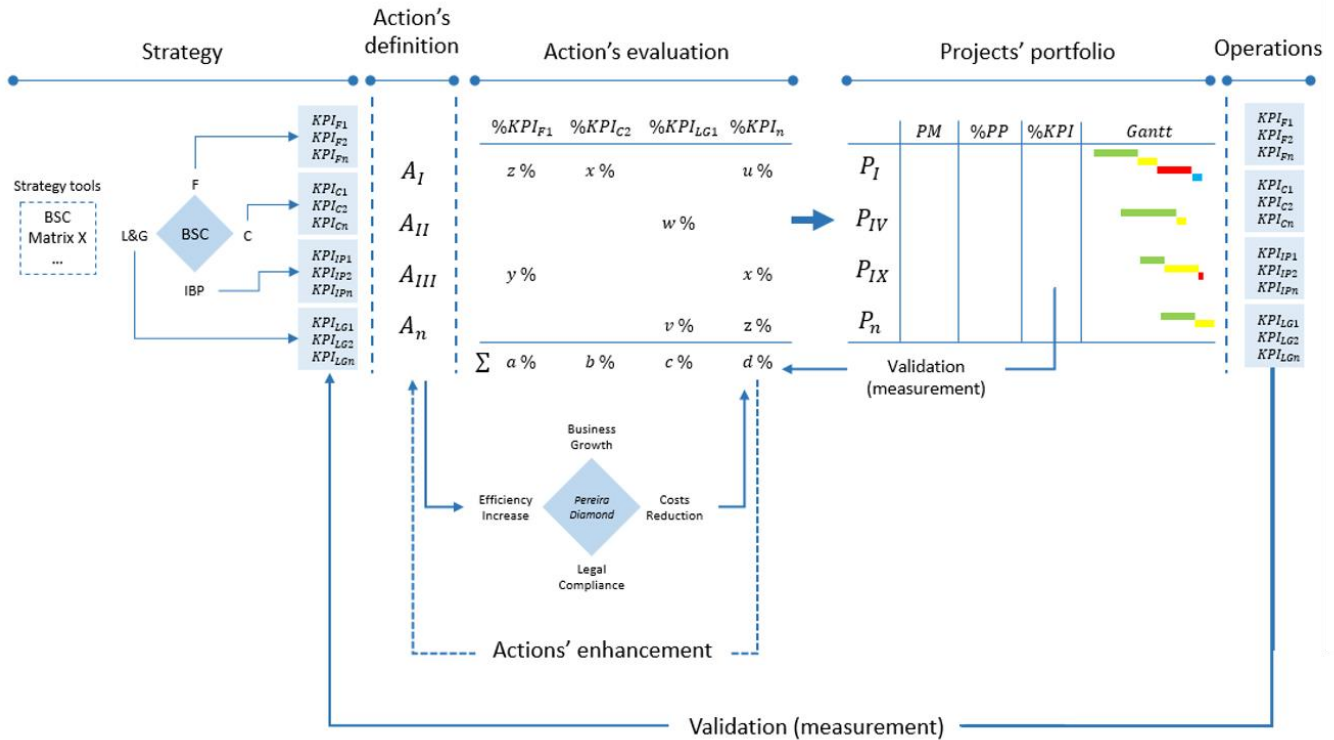
Figure 17. Conceptual Model. Self-constructed

According to the conceptual model present in Figure 17, there should be five stages when talking about projects within companies: strategy definition, actions' definitions, action's evaluation, projects' portfolio construction, and operations.

In the first phase – strategy definition – is where the companies define their strategic objectives and associate them with Key Performance Indicators. In this conceptual model, the author chose to use the Balanced Scorecard as a strategic tool to assist the strategy definition. As stated in the literature review chapter, the BSC is decomposed in four different perspectives: Financial perspective that stands for "F", Customer perspective that stands for "C", Internal Business Processes perspective that stands for "IBP" and Learning and Growth perspective that stands for "LG".

In the second phase – actions' definition – is where the companies come up with ideas to actions contributing to the achievement of the KPIs defined in the previous stage. At this point, the main idea of each action should be defined, as well as the respective scope, time and cost.

Between the second and the third stage, it is used the *Pereira Diamond* that is a Benefits Management Framework already explained in the literature review. With this framework, is possible for the companies to identify and estimate the benefits each action can bring to the company, contributing to the KPIs. It also works in the opposite way. If the total sum of the contributions to the KPIs defined is not 100%, there are not enough actions to achieve the objectives or the actions that are being assessed are not enough valuable since they do not bring enough benefits. Therefore, there is a cycle of enhancement of the actions until there is enough contribution to assure the KPI's achievement.

In the third phase – actions' evaluation – is where the companies assess the different actions in order to understand the percentage of contribution that each action is bringing to each KPI previously defined. At the end of this phase, the total sum of each action's contribution should be 100% in order to achieve the overall KPI.

In the fourth – projects' portfolio construction – is where the actions that bring a greater contribution to the set of KPIs are chosen and turned into projects to implement. Usually, there are prioritized the actions that give contribution to the higher number of KPIs and the actions that give a major contribution to a few KPIs. Sometimes, the contribution an action brings to the KPI's set is not highly relevant comparing with others, but that one is undertaken and turned into a project when it is critical to the activity of a company. This stage can also be called "make it happen".

Also in the project's portfolio, is possible to see the name of the Project Manager (PM), the percentage of Project Progress (%PP), the percentage of KPI achieved so far and the project schedule as well as the dependency relationships between activities and current schedule status through the Gantt chart. After a project ends, the percentage of KPIs achieved by a project should be measured and confronted with the contribution the project promised to bring to the KPIs - on the third phase - to validate it.

In the fifth and last phase – operations – is where the life cycle of the product begins, namely, the operation. Is only through the products resulting from projects that are possible to measure the KPI achieved and confront it with the planned KPI in order to validate it.

V. CONCLUSIONS

This chapter is intended to provide a synthesis of the study highlighting its main conclusions. Furthermore, the limitations affecting the study and some suggestions for future research are also approacher here, with the purpose of continuing to develop a topic that has not been substantially studied yet.

5.1.Synthesis of the research

Regarding the literature review and the data analysis, were developed some conclusions. There is still an immense confusion between the terms project success and project management success, which could be confirmed in the interviews results where was possible to recognize this usual confusion.

Also, benefits management is still a subject not well known and put into operation as well as Pereira Diamond framework. There are just a few articles about it compared with other subjects. Also, most of the companies do not take benefits management subject into account when doing the strategic plan.

There is no agreement in what is critical to undertake a project instead of others. The set of criteria used is a broad one, either on literature or on the data analysis.

From the interviews, it was also possible to notice that the companies' strategy definition process is not a standardized one and the linkage between projects and KPIs is not uniform.

Given the conceptual model provided, there is a lot of space for improvement regarding the contribution project management can give to the achievement of the strategy in the companies, especially, in the three clusters identified since all the research questions had negative or inconclusive answers. However, the stage where the companies were revealed to be more routed is in the strategy definition.

This study is important to the corporate world as far as proved that the selection of the right projects, for the right reasons, can lead to successful strategy implementation as subsequent achievement of strategic objectives

5.2. Limitations of the study

Although the objectives have been met, through the elaboration of this research some limitations and gaps must be noted.

Regarding the literature review, the Balanced Scorecard chapter can be considered old since there is just a few literature about the BSC concept in recent years. Another limitation is that this investigation uses only one strategic tool – the balanced scorecard – to prove a perspective and to draw up the conceptual model. It is important to note that it can be done using other strategic tools such as Matrix X, OKR's framework, and others.

Also, this study did not get deep in the business case theme since the goal of the research is to study benefits and not the investment viability regarding benefits.

Concerning the data collection, it was conducted only 12 interviews. Despite the invitations to participate in the study had been sent to many companies, just 12 demonstrated availability to give their contribution. Another gap is related to geography, this research was focused in Portugal since the companies interviewed were either Portuguese or Portuguese subsidiaries. Also, there was a time limitation since the investigation was made in a period of one year.

The awareness of the study limitations was present throughout all the research development in order to avoid taking inappropriate conclusions.

5.3. Future research

Regarding this investigation, there is still a lot to develop in the three main topics: assessment, methodology, and measurement. Also, there is a need to develop and improve the conceptual model presented.

More than continue developing the model, mechanisms need to be found to the professionals in the area perceive the benefits of these techniques, in short time.

Another suggestion for further research is to study how does the benefits selection is influenced by the investments.

Taken the limited evaluation period into account, it becomes relevant to continue with the investigation by utilizing a wider sample and segmenting by industries.

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APPENDICES

Appendix A – Interview's details

Companies' Designation	Interviewee's position	Interview's date
Company A	Director	26/04/2019
Company B	Director	26/04/2019
Company C	Director	06/05/2019
Company D	Manager	15/06/2019
Company E	Senior Manager	12/07/2019
Company F	Partner	30/08/2019
Company G	Manager	08/10/2019
Company H	Director	09/10/2019
Company I	Director	09/10/2019
Company J	Director	09/10/2019
Company K	Director	11/10/2019
Company L	Director	17/10/2019

Appendix B – List of Companies

	List of Companies
1	Alliance Healthcare Portugal
2	Allianz SE Portugal
3	Altice Portugal
4	Arsenal do Alfeite
5	Autosil
6	Bison Bank
7	Boost Change
8	Camâra Municipal de Lisboa
9	Carglass
10	Chubb European Group Limited Portugal
11	Corporação Industrial do Norte, S.A.
12	Cofidis Portugal
13	Crédito Agricola
14	Decision Portugal
15	Digital Connection
16	Grupo Terris
17	Hertz Corporation
18	i2S Informática, Sistemas e Serviços S.A.
19	ISUZU
20	José de Mello Saúde, S.A.
21	McCain Portugal, Lda.
22	Miele
23	Mitsubishi
24	Nestlé Portugal, S.A.
25	PepsiCo

26	Primavera Business Software Solutions, S.A.
27	Público
28	SECIL Portugal, S.A.
29	Servdebt, S.A.
30	Siemens Portugal
31	Sonae MC, S.A.
32	TimweTech Portugal
33	Winning Scientific Management, Lda
34	Worten

Appendix C – Interview's Script

1. Context

    1.1. How many employees does the company have in Portugal?

    1.2. How is the international presence of the company?

    1.3. In which area do you work at the moment? What is your position?

2. Strategy

    2.1. How does the company define its strategy? Do you use any strategic tools?

    2.2. How is made the connection between the Key Performance Indicators defined in the strategy and the projects of the company?

    2.3. Do you have a scientific process to assign the projects to the achievement of the Key Performance Indicators? i.e, does the company use trustable sources of external and internal stakeholders?

    2.4. How is the prioritization of projects done in the company? What are the indicators or criteria used?

    2.5. Do you control the Key Performance Indicators during the projects and at the end of them? i.e, do field measurement exists or you just measure at the end of the year?

    2.6. In the case of the non-achievement, or predicts not to achieve, the Key Performance Indicators defined, what do you do? Add more projects, add stages to the existing projects, etc..?

    2.7. How does the company evaluate the success or performance of a project?