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INVESTIGATION MODEL OF SENSING, SEIZING AND RECONFIGURING CAPABILITIES

Henrique Pereira Correia de Carvalho

Master of Science in Management

Supervisor:

Prof. Doctor Renato Lopes da Costa, Assistant Professor,
Iscte – Instituto Universitário de Lisboa

Co-supervisor:

Prof. Doctor Ricardo Jorge Castro de Correia, Assistant Professor,
UMA – Universidade da Madeira

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**BUSINESS
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Marketing, Operations and Management

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Abstract

In the 90's the Resource-Based View became the most prolific framework for value creation. Over time, markets revealed increasing levels of available technology and innovation, and the RBV was criticized for being too static and disregarding market dynamism. The Dynamic Capabilities View came to life as an enhancement of the RBV and became the most prolific research stream of the resource-based approaches. With most critics pinpointing definitional issues, contradictory interpretations, and tautological assumptions as issues to solve before the view could become a theory.

Having these shortcomings in mind, the research aim of this investigation is to identify sensing and seizing capabilities, knowledge repositories to yield these capabilities, capabilities reconfigured that can be considered dynamic capabilities and finally which of these capabilities evolved through exploitation and exploration processes. This dissertation lays the foundations in the creation of a model which has the fundamental constructs of sensing, seizing and reconfiguring capabilities complemented by exploration and exploitation concepts, organizational ambidexterity constructs. To assess the applicability of this model, through a qualitative approach method, a set of semi-structured interviews took place to Portuguese managers. On a more operational manner the outcome of these interviews defined a set of capabilities companies should attempt to have to properly sense, seize and reconfigure to develop dynamic capabilities. The main contribution to the field of strategy is the suggestion of a link between the two constructs of sensing and seizing, and exploration and exploitation, further research will potentially strengthen this understanding.

Key words: Sustainable Competitive Advantage; Resource-based Approach; Dynamic Capabilities; Organizational Ambidexterity; Sensing Seizing and Reconfiguring.

JEL classification:

- I230 Higher Education; Research Institutions.
- L1 Market Structure, Firm Strategy, and Market Performance.

Sumário Executivo

Na década de 90, a Visão Baseada em Recursos tornou-se na estrutura mais prolífica na compreensão da criação de valor. Com o tempo, os mercados revelaram níveis crescentes de tecnologia e inovação e a RBV foi criticada por ser estática e desconsiderar o dinamismo do mercado. A Visão das Capacidades Dinâmicas ganhou vida como aprimoramento da RBV e tornou-se na corrente de investigação mais promissora das abordagens baseadas em recursos. Com a maioria dos críticos sugerindo problemas de definição, interpretações contraditórias e suposições tautológicas como questões a serem resolvidas até que a visão possa ser considerada uma teoria.

Tendo estas lacunas em mente, o objetivo desta investigação é identificar capacidades de deteção e aproveitamento, repositórios de conhecimento para iterar estas capacidades, capacidades reconfiguradas consideradas capacidades dinâmicas e quais destas capacidades evoluíram através de processos de inovação e exploração. Esta dissertação lança as bases para a criação de um modelo que tem nos conceitos de capacidades de deteção, aproveitamento e reconfiguração o complemento dos conceitos de inovação e exploração, conceções de ambidestria organizacional. Para avaliar a aplicabilidade deste modelo, através de uma abordagem qualitativa, realizaram-se um conjunto de entrevistas semiestruturadas. Em termos operacionais, estas entrevistas definiram um conjunto de capacidades que as empresas deveriam possuir para detetar, aproveitar e reconfigurar adequadamente com o intuito de desenvolver capacidades dinâmicas. A principal contribuição para o campo da estratégia é a sugestão de uma ligação entre os dois conceitos de deteção e aproveitamento e inovação e exploração, investigações futuras irão potencialmente fortalecer este entendimento.

Palavras chave: Vantagem Competitiva Sustentável; Abordagem Baseada em Recursos; Capacidades Dinâmicas; Ambidestria Organizacional; Deteção, Aproveitamento e Reconfiguração.

Classificação JEL:

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Abbreviations List

CA – Competitive Advantage

DC – Dynamic Capabilities

DCV – Dynamic Capabilities View

OBJ – Objectives

Q – Question

RBV – Resource-Based View

SCA – Sustained Competitive Advantage

VRIN – Valuable, rare, imperfectly imitable and non-substitutable

VRIO – Valuable, rare, imperfectly imitable and organized

Chapter I - Introduction

1.1 Research background

Porter's positioning school (Porter, 1980) was probably the first universal approach to strategy. With great implications for firms in the 80's, it contributed with great development to the field of strategy and the economy. However, many American firms operating in cost-leadership were devastated by the entry of Japanese firms in the American auto industry, they operated in cost leadership as well but could deliver a considerable better-quality product. Porter defended that a firm should analyse the market and perceive the best positioning in order to be able to compete. This approach revealed itself destructive in the long term as companies only gained superior performance at detriment of its competitors. The Resource-Based View (RBV) defended an opposite approach, firms should look for their resources and capabilities in order to understand what markets to be part of and with what competences.

Strategy evolved and more perspectives came to light, most of which resource-based, the Dynamic Capabilities View (DCV) can be seen as an enhanced standpoint from the RBV (Eisenhardt & Martin, 2000) as it bears in mind market dynamism and the evolution and preponderance of technology. Current resource-based research integrates market dynamism and innovation requirements for sustainable growth of an ever so rapidly changing world, yet the struggle to be recognized as theory and the criticism associated to contradictory interpretations (Barreto, 2010), definitional issues (Wang & Ahmed, 2007) and tautological assumptions (Williamson, 1999) hold back the DCV from becoming the norm among strategies to value creation and sustained competitive advantage.

David Teece, reasonably the most influential researcher on the field of the DCV (Barreto, 2010) disaggregates dynamic capabilities in three primary clusters of activities, sensing, seizing and reconfiguring. The ability to perform on those three areas approximates companies from sustained competitive advantage when this companies find themselves in possession of dynamic capabilities. Sensing, seizing and reconfiguring were the foundation to an investigation model proposed in this master's thesis, besides this foundation organizational ambidexterity and the companies' ability to explore and exploit complement the DCV. Until now no other investigation model combined these two research streams in an effort to develop

an operational model to be of service to practitioners and to enrich the strategic management field.

1.2 Research objectives

The main research objective is to lay the first stone in the path to create a model which has both DCV and organizational ambidexterity as core differentiator among other value creation models. In this way this master's thesis looks to contribute to both management practitioners and scholars but also to contribute in the development of scientific knowledge in the field of organizational strategy. It is important to notice that this investigation is not aimed to be a representative study, therefore achieved conclusions should not be generalized. In order to achieve the proposed objectives this investigation pursues the following general objectives (OBJ):

OBJ1 - To understand how firms assess their future and if firms are aware of their resources and capabilities used to sense the market for opportunities.

OBJ 2 – To understand how firms seize market opportunities and if they are aware of the resources and capabilities used to seize opportunities necessary to grasp their future.

OBJ 3 – To understand how firms integrate knowledge, and if this process yields the sensing and seizing capabilities of the firm.

OBJ 4 – To understand what resources and capabilities firms possess that can be considered dynamic capabilities and of these dynamic capabilities which ones evolved through an exploitative processes and which ones through and explorative process.

1.3 Research structure

Following the introductory statement and in an effort to attain the aforementioned research purposes, the present thesis is divided into two main parts – the literature review (Chapters II to V) and an empirical study (Chapters VI to IX).

The literature review is composed by Chapter I that defines the Resource-Based View, clarifying the competitive advantage construct from the RBV perspective and some critiques to the view. Chapter III defines the Dynamic Capabilities View, distinguishes dynamic capabilities from ordinary capabilities and provides some empirical evidence supporting the DCV and some of its criticism. Chapter IV defines Organizational Ambidexterity, clarifies the

central tension associated with the research stream, enlist actions to achieve ambidexterity and provides empirical evidence as some of the major critiques associated with organizational ambidexterity. Finally, Chapter V defines sensing, seizing and reconfiguring among some processes and/or activities that underpin these capabilities.

The empirical study is composed by the theoretical approach in Chapter VI where the investigation model is designed, and research questions are enlisted. Chapter VII contains the methodology of the investigation model and the characterization of the sample of the 21 interviews performed. In Chapter VIII an analysis is conducted from the information gather in the interviews. Finally, Chapter IX presents the conclusion of this investigation, the contribution to state of the art, contribution to practitioners, the research limitations, and some suggestions for future research.

Chapter II – The Resource-Based View

2.1 Competitive Advantage from the Resource-Based View perspective

The Resource-Based View (RBV) is commonly known as an inside-out approach to strategy (Barney, 1991; Kraaijenbrink et al., 2010; Stonehouse & Snowdon, 2007), this is the core differentiator to Porter's Positioning School (Porter, 1979, 1980, 1985a). Resource-based approaches have their premise on the understanding that Competitive Advantage (CA), stems from the development of knowledge-based core competences through organization learning (Sigalas & Pekka Economou, 2013). These competencies are also referred as idiosyncratic firm resources and capabilities (Barney, 1991; Stonehouse & Snowdon, 2007; Wernerfelt, 1984).

Barney (1991) outlines firm resources as including “all assets, capabilities, organizational processes, firm attributes, information, knowledge, etc.” (p.206) that enable firms to pursuit and implement strategies that enhance efficiency and effectiveness (Daft, 2013). In that same paper Barney also distinguished firm resources in three groups. ‘Physical capital resources’ (physical technology, equipment, plant location, etc.), ‘human capital resources’ (knowledge, networking, training, management and staff, etc.) and ‘organizational capital resources’ (firm's planning, reporting structure and controlling, coordinating systems, ect.). Grant (1991) complements these three categories with financial, technological and reputational resources (Miller & Shamsie, 1996). One central purpose of the RBV and specifically the VRIO framework is to specify the conditions under which firm resources can be a source of sustained competitive advantage (SCA)(Barney, 1991, 1995).

There is no consensus on what leads to Competitive Advantage (Rumelt & Kunin, 2003), there are numerous definitions, some bearing different meanings (Sigalas & Pekka Economou, 2013). The difficulty to operationalize and measure performance owning CA makes most scholars define the concept in terms of firm performance (Ma, 2000). Although these two constructs are expected to be correlated, they are empirically different and Newbert (2008) in an attempt to operationalize the Resource-Based View, defined Competitive Advantage has “the degree to which a firm has exploited opportunities, neutralized threats and reduce costs” (p.756). Sustained Competitive Advantage describes the implementation of a value creation strategy, unique among current and potential competitors (Barney, 1991).

In order to develop Sustained Competitive Advantage (SCA), by RBV's reasoning (Barney, 1991, 1995), firm resources must be valuable, rare, imperfectly imitable and non-substitutable (VRIN). Prior research from Barney (1995), concludes that to be able to fully capitalize value, rareness and imitability firms' need to be organized to exploit these resources. This addition to the above VRIN resources makes the improved valuable, rare, imperfectly imitable and organized (VRIO) framework, extending the understanding of sustained competitive advantage (Barney, 1995).

The analysis of firms resources by the VRIO framework states that if the firm cannot derive value from a resource or bundle of resources then finds itself in a state of competitive disadvantage and should analyse the possibility to outsource the output of those resources. A firm finds itself in a state of competitive parity if its resources are valuable and rare but fail to be difficult to imitate and at last a firm achieves sustained competitive advantage when has valuable, rare, difficult to imitate resources and the ability to exploit them (Barney, 1995; Barney & Wright, 1998). Table 1 simplifies the identification of the firm's competitive situation by the evaluation of resources by the VRIO framework.

Table 1. Identification of sustained competitive advantage by the VRIO framework

Valuable?	Rare?	Difficult to Imitate?	Organizations' Capability to Exploit?	Competitive Implications
No				Competitive Disadvantage
Yes	No			Competitive Parity
Yes	Yes	No		Temporary Competitive Advantage
Yes	Yes	Yes	Yes	Sustained Competitive Advantage

Source: Adapted from Barney, 1998

2.2 Critiques of the Resource-Based View

As time passed and strategy evolved, the business environment became continuously more dynamic and the RBV approach was criticized for disregarding the influence of market dynamism, being considered to static (Eisenhardt & Martin, 2000), for not having meet empirical criteria in order to become a theory (Priem & Butler, 2001a), for being a sustainability theory and not a value creation theory (Priem & Butler, 2001b) and for having an ambiguous conceptualization of value that tuns it into a heuristic or tautology (Kraaijenbrink et al., 2010). Albeit the criticism Barney et al. (2011) defined the resource-based a theory and stated the resource-based theory to be “one of the most prominent and powerful theories for understanding organizations”, in the 20 years perspective it is also outlined that the theory has reached maturity and it is in a critical stage between decline or revitalization (Barney et al., 2011)

Aa a result of an analysis of 50 plus papers, Lopes da Costa and colleagues (forthcoming) define three main critics uncontested by Barney by the lack of theorisation and empirical evidence which weaken the supporting pillars of the RBV and CA appropriation from the application of the VRIO model. One of the critics is the unexplored relationship between different economic theories, the second aims to the poor exploration of the dynamic relations between resources and capabilities and the third the gap in the RBV literature about organizational culture and organization’s values as the incubation phase to create the dynamism necessary in the RBV assumptions. Lopes da Costa and colleagues suggest the inclusion of the concept of dynamic capabilities in the VRIO model in order to overcome the critics mentioned above.

Chapter III – The Dynamic Capabilities View

3.1 Dynamic Capabilities Definition

The Dynamic Capabilities View (DCV) can be seen as an improvement of the RBV, or spin-off (Barney et al., 2011), and even an evolutionary and enhanced interpretation (Eisenhardt & Martin, 2000), complementing the RBV's premise and shedding light into the field with empirical research (Wang & Ahmed, 2007), attempting to clarify the ability companies need to have in order to renew existing capabilities in a changing environment (Teece et al., 1997). The Dynamic Capabilities approach to value creation and sustainable competitive advantage is now one the leading perspectives in the field of strategic management (di Stefano et al., 2010; Schilke et al., 2018; Teece, 2019). According to Schilke (2018) the predominant DC approaches stand between (i) type of processes within Dynamic Capabilities (DC) – sensing, seizing and reconfiguring (Teece, 2007; Teece et al., 1997); (ii) the level of routinization of DC - (Winter, 2003); and (iii) the functional domain of application of DC - (Eisenhardt & Martin, 2000).

Teece et al. (1997) suggests that the ability to consecutively achieve new forms of competitive advantage is due to dynamic capabilities, where dynamic is the ability to “renew competencies so as to achieve congruence with the changing business environment” (p.515) and capabilities highlight the “key role of strategic management in appropriately adapting, integrating, and reconfiguring internal and external organizational skills, resources, and functional competences to match the requirements of a changing environment.” (p.515). Another leading perspective and seminal paper is that of Eisenhardt and Martin (2000) that define DC as “specific strategic and organizational processes” (p.1106), such as “product development, alliancing, and strategic decision making” (p.1106) creating value by controlling resources.

3.2 Ordinary Capabilities and Dynamic Capabilities

Capabilities are sets of integrated critical resources (Cardeal, 2012), or the capacity to employ them (Amit et al., 1993), firm specific and developed over time (Wang & Ahmed, 2007). According with Teece (2016) “an organizational capability is a resource that can be harnessed to produce a desirable outcome” (p.30) and Teece et al. (1991) distinguish capabilities between ordinary and dynamic. Ordinary capabilities are responsible for “operations, administration, and governance of the firm’s activities” (p.8) they could be “processes and routines” (p.8) or

“administrative coordination needed to get the job done” (p.8), these ordinary capabilities can be easily bought or augmented (Teece, 2019). Dynamic capabilities on the other hand helps firms respond to environmental changes by building, renewing and reconfiguring resources enabling innovation (Teece, 2019). Ordinary capabilities may help determine short-term success but are not a suitable indicator of future performance and sustained competitive advantage (Teece, 2019). Dynamic capabilities are harder to develop and require more time (Winter, 2003), they cannot be purchased but instead need to be developed (Teece, 2019). Table 2 differentiates ordinary capabilities from dynamic capabilities.

Table 2. Differences between ordinary capabilities and dynamic capabilities

	Ordinary capabilities	Dynamic capabilities
Purpose	Technical efficiency in business functions	Congruence with customer needs and with technological and business opportunities
Tripartite schema	Operate, administrate, and govern	Sense, seize, and transform
Key routines	Best practices	Signature (upgraded) processes
Managerial emphasis	Cost control	Entrepreneurial asset orchestration, leadership, and learning
Priority	Doing things right	Doing the right things
Imitability	Relatively imitable	Inimitable
Result	Technical fitness (static efficiency)	Evolutionary fitness (ongoing learning, capability enhancement, and alignment)

Source: Teece (2016)

Given the proximity among different approaches it becomes convenient to distinguish and to establish a hierarchy among resources and capabilities in the Dynamic Capabilities View (DCV). According to Wang and Ahmed (2007) resources with VRIN traits are considered zero order, these resources do not persevere over time in dynamic markets thus they cannot be source of SCA, capabilities *per se* are ‘first order’ and suggest improved performance, core capabilities, second order, are a bundle of resources and capabilities related to the core strategy

of the firm, but even core capabilities can be threaten by environment changes, which are common in dynamic markets, this makes the necessity for the distinction of a third order capability, the most significant, characterized by firms that have the ability of “renewal, reconfiguration and re-creation of resources” (p.36), these firms find themselves in possession of dynamic capabilities.

3.3 Empirical evidence and critiques of the Dynamic Capabilities View

Protogerou et al. (2011) findings suggest that DC underpin operational capabilities which in turn have a significant effect on performance, in both higher and lower levels of environmental dynamism (Protogerou et al., 2011). Wilden et al. (2013) findings suggest that the more organic an organization is structured the stronger the effect of DC on sales growth and financial solvency and other studies also found a positive correlation between organizational learning and performance through the mediating effects of DC (Hung et al., 2010) and between DC’s exploratory processes and performance (Prange & Verdier, 2011). Moreover, Karna et al. (2016) meta-analysis of 115 studies found that both ordinary and dynamic capabilities are closely associated and that one does not outweighs the other in its effects on performance, both in stable and changing environments, although they also found that environmental dynamism has a reinforcing effect on both types of capabilities.

The various interpretations of dynamic capabilities, some contradictory, disconnected (Barreto, 2010) and tautological (Williamson, 1999), suggest a definitional issue that was not yet been clarified (Wang & Ahmed, 2007). Winter (2003), suggests scepticism among scholars and states that dynamic advantage does not necessarily confer competitive advantage. Even though criticized the Dynamic Capabilities View is among the leading strategic perspectives in the field (di Stefano et al., 2010; Teece, 2019), albeit not yet as theory (Barreto, 2010) it makes a framework for value creation and firm sustainability in the changing market (Teece, 2019).

Chapter IV – Organizational Ambidexterity

4.1 Organizational Ambidexterity definition

Organizational ambidexterity has its roots in Duncan's (1976) seminal work, most scholars define ambidexterity as the firm's ability to pursue both exploitation and exploration (Adler et al., 1999; Kauppila, 2010; March, 1991; Raisch & Birkinshaw, 2008; Tushman & O'Reilly, 1996), although some describe it as the ability to engage in competing and opposing strategic routines (Simsek et al., 2009), or the ability to create new knowledge (exploration) at the same time as improving existing knowledge (exploitation) (Turner et al., 2013). Ambidexterity should be seen as a fundamental element in sustainable competitive advantage (O'Reilly & Tushman, 2008; Tushman & O'Reilly, 1996).

The Dynamic Capabilities View and the link between these capabilities and competitive advantage proposes an encouraging method to clarify organizational adaptation (O'Reilly & Tushman, 2008). O'Reilly and Tushman (2013) strengthen this understanding stating that organizational ambidexterity, whatever the structural configuration (sequential, structural contextual or cross boundary), "is reflected in a complex set of decisions and routines that enable the organization to sense and seize new opportunities through the reallocation of organizational assets" (p.17). Nosella et al. (2012) characterizes organizations as adaptive systems that need continuous reconfiguration of its activities and designs, suggesting that "ambidextrous organizations adapt their designs over time rendering the ambidexterity capability a dynamic capability" (p.460).

As exploitation and exploration routines are somewhat contradictory, the ability to find an equilibrium between them is an ambidextrous capability (March, 1991; O'Reilly & Tushman, 2008; Raisch et al., 2009). The relationship between exploitation and exploration is at the core of ambidexterity reasoning (Tushman & O'Reilly, 1996), exploitation embraces "business as usual", efficiency, execution, implementation, production and sales whereas exploration embraces flexibility, innovation, entrepreneurship, discovery and experimentation (March, 1991; Raisch & Birkinshaw, 2008; Tushman & O'Reilly, 1996). A trade-off paradox takes shape as exploitation and exploration are most of times contradictory activities (Adler et al., 1999; Lavie et al., 2010), yet firms cannot fully benefit from either activity without balancing both (Adler et al., 1999; Lavie et al., 2010; March, 1991; O'Reilly & Tushman, 2008).

According to March (1991) the ability to balance both “is a primary factor in system survival and prosperity” (p.71).

Lavie et al. (2010) stress the importance of defining exploration and exploitation “from the viewpoint of a given organization or unit” (p.115) as what is considered exploration activity to a company may already be an exploitation activity to another, as the latter could already possess and capitalize the knowledge or a particular technology that the former does not yet possess. As facilitators between altering from exploitation and exploration activities, Kauppila (2010), suggests “project management skills, job rotation, physical proximity and a shared customer-oriented culture as mechanisms that collectively improve collaboration and shared perceptions between the functions” (p.302), Adler et al. (1999) refer to meta-routines for systematizing creative processes and job enrichment schemes that empower innovation and flexibility among workers routine tasks as two mechanisms for reconciling efficiency (exploitation) and flexibility (exploration).

4.2 Central Tension – The Trade-off Paradox

As mentioned above, exploitation and exploration are capabilities, routines and activities or actions that appear to be contradictory and organizational tensions arise between electing one or the other or, when choosing both, which of them should involve more resources, this inherent conflict is known as ambidexterity central tension (Adler et al., 1999; O’Reilly & Tushman, 2013). Raisch and colleagues (2009) suggest “four closely interrelated ‘central tensions’” (p.685) that should guide companies’ efforts to achieve ambidexterity.

Choosing from differentiation versus integration is the first tension. Differentiation, also known as structural ambidexterity (O’Reilly & Tushman, 2008), is characterized by having different business units to exploit and to explore while integration is characterized by having a single business unit that does both (Raisch et al., 2009). Some scholars suggest that these two solutions should be considered as mutual exclusive (Ebben & Johnson, 2005; Giarratana & Fosfuri, 2007), others in a growing number propose that companies need to balance between differentiation and integration (Adler et al., 1999; Gulati & Puranam, 2009; Gupta et al., 2006). Raisch and its colleagues (2009) suggest that the ability to manage differentiation and integration among different exploitative and explorative activities is a crucial dynamic capability and make three important observations: (1) integration and differentiation are

complementary; (2) the balance between one another varies among tasks or activities; and (3) the tension between both requires continuing attention by managers.

The second tension stands between choosing from organizational versus individual level ambidexterity (Raisch et al., 2009), also known as contextual ambidexterity (O'Reilly & Tushman, 2013), which means creating the necessary structural mechanisms to enable ambidexterity. Inside a business unit an organization can become ambidextrous by having different teams performing exploitation and exploration (Adler et al., 1999) or even having in each team individuals allocated to different roles (Jansen et al., 2008). Smith and Tushman (2005) acknowledge the need from some managers at top management levels to be ambidextrous by integrating exploitative and explorative activities. Raisch and its colleagues (2009) make three important observations: (1) by performing both exploitation and exploration activities managers exhibit ambidexterity; (2) the context shapes the degree of this ambidexterity; and (3) cumulative personal ambidexterity influences organizational ambidexterity but is not limited to such.

The third tension arises by the choice of a static versus a dynamic approach, firms should choose between cycling periods of exploitation and exploration or choose to make it part of their ongoing process (Raisch et al., 2009). Eisenhardt and Brown 1998, Nickerson and Zenger 2002, Siggelkow and Levinthal 2003 suggest the former as an effective way to explore and exploit, which is also known as sequential ambidexterity. The majority and growing number of scholars outline ambidexterity as the simultaneous pursuit of exploitation and exploration (Gupta et al., 2006; Raisch & Birkinshaw, 2008) favouring a dynamic approach.

Opting from internal versus external ambidexterity, also known as cross-boundary perspective (Nosella et al., 2012), is the fourth and last proposed tension, firms should opt from keeping exploitation and exploration solely internal, from externalize one of them fully or opting from activities from one another (Raisch et al., 2009). Externalize ambidexterity could be done by establishing alliances or outsourcing (Holmqvist, 2004; Lavie & Rosenkopf, 2006; Nosella et al., 2012), this presumes internal and external knowledge across organizational boundaries processes enhancing ambidexterity thru synergies. When externalizing some activities firms should carefully analyse if these activities could be considered core routines (Winter, 2003) or key activities that compromise sources of sustainable competitive advantage.

Raisch and colleagues' (2009) findings suggest that from the four above perspectives, firms must find an equilibrium instead of choosing one in detriment of another, only then can an organization be considered truly ambidextrous, maximizing synergies and empowering their workers.

4.3 Achieving Ambidexterity

Empirical studies present robust evidence of positive performance effect via ambidexterity capability (Junni et al., 2013), although there is also significant research stressing the complications of achieving this dynamic capability (Lavie et al., 2010; Raisch et al., 2009) which indicates that little is known about ambidexterity evolution over time and its effects on long-term organizational performance (Luger et al., 2018).

Senior management teams and their individual ambidextrous capabilities are the focus of many scholars' recommendations on achieving ambidexterity, O'Reilly and Tushman (2004) stress the ability of senior teams and managers to be sensitive and understanding of different businesses and list attributes of cost cutting and entrepreneurship while preserving the objectivity necessary to make tough tradeoffs decisions as vital to ambidexterity success. Diversified experience within the teams also stimulates ambidexterity (Beckman, 2006), a common incentive system that promotes unity enhancing long-term collaboration (O'Reilly & Tushman, 2008) and a compelling and clear vision extremely well communicated to lower-levels by the senior teams (O'Reilly & Tushman, 2004) it is also crucial.

O'Reilly and Tushman (2004) suggest different alignments within exploitative and explorative business units, albeit suggesting structural ambidexterity as the best way to balance exploitation and exploration these different alignments between business strategy, competencies, culture among others serve a good illustration of the strategic alignment suitable for exploitation and exploration activities. Table 3 displays the different suggested alignments between exploitative and exploratory activities.

Table 3. Different alignments between exploitative and exploratory activities

Alignment of:	Exploitative Activities	Exploratory Activities
Strategic intent	Cost, profit	Innovation, growth
Critical tasks	Operations, efficiency, incremental innovation	Adaptability, new products, breakthrough innovation
Competencies	Operational	Entrepreneurial
Structure	Formal, mechanistic	Adaptive, loose
Controls, rewards	Margins, productivity	Milestones, growth
Culture	Efficiency, low risk, quality, customers	Risk taking, speed, flexibility, experimentation
Leadership role	Authoritative, top down	Visionary, involved

Adapted from: O'Reilly and Tushman (2004)

Although recognizing the preponderant role of senior teams and top management on an organization fitness to achieve ambidexterity recent research emphasizes bottom-up ambidexterity capabilities (Birkinshaw et al., 2016), as front-line managers generally have more direct contact to customers changing demands, operational difficulties and technological developments (Sheremata, 2000). Organizations and top-level management need to endorse feedback sharing by first-line managers as they represent ambidextrous opportunities (Zimmermann et al., 2015).

4.4 Empirical evidence and critiques of Organizational Ambidexterity perspective

Albeit demanding or difficult to achieve by organizations' management (Lavie et al., 2010; Raisch et al., 2009) when properly executed ambidexterity is associated with sustained competitive advantage (O'Reilly & Tushman, 2008). He and Wong (2004) based on a sample of 206 manufacturing firms found evidence to support the following hypothesis: "(1) the interaction between explorative and exploitative innovation strategies is positively related to sales growth rate, and (2) the relative imbalance between explorative and exploitative innovation strategies is negatively related to sales growth rate" (p.481) demonstrating the necessity to balance both exploitation and exploration. Lubatkin et al. (2006) based on a data

base of 139 small-and-medium-sized enterprises also found evidence that the simultaneous pursuit of exploitation and exploration to be positively related to firm performance.

O'Reilly and Tushman (2013) review article on the past, present and future of organizational ambidexterity offers a vast record of prior empirical research demonstrating a clear pattern between ambidexterity and sales growth, subjective ratings of performance, innovation, market valuation, and firm survival. They conclude that "in spite of using different measures of ambidexterity, a range of outcome variables, different levels of analysis, and samples from differing industries, the results linking ambidexterity to performance are robust" (p.6).

Prior research offers good insights on organizational solutions that enable ambidexterity, however these studies generally take a static approach (Raisch et al., 2009) therefore there is considerable research to be made to explain how ambidexterity evolves over time and how it will improve long-term performance (Luger et al., 2018). O'Reilly and Tushman (2013), as indicated above, offer a robust empirical research record, however they also state that "a number of ambiguities still exist that future research could productively clarify" (p.14), describing some confusion on the exact meaning of organizational ambidexterity and ambiguity in the meaning of terms exploitation and exploration (Nosella et al., 2012; O'Reilly & Tushman, 2013; Simsek et al., 2009) causing research to move away from the original phenomenon losing its meaning, and consistency in theory building (Simsek et al., 2009).

Zimmermann et al. (2018) reframed the organizational ambidexterity configurational perspective and suggest that future research should focus "less on the design of stable solutions than on the dynamic shaping and reshaping of organizational contexts to deal with persistent exploration-exploitation tensions" (p.741) and also on the better "understanding of frontline managers' role in shaping ambidextrous contexts, thus calling for a more integrative view of the systemic interplay between senior executives and frontline managers' actions in the pursuit of ambidexterity" (p.741).

Chapter V – Sensing, Seizing and Reconfiguring Capabilities

5.1 Introduction

According to Barreto (2010) review article Teece is plausibly the most influential researcher on the area of the DC. Teece (2007) suggested the disaggregation of Dynamic Capabilities (DC) in three primary clusters of activities (Teece, 2010b, 2017), “(1) to sense and shape opportunities and threats, (2) to seize opportunities, and (3) to maintain competitiveness through enhancing, combining, protecting, and, when necessary, reconfiguring the business enterprise’s intangible and tangible assets” (p.1319). This DC concept provides a more comprehensive framework to help understand firms value creation (Teece, 2010b) and is used in the majority of articles on the topic (Schilke et al., 2018). The DC concept through the ability to sense, seize and reconfigure (or transform) provides a ‘broader framework’ to support the understanding of firm value creation Teece (2010). The speed in which the firm’s resources are aligned and realigned through constantly sensing, seizing and periodically reconfiguring determines the strength of a firm’s dynamic capabilities (Teece, 2016).

Breznik and colleagues (2019) recognized six meta capabilities as the most value creating to information technology companies through the development of sensing seizing and reconfiguring activities according with Teece (2007) reasoning and disaggregation of the three clusters. These dynamic capabilities are “managerial capability as the primary capability that plays the dominant role in exploiting firm capabilities as dynamic capabilities; marketing capability; technological capability; R&D capability; innovation capability; and human resources capability” (p.6). Albeit being aimed for information technology companies, characterized for rapid changing environments (Bruni & Verona, 2009), this empirical investigation has practical implications for any industry.

5.2 Sensing

The ability to sense is associated with the firm’s entrepreneurial capability (Teece, 2019) to “identify and shape opportunities” (p.1322) (Teece, 2007) across markets, peripheral and non-peripheral (Nelson & Winter, 2002). In order to sense firms must understand demand, customer wants and needs, technological opportunities, market evolution and possible supplier

and direct and indirect competitors' responses (Teece, 2007). Teece (2007) also defines sensing new opportunities as a “scanning, creation, learning, and interpretive activity” (p. 1322).

Pavlou and El Sawy (2011) suggest “(i) generating market intelligence (Galunic & Rodan, 1998), (ii) disseminating market intelligence (Kogut & Zander, 1996), and (iii) responding to market intelligence (Teece, 2007)” (p.244) as the three basic sensing routines. Sensing also needs a balance between centralization and decentralization to allow and encourage feedback (O’Reilly & Tushman, 2008). According to Kump et al. (2019) firms with high sensing capability are able to reliably and continuously obtain outside strategically significant information from the environment, this includes best practices and competitors’ activities and market trends.

To develop and improve the ability to sense investment in R&D is crucial (Teece, 2007; Teece et al., 1997). Teece (2007) suggests the accessibility of “information and the ability to recognize, sense, and shape developments” (p.1323) as conditions to opportunity creation. Opportunity recognition is dependent on the individual’s capabilities and existing firm knowledge especially when it comes to customer needs, in both existing and innovative solutions (Teece, 2007). Table 4 illustrates, according with Teece (2010b) the clusters of sensing activities that help create and capture value.

Table 4. Sensing activities that help create and capture value

Creating Value	Capturing Value
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Spotting opportunities	Positioning for first mover and other advantages
Identifying opportunities for research and development	Determining desirable entry timing
Conceptualizing new customer needs and new business models	

Source: Teece, 2010b

Table 5 on a more specific manner Breznik et al. (2019) enlists the practices and/or activities that underpin the six meta capabilities shown above (point 4.1) through the sensing capability:

Table 5. Practices and/or activities that underpin the six meta capabilities through the sensing capability

Meta Capability	Underpinning practices and/or activities
Managerial capability	Managers practice and promote open communication. Managers are open to novelties. Systematic sensing of what is happening in the environment.
R&D capability	Activities to direct internal R&D. Networking activities are a vital part of gathering information about potential R&D partners/ projects, etc. Employees closely follow technological development and science and technology in general. On-going benchmarking.
Innovation capability	Innovation activities as a key and dominant part of business processes (non-formalised innovation processes that allow room for creativity and emergent innovation in dynamic IT industry). On-going industry benchmarking. Activities to identify customers and competitors' innovations.
Marketing capability	Networking activities are a vital part of gathering information about target markets, customers, etc. Employees understand their role within the marketing process. On-going industry and competitor benchmarking.
Human resources capability	Employees identify their knowledge deficit (at professional conferences, in collaboration with clientele, partners, universities, etc.).
Technological capability	Networking activities are a vital part of gathering information about technology trends in general. Employees closely follow technological development and new trends in the market area.

Source: Adapted from Breznik et al. (2019)

5.3 Seizing

After sensing there is the necessity to seize an opportunity, to make choices and investment (Teece, 2019) to address markets needs or gaps with new products, processes or services (Teece, 2007) in an effort to reach public acceptance and to shape or create a market. Seizing includes business model's implementation to satisfy customers and capture value (Teece, 2019) and may include building a new competence or identifying the proper external alliance to secure access to one (Teece, 2010b). Seizing requires the restoration of the existing operational capabilities with knowledge-based learning (Teece, 2007). According to Kump et al. (2019), firms have a high seizing capability if they are able to efficiently decide if some information has potential value, to transform potentially valuable information into concrete business opportunities and business models aligned with the firm's strengths and weaknesses and finally to make decisions accordingly.

To develop and improve the ability to seize it is crucial to get the timing right and to foster employee motivation and an accurate cultural alignment (Teece, 2019). O'Reilly and Tushman (2008) also stress the importance of leaders to craft vision and strategy to ensure the proper organizational alignment. As stated above business models are of particular importance, alongside with the design and performance specification they help firms delivering value and persuading customers to pay for it (Teece, 2007).

Teece (2007) defines the purpose of a business model as “ to ‘articulate’ the value proposition, select the appropriate technologies and features, identify targeted market segments, define the structure of the value chain, and estimate the cost structure and profit potential” (p.1329) (Chesbrough & Rosenbloom, 2002) and outlines the analysis of multiple alternatives, having a deep understanding of customer needs, analysing the value chain to understand how to deliver what the customer wants in a cost-effective and timely manner and adopting a relative perspective to outsourcing decisions as facilitating the design of a good business model. Table 6 illustrates, according with Teece (2010,) the clusters of seizing activities that help create and capture value.

Table 6. Seizing activities that help create and capture value

Creating Value	Capturing Value
----------------	-----------------

Investment discipline	Intellectual property qualification and enforcement
Commitment to research and development	
Building competencies	Implementing business models
Achieving new combinations	Leveraging complementary assets

Source: Teece, 2010b

Table 7 on a more specific manner Breznik et al. (2019) enlists the practices and/or activities that underpin the six meta capabilities shown above (point 4.1) through the seizing capability:

Table 7. Practices and/or activities that underpin the six meta capabilities through the seizing capability

Meta Capability	Underpinning practices and/or activities
Managerial capability	<p>Managers build, promote and nurture long-term partnerships with customers, partners and employees.</p> <p>Demonstrating leaderships. Recognising and designing mechanisms to capture value.</p> <p>Managers promote networking. Managers form special networking teams for straightforward and focused networking activities.</p> <p>Managers accept diversity and are open-minded.</p>
R&D capability	<p>Recognising and selecting the “right” market opportunity (tapping the potential synergy).</p> <p>On-going competitors benchmarking: searching for diversity and recognising/ selecting the “right” technology.</p> <p>Recognising new opportunities outside the firm’s boundaries.</p>
Innovation capability	<p>Time for creativity: the firm gives employees the time and space to think innovatively.</p> <p>Market-oriented innovations.</p> <p>Customers play an active part in innovation activities.</p>

	Recognising more innovative employees (the so-called stars).
Marketing capability	<p>Goal-oriented networking activities are a vital part of gathering information about target markets.</p> <p>Goal-oriented networking activities are a vital part of gathering information about clientele – additional projects, potential/new customers – new business projects, etc.</p> <p>Employees play an active part in marketing activities/ processes (especially employees working as business analysts and project managers): recognising the changing customers’ needs.</p>
Human resources capability	<p>Employees seize the lack of specific knowledge deficit.</p> <p>Test recruiting as a practice of identifying the “right” employees for their firm/environment.</p> <p>Employees’ self-directed learning: continuous in-house knowledge tests/ evaluations.</p> <p>Time for creativity: the firm gives employees the time and space to think innovatively.</p> <p>Effective communication (on-time, face-to-face and open communication).</p> <p>Utilising outside staff/human resources (more flexibility, inside-out knowledge transfer, outside-in knowledge transfer).</p>
Technological capability	<p>Networking activities are a vital part of selecting information and knowledge about key technology trends, strategic vendors/ suppliers’ strategies, etc.</p> <p>Employees objectively seize opportunities related to technological development and new trends and knowledge in the IT area.</p> <p>On-going technology benchmarking: recognising/ selecting the “right” technology and product architecture.</p>

Source: Adapted from Breznik et al. (2019)

5.4 Reconfiguring

Sensing and seizing capabilities lead to growth and profitability, which in turn will lead to the development of firm resources and assets, this firm success will be responsible for a path dependent evolution, and evolutionary fitness (Teece, 2007). The ability to recombine and reconfigure assets, is the key to a sustained growth (Teece, 2007). Transformation of the firm is required for “for creating (and capturing) value” (p696) (Teece, 2016). Kump et al. (2019)

consider firms to have a high reconfiguring capacity if consistently and effectively are able to implement “renewal activities by assigning responsibilities, allocating resources, and ensuring that the workforce possesses the newly required knowledge” (p.10)

As firms grow in size they prefer centralization which leads to the loss of flexibility and timely responsiveness (Teece, 2007), in order to develop and improve the ability to transform or reconfigure assets, firms should favour decentralization, which will approximate the market, customer and new technologies to the top management (Teece, 2007, 2019). Decentralization becomes especially important in cycles of business and technological uncertainty as firms may increase their competitive advantage if “top management is able to rapidly propagate a strategic vision at all levels of an organization that is sufficiently flexible to execute the new strategy effectively” (p.41) (Teece, 2016). Table 8 illustrates, according with Teece (2010,) the clusters of reconfiguring activities that help create and capture value.

Table 8. Reconfiguring activities that help create and capture value

Creating Value	Capturing Value
Achieving recombination’s’	Managing threats Honing the business model Developing new complements

Source: Teece, 2010b

Table 9 on a more specific manner Breznik et al. (2019) enlists the practices and/or activities that underpin the six meta capabilities shown above (point 4.1) through the reconfiguring capability:

Table 9. Practices and/or activities that underpin the six meta capabilities through the reconfiguring capability

Meta Capability	Underpinning practices and/or activities
Managerial capability	Managerial and leadership capabilities are being developed at all firm levels The firm builds on a winning strategic orientation – In the right place, at the right time, being the first mover.

Meta Capability	Underpinning practices and/or activities
	<p>Adapting/reconfiguring its business model.</p> <p>Attractive, simple and straightforward reward systems.</p> <p>Managers include key employees in the decision-making process.</p> <p>Building an appropriate organisational structure and culture: a flat, flexible and permeable organisational structure.</p> <p>A team-based work environment (shared goals, equal opportunities for all, treating all employees equally).</p> <p>The firm appoints a new management team.</p>
R&D capability	<p>Adopting new/improved knowledge and technologies and transforming them into market-oriented solutions (knowledge transfer).</p> <p>Improving the effectiveness of business processes.</p>
Innovation capability	<p>Establishing a group of more innovative employees (the so called “innovation team”): innovation as a natural part of the business and their work.</p> <p>Transforming new ideas into new/ improved market-oriented innovations.</p> <p>Stimulation/development of creativity and innovation.</p> <p>Well-defined and accepted reward systems.</p> <p>Reward systems with non-financial benefits, e.g. extra holiday time.</p>
Marketing capability	<p>Constantly improving customers’ loyalty and satisfaction.</p> <p>Constantly establishing, building, promoting and nurturing longterm partnerships with key customers, partners, employees and competitors.</p>
Human resources capability	<p>Human resource strategy is clearly defined and communicated.</p> <p>Knowledge and experiences transfer.</p> <p>Established mentorship at the corporate level.</p> <p>Internal learning system: promoting the transfer of knowledge between the older and more experienced employees and the younger and less experienced employees.</p> <p>Established practice of learning by doing and learning from failures.</p>
Technological capability	<p>Reconfiguring the resource base: new and improved products/services in line with technological development and market demands.</p> <p>Know-how integration</p>

Source: Adapted from Breznik et al. (2019)

Chapter VI – Theoretical Approach

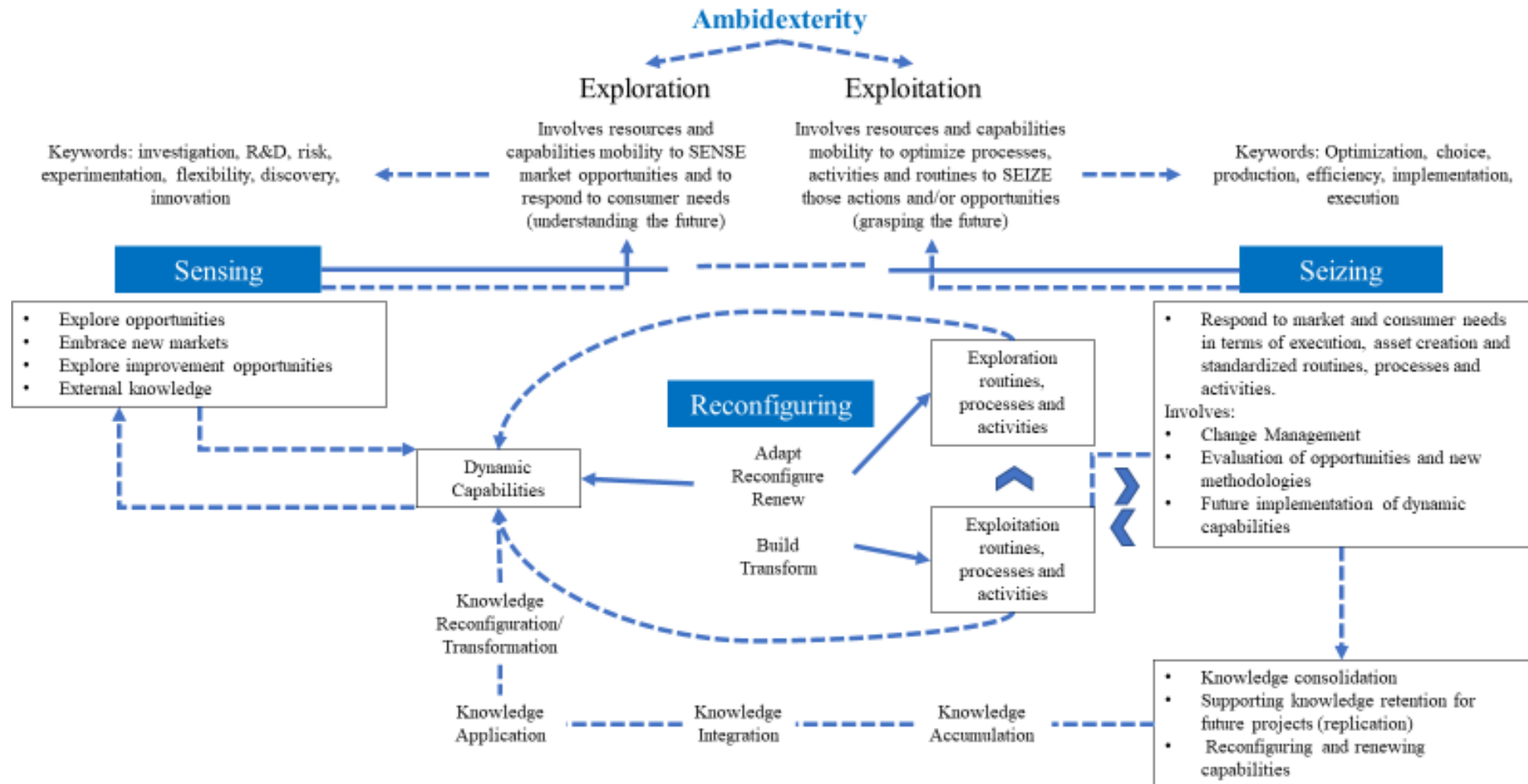
In agreement with the literature review elaborated in chapters II, III, IV and V of the present dissertation, there were various viewpoints, frameworks and theoretical standpoints of several authors studied in respect to the Resourced-Based View, the Dynamic Capabilities View, Organizational Ambidexterity and the Sensing, Seizing and Reconfiguring capabilities. As result of this investigation, several research questions emerged that will be addressed in the following chapter aimed to understand the applicability of an investigation model using Sensing, Seizing and Reconfiguring capabilities and Organization Ambidexterity as foundation stones.

One of the core purposes of the Strategic Management field is to understand why some firms outperform others and how could that serve as learning to both scholars and managers. In the 80's Porter was probably the most influential researcher with seminal works on competitive strategy (Porter, 1979, 1980) and competitive advantage (Porter, 1985a), by is reasoning firms should look to their competitors and position themselves accordingly, latter known as an outside-in approach to strategy. Barney (1986, 1991, 1995) developed a resourced-based approach the Resource-Based View (RBV), also known as an inside-out approach to strategy, that became prominent through the years.

Over time the RBV became criticized for being too static and disregarding market dynamism (Priem & Butler, 2001a, 2001b). The Dynamic Capabilities View followed as an evolutionary and enhanced interpretation of the RBV (Eisenhardt & Martin, 2000), the most noticeable contributor of this research stream is David Teece (Barreto, 2010) with his seminal works on the dynamic capabilities and their microfoundations (Teece, 2007; Teece et al., 1997). The research on Dynamic Capabilities had an exponential growth from 2000 to 2012 becoming is one of the most prolific streams of research within the field of strategic management for the last two decades (Albort-Morant et al., 2018), one of the major critiques and future research calls to address in this subject area is the antecedents or drivers, outcomes and the organizational and managerial processes underlying dynamic capabilities (Albort-Morant et al., 2018; Cepeda & Vera, 2007; Teece, 2007).

According with the stated above, an investigation model shown in figure 1 is presented, leading to four investigation questions that follow:

Figure 1. Conceptual Sensing, Seizing and Reconfiguring Model



Teece (2007) identified the ability to Sense to be related to the firm's entrepreneurial capability to identify and shape opportunities in order to understand customer wants and needs, technological opportunities, market evolution and competitors' responses to the firm's attempt to grasp these opportunities. As seen in chapter V point 5.2, Teece (2010b) suggests value creating and value capturing sensing activities and Breznick et al. (2019) enlist, practices and/or activities that underpin firms' capability to sense. Kump et al. (2019) suggested that firms with high sensing capabilities are able to obtain strategically significant information from the environment, including best practices and competitors' activities and market trends. This takes us to the first research question on what resources and capabilities a firm requires in order to Sense.

Q1 – If existing, what resources and capabilities firms use to sense market opportunities and answer consumer needs? (understanding the future)

After sensing there is the need to have the right structure in place to seize an opportunity, this includes making choices and investment (Teece, 2017) to address market needs or gaps with products or services in an effort to reach public acceptance (Teece, 2007). Seizing includes business models implementation and building new competencies or identify an appropriate external alliance to secure access to one, requiring the restoration of operational capabilities with knowledge-based learning (Teece, 2007). As seen in chapter V point 5.3, Teece (2010b) suggests value creating and value capturing seizing activities and Breznick et al. (2019) enlist, practices and/or activities that underpin firms' capability to seize. Kump et al. (2019) suggested that firms with high seizing capabilities are able to efficiently decide if some information has potential value, to transform potentially valuable information into concrete business opportunities and business models. This leads us to the second question on what resources and capabilities a firm requires in order to Seize.

Q2 – If existing, what resources and capabilities firms use to optimize processes, activities and routines to seize those actions and/or opportunities? (grasping the future)

March (1991) seminal paper suggests that learning increases organizational performance which will lead to competitive advantage enhancement. Eisenhardt and Martin (2000) support that knowledge management has every characteristic to be considered a dynamic capability and

Teece (2019) advocates “sensing, seizing, and transforming capabilities of managers and their organizations bring learning and leadership onto the stage” (p.20), this means that firms to be able to effectively recombine, reconfigure and transform first need to sense and seize accurately, capabilities which will be enhanced by organizational learning and knowledge management (Teece, 2007). This leads us to the third research question on the types of knowledge repositories firms’ have that yield sensing and seizing capabilities.

Q3 – If existing, what type of knowledge repositories firms have to optimize activities and/or routines in order to accumulate and integrate knowledge so that firms can afterwards yield the process described in Q1 and Q2?

Innovation assures organizational fitness and sustainability (O’Reilly & Tushman, 2008), requiring firm’s to have the capability to on an ongoing basis sense, seize and reconfigure, this process is the core of the dynamic capabilities concept (Teece, 2007, 2010b). As seen in chapter V point 5.4, Teece (2010b) suggests value creating and value capturing reconfiguring activities and Breznick et al. (2019) enlist, practices and/or activities that underpin firms’ capability to reconfigure. Kump et al. (2019) suggested that firms with high reconfiguring capabilities are effectively able to implement renewal activities, allocating resources, assigning responsibilities and ensuring the collaborators possess the newly required knowledge. In their seminal paper O’Reilly and Tushman (2008), explained how an ambidextrous firm’s ability to exploit and explore acts as a dynamic capability and in 2013 they strengthen this understanding suggesting that ambidexterity enabled the ability to sense and to seize opportunities. This leads us to the fourth and last research question on what capabilities were object to adaptation throughout time and can be characterized as dynamic capabilities, and which of these dynamic capabilities went through this adaptation process evolving exploration or exploitation routines, processes and activities.

Q4 – What capabilities firms have been object to adaptation, renovation, recombination and reconfiguration that can be described as Dynamic Capabilities? Which of these dynamic capabilities went through this adaptive evolution from routines, processes and activities evolving Exploration? Which of these dynamic capabilities went through this adaptive evolution from routines, processes and activities evolving Exploitation?

Chapter VII - Methodology

7.1 Investigation Model

The research methodology is a discipline derived from logic and its object is the study of the scientific method (Tarski, 1977). Therefore, one can assume that the scientific process or method is a set of practices employed and approved by the scientific community as valid for exposition and confirmation of a given theory. In this sense, and considering the research classification criterion proposed by Vergara (2006) and Vilelas (2009), there are two ways in which we can classify the methodology used in the design of research documents: as to the goals and as to the means. In this case the goals refer to the exploratory and applied research, while the means are linked to investigation on the field and bibliographic research.

The present investigation was based on a pragmatic or inductive¹ character, and was conducted from a non-probabilistic sample for convenience² constituted according to the availability and accessibility of the elements addressed (Carmo, H. & Ferreira, 2008), in this case, through the application of 21 interviews to CEOs and directors (former and in activity), team leaders, managers and associates of several industries ranging from SMEs to multinational firms. However, it is important to note that these interviews were of intentional nature for the purposes of constituting the sample since the participants that best represented the phenomenon investigated in terms of knowledge and experience were selected. Although the sample is considered above satisfactory, the conclusions of this dissertation must be read with due care given the impossibility of making generalizations, this factor is presented as the main limitation of this investigation, with due caution that generalization was also not a primary objective.

¹ It is not intended to reach conclusions from equally true premises (deductive method), but only, by means of induction, to measure a set of social phenomena under study in order to obtain a set of probabilities that allow comparisons to be made and to discover existing relationships between them.

² This type of sampling is not representative of the population. It occurs when participation is voluntary, or the elements of the sample are chosen for the sake of convenience. In this case, the sampling process was made up of a set of individuals who were asked to answer a set of interview questions. That is, the sample was constituted by the elements that collaborated, and therefore cannot be representative, so the results of this investigation have to be read with caution in order to be able to infer to the general population.

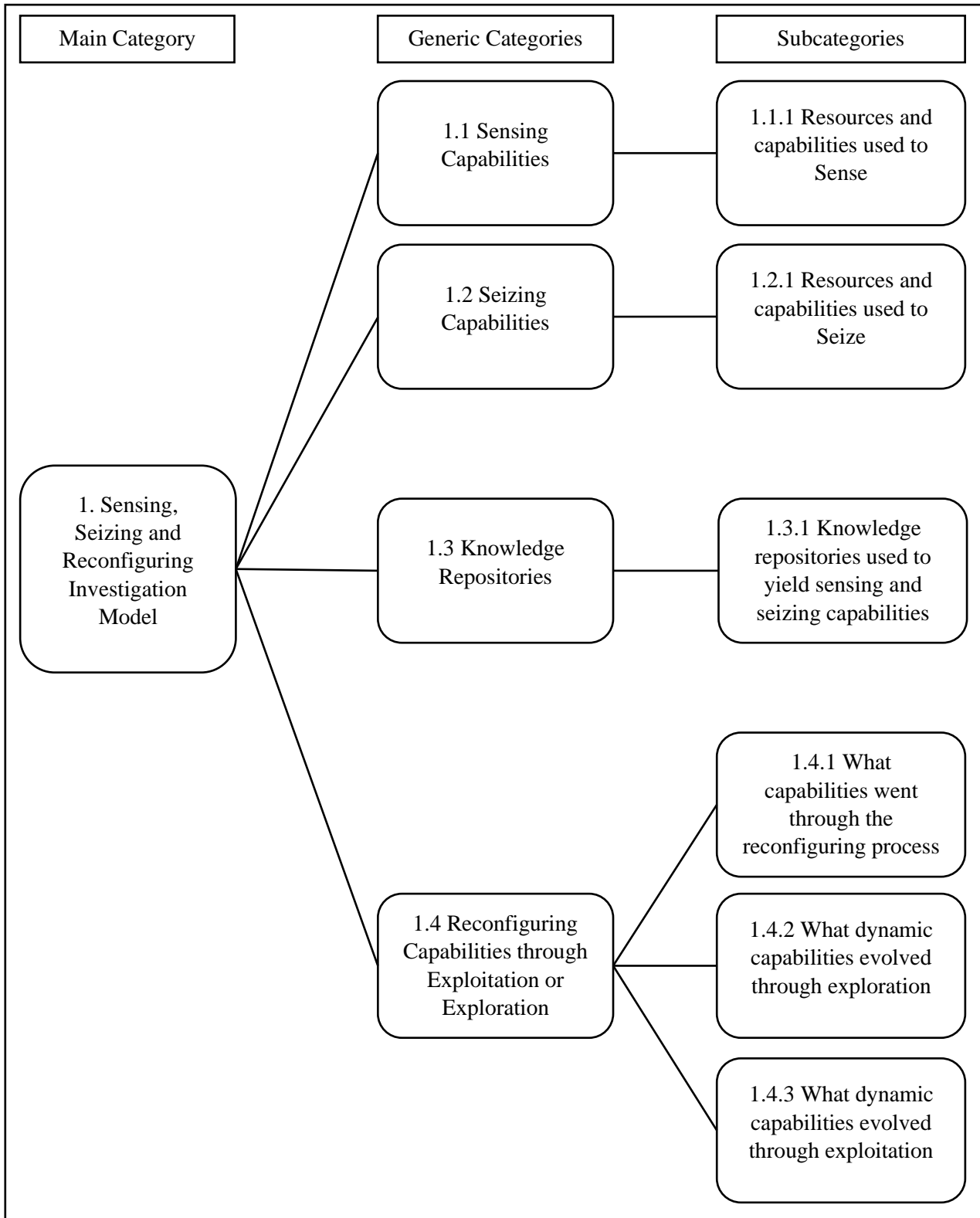
The applied character resulted from an attempt to investigate a contemporary phenomenon in the context of real life (Yin, 2014), which was assisted by the presentation of an exploratory aspect, given the inexistence of great systematized knowledge about the subject of an investigation model of sensing, seizing and reconfiguring complemented with organizational ambidexterity. Regarding the purpose of classifying some concepts and generating new ideas and knowledge on the topic, these will only be possible to be found through the search for causes for certain effects found (internal validity). As far as the research means are concerned, the present investigation was based on a set of primary sources on the form of semi-structured interviews to management employees, and from secondary sources, through bibliographic research and information processing, included in the systematic study developed in books, magazines, scientific articles and electronic networks.

In terms of the qualitative methodology used, the sample resulted from the analysis of 21 interviews with managers varying from business leaders, directors, team leaders, managers and associates, with the purpose being to measure the phenomenon under study in terms of the social, individual and holistic dynamics of the human³ being framed in the thematic of sensing, seizing and reconfiguring capabilities investigation model, trying to understand the meaning that people attribute to the phenomena analysed, rather than having people trying to interpret them, this is because actions, words and gestures can only be understood in their context, trying to live the reality of that same context, so that it is possible to analyse the information in an inductive way, which is only possible from the observation, collection and analysis *in loco* of the scientific facts (Vilelas, 2009).

In terms of the qualitative analysis technique used to interpret the data produced in the interviews the data analysis program MAXQDA 2020.4.1 was used, this translated into a content analysis, trying to relate the semantic of the statements, in order to articulate the surface of the transcripts with the factors that determine their characteristics [(psychosocial variables, cultural context, context, processes and reproduction of the message) - (Duriiau et al., 2007)]. Figure 2 shows the categorization and coding of the *corpus* of the interview that gave rise to the qualitative analysis.

³ Assuming the fundamental understanding of the human being as indivisible and in continuous interaction that cannot be analysed through isolated activities.

Figure 2. Categorization and coding of the corpus of the interview for the qualitative analysis



Source: Author's elaboration

From the reproductions of voice, documented later in written texts, the process of making explicit the content of the messages, systematized and expressed, promoted by the content analysis, was organized in accordance with the three chronological poles of Bardin (2011), that is, in a first phase giving way to the organization and systematization of ideas, in a second in which all the material was explored, and in the end the treatment and the respective interpretations of the results obtained were carried out.

Given the objectives of this thesis, it must be mentioned that the interviews were the most appropriate method of collecting information, because although the analyses may be implicit in a certain degree of subjectivity associated with the answers given, it is a method that allows social actors themselves to provide data on the phenomenon under study (Carmo and Ferreira, 2008). In terms of the 21 interviews carried out, although it is implicit in a framework recognized by Vilelas (2009) as above what is considered acceptable (between 15 to 20) which ends up offering a decent degree of confidence.

It should also be noted that the semi-structured interview technique used was developed based on a range of pre-conceive questions, although implied in an adaptable and non-rigid character, almost always allowing the conversation to take place in a fluid way (Carmo, H. & Ferreira, 2008). In other words, although the questions were previously prepared, most of the following questions were generated as the interview took place, allowing the interviewer and the interviewees the flexibility to deepen or confirm certain data, whenever necessary. It was, therefore, a planned interview, but with a spontaneous, flexible and informal character, which allowed the collection of many and important data that generates quantitative and qualitative information (Werr & Styhre, 2002). Therefore, interviews were associated with the spontaneity factor, implicit in a more informal character, although conducted through a list of points of interest in a pre-structured script. Assuming this, whenever the interviewee addressed the topics mentioned, the dialogue was flowing at ease (Carmo, H. & Ferreira, 2008).

The choice of this type of interview therefore had as advantage its little formalization and great flexibility that allowed a deeper and richer dialogue, capturing not only the responses to the selected topics and the attitudes, values and ways of thinking of those who were interviewed, but also the collection of many important data generating information that could arise spontaneously. On the other hand, it also had the advantage that there was no need for a uniform collection of quantified and comparable data from all respondents, which meant that it was not

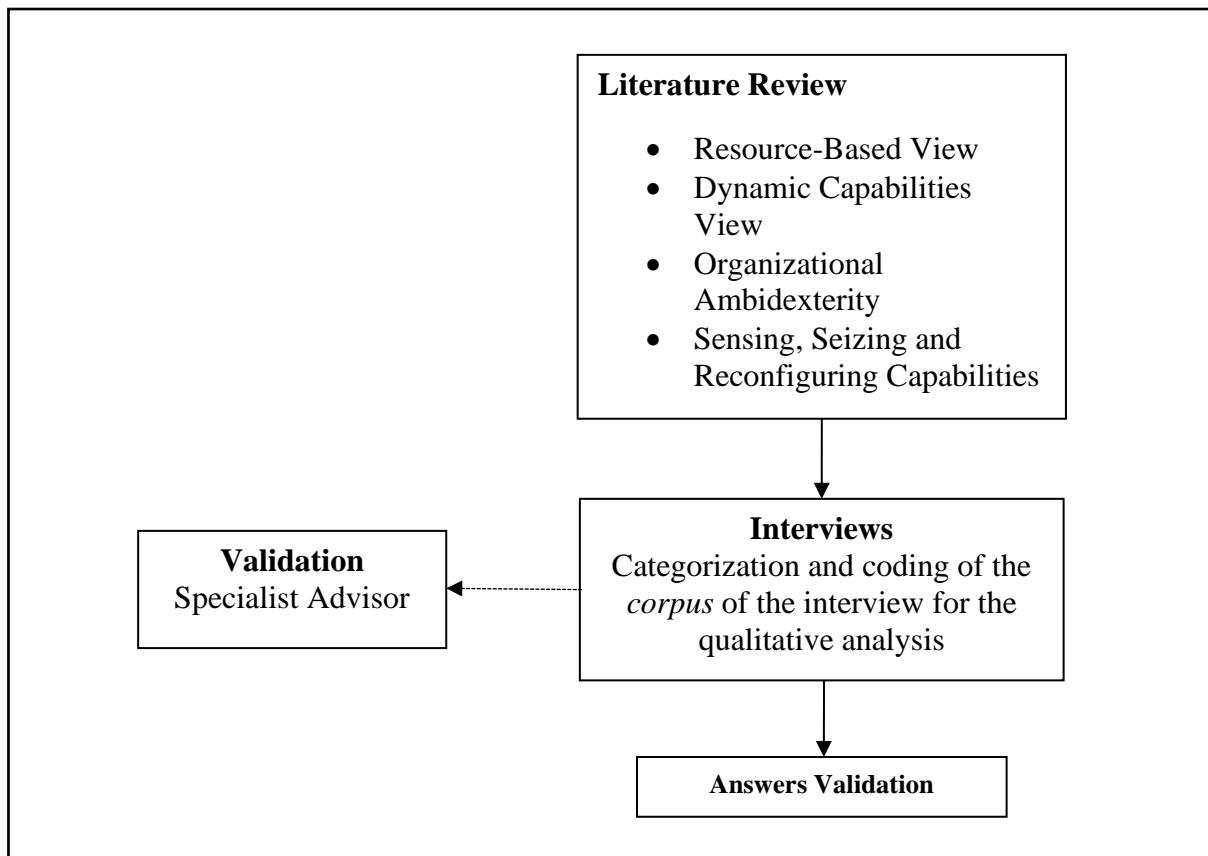
necessary to use strict criteria that in many cases impair the depth of the investigation (Vilelas, 2009).

In terms of disadvantages, due to its heterogeneity in terms of responses obtained, as mentioned in the previous paragraph, there was in fact some difficulty in grouping and comparing responses whenever it was necessary to make this same comparison, which in turn validated some difficulty in synthesizing the data (Vilelas, 2009).

Succinctly; the first stage of this investigation went through bibliographic research and treatment of information; the second, by transferring the theoretical construct to the field of observation in order to obtain the best possible confidence in terms of results; the third, for fieldwork and for collecting information from data resulting from interviews and; finally, the fourth, which consisted of a qualitative analysis of the data, from the information reproduced in audio from the interviews, which resulted in the construction of new theoretical conceptual approaches combined with empirical data within the scope of the theme inherent to the sensing, seizing and reconfiguring capabilities of firms through the application on the research model.

With regard to external validity, that is, the possibility of generalizing the results found to other contexts or samples, this study reinforced some of the existing theory regarding the dynamic capabilities view and the sensing, seizing and reconfiguring capabilities and its microfoundations, allowing contextual analyses to be carried out in the future by comparing results between different firms and organizational strategy scholars in this field of research. figure 3 illustrates the research model used in this study.

Figure 3. Design of the research model



Source: Author's elaboration

On table 10, it is possible to analyse the relationship between the objectives of the study, the research questions elaborated in the chapter of the theoretical approach and the respective connection with the literature review previously done.

Table 10. Analysis model relating the objectives of the study with the research questions and with the literature review.

Purpose	Research Question	Literature Review
OBJ 1 – To understand how firms assess their future and if firms are aware of their resources and capabilities used to sense the market for opportunities.	(Q1). If existing, what resources and capabilities firms use to sense market opportunities and answer consumer needs? (understanding the future)	(Breznik et al., 2019; Kump et al., 2019; Teece, 2019)
OBJ 2 – To understand how firms seize market opportunities and if they are aware of the resources and capabilities used to seize opportunities necessary to grasp their future.	(Q2). If existing, what resources and capabilities firms use to optimize processes, activities and routines to seize those actions and/or opportunities? (grasping the future)	
OBJ 3 – To understand how firms integrate knowledge, and if this process yields the sensing and seizing capabilities of the firm.	(Q3). If existing, what type of knowledge repositories firms have to optimize activities and/or routines in order to accumulate and integrate knowledge so that firms can afterwards yield the process described in Q1 and Q2?	Gap in the literature
OBJ 4 – To understand what resources and capabilities firms possess that can be considered dynamic capabilities and of these dynamic capabilities which ones evolved through an exploitative processes and which ones through and explorative process.	(Q4). What capabilities firms have been object to adaptation, renovation, recombination and reconfiguration that can be described as Dynamic Capabilities? Which of these dynamic capabilities went through this adaptive evolution from routines, processes and activities evolving Exploration? Which of these dynamic capabilities went through this adaptive evolution from routines, processes and activities evolving Exploitation?	Gap in the literature

Source: Author's elaboration

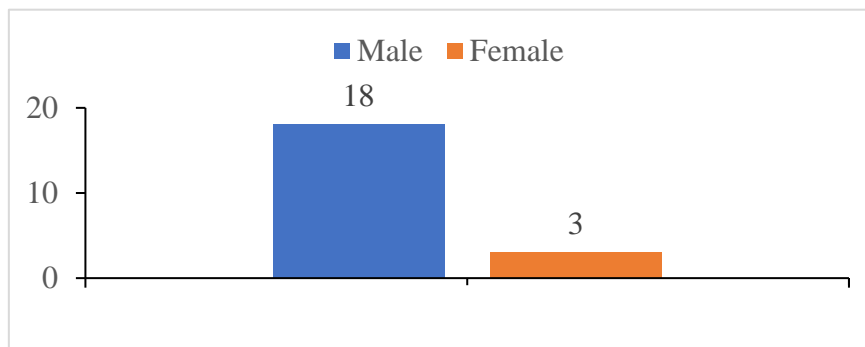
7.2 Sample

This investigation was based on a set of primary sources, from 21 semi-structured interviews with open questions to CEOs and directors (former and in activity), team leaders, managers and associates of several industries ranging from SMEs to multinational firms, which were later submitted to an extensive content analysis. This scope was intended to capture employees who had some relationship with top management positions and whose responsibilities could, in some way, contribute to the present study. Given the characteristic of my professional relationship with the interviewees, it was possible to obtain data with a wider scope and disparity in the functions of employees and not restricted to a specific industry or role, allowing for a more transversal information gathering.

First, an analysis of all variables that could statistically objectively characterize the sample was carried out, especially regarding its demography, age group, gender, educational background and role in the organization in order to understand the existing sample with regard to its nature and the dimension of experience and professional knowledge (Provdanov & Freitas, 2013). Finally, a content analysis of the responses was carried out, in order to obtain analytical data that would later allow theoretical and empirical conclusions to be drawn.

As shown in figure 4 Of the 21 interviews carried out, 18 (87,4%) were made to male elements and 3 (14,3%) to female elements,

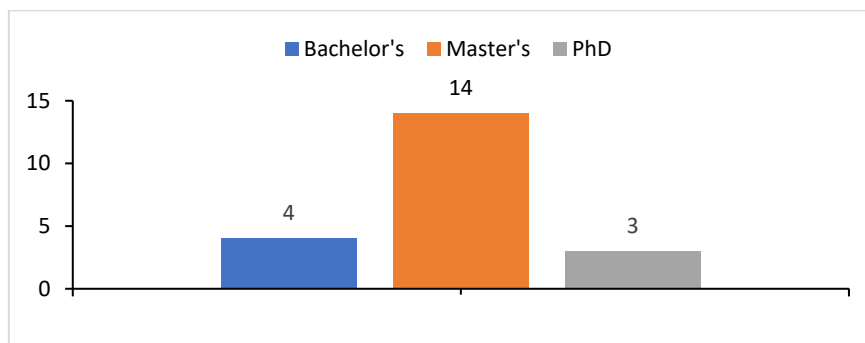
Figure 4. Distribution of respondents by gender



Source: Author's elaboration

With regard to academic background, the entire sample has higher academic qualifications, as shown in figure 5.

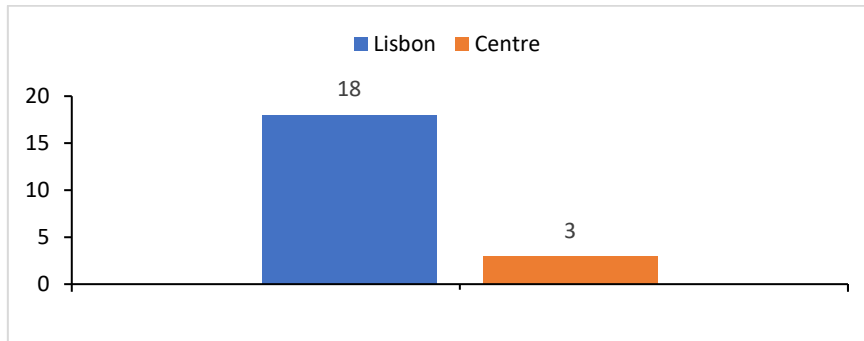
Figure 5. Distribution of respondents by academic background



Source: Author's elaboration

Regarding geographic location, it is possible to see in figure 6 that only 3 interviewees are based outside Lisbon metropolitan area.

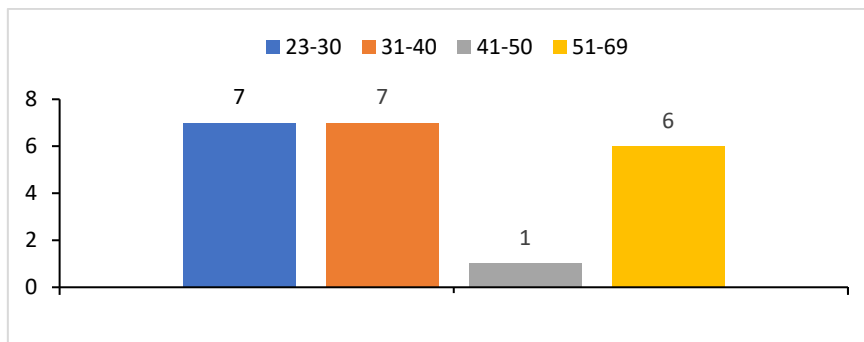
Figure 6. Distribution of respondents by geographic area



Source: Author's elaboration

With regard to age of the interviewees, as shown in figure 7, there was a higher prevalence in the 23-30, 31-40 and 51-69 age groups.

Figure 7. Distribution of respondents by age



Source: Author's elaboration

Chapter VIII – Analysis and Results

8.1 Resources and capabilities used to sense the market and answer consumer needs

In this first question the aim is to understand what resources and capabilities are used by the companies in which the interviewees are employed to sense the market in order to be able to answer consumer needs and to pursue opportunities. Interviewees were asked to describe the process by which their firm acquired knowledge about the market so as to sense opportunities, followed by the question of what resources and capabilities did the interviewee acknowledge is firm to have that yielded this process. As table 11 demonstrates the majority of the respondents, 14 (66,7%), identified the capacity to deliver quality feedback and field knowledge of commercials gained through their experience on a daily-basis and from customer interaction, as well as the capacity to properly analyse market data (also 14 interviewees) as the most valuable capacities to sense the market. It is also relevant to mention the capacity to correctly analyse the company's environment in order to anticipate threats, market trends, and consumers behavioural changes, identified by 13 (61,9%) interviewees, and the capacity to accurately benchmark so that the company can respond to its competitors, identified by 12 (57,1%) interviewees, as prominent capacities to sense the market.

Table 11. Possible resources and capabilities used to sense the market

Transcript	Generic Category	Subcategory	Times Repeated	Interviewees
Field knowledge shared by commercial teams throughout the hierarchy	1.1	1.1.1	14 (66,7%)	1,3,5,6,8,10,12,13,14,16,17,19,20,21
Market data analysis	1.1	1.1.1	14 (66,7%)	1,4,5,6,8,9,11,12,14,16,17,19,20,21
Environmental analysis	1.1	1.1.1	13 (61,9%)	4,6,8,10,11,12,13,14,15,16,17,18,21

Benchmarking	1.1	1.1.1	12 (57,1%)	2,3,7,9,10,11, 13,17,18,19,2 0,21
Ad-hoc market studies by third parties	1.1	1.1.1	9 (42,9%)	1,2,4,7,11,16, 17,18,19
Cultural Alignment	1.1	1.1.1	6 (28,6%)	1,2,4,6,9,11
Financial Resources	1.1	1.1.1	6 (28,6%)	1,3,4,9,18,19
Diversity – synergies thru different backgrounds	1.1	1.1.1	4 (19,0%)	9,11,15,21
Investigation as a business unit (organizational structure)	1.1	1.1.1	4 (19,0%)	1,3,9,11
Independent research units	1.1	1.1.1	3 (14,3%)	3,7,9
National and international tradeshows and events	1.1	1.1.1	2 (9,5%)	6,10
Ambidextrous design – investigation departments of different business units	1.1	1.1.1	1 (4,8%)	3

Source: Author's Elaboration

As mentioned in chapter V Kump et al. (2019) suggest that firms that can reliably and continuously obtain outside strategically significant information from the environment including best practices and competitors' activities and market trends have a high sensing capability. Our findings corroborate Kump et al. (2019) suggestion as field knowledge shared by commercials, market data analysis, environmental analysis and benchmarking are capabilities aimed to develop information about best practices and competitors' activities and market trends. Our findings also go in line with several Brezniz et al. (2019) set of suggested activities (see table 5 in point 5.2) that underpin firm's sensing capability.

8.2 Resources and capabilities used to seize the market and answer consumer needs

In this second question the aim is to understand what resources and capabilities are used by the companies in which the interviewees are employed to seize market opportunities with novel solutions, products and/or services. Interviewees were asked to describe the process by which their firm's seized opportunities, followed by the question of what resources and capabilities did the interviewee acknowledge is firm to have that yielded this process. As table 12 demonstrates 13 interviewees (61,9%) identified an accurate timing when pursuing an opportunity whether it translates into the appropriate moment to enter/create a market, employing or developing a technology/solution and having the appropriate resources (analysis of resources vs available opportunities was also mentioned 7 times) as the most valuable capacity to seize opportunities. It is also relevant to mention the human resources capacity, answered by 11 (52,5%) interviewees, which means to have the best people and the best team allocated to the right role/project, and 10 respondents identified the company's perceived expertise in several or particular areas or fields as important to seize opportunities.

Table 12. Possible resources and capabilities used to seize opportunities

Transcript	Generic Category	Subcategory	Times Repeated	Interviewees
Timing	1.2	1.2.1	13 (61,9%)	4,5,6,9,10,11, 12,13,14,16,17,19,20
Human resources – the right roles for the right people, the right team	1.2	1.2.1	11 (52,4%)	1,4,5,6,7,8,11, ,12,13,15,18
Perceived expertise	1.2	1.2.1	10 (47,6%)	3,4,6,12,13,14, 4,15,19,20,21
Financial resources	1.2	1.2.1	8 (38,1%)	2,7,9,11,16,17, 8,19,20
Analysis of opportunities vs available resources	1.2	1.2.1	7 (33,3%)	2,5,9,10,14,15, 8,19
Project management	1.2	1.2.1	7 (33,3%)	3,5,7,9,11,12, 14

Reputation	1.2	1.2.1	7 (33,3%)	4,10,12,15,18 ,19,20
Consumer feedback and pilot testing	1.2	1.2.1	5 (23,8%)	8,10,11,16,17
Heavy focus on training	1.2	1.2.1	5 (23,8%)	6,9,11,15,20
Risk taking culture	1.2	1.2.1	5 (23,8%)	1,2,9,15,16
Seminars, talks and workshops	1.2	1.2.1	5 (23,8%)	6,8,10,11,17
Short, medium, and long-term planning	1.2	1.2.1	5 (23,8%)	1,8,11,15,18
Pricing	1.2	1.2.1	4 (19,0%)	4,17,20,21
Supplier relationship (long term)	1.2	1.2.1	4 (19,0%)	5,10,13,21
High error tolerance by management	1.2	1.2.1	3 (14,3%)	1,5,11
Physical Network (point of contacts)	1.2	1.2.1	3 (14,3%)	5,10,13
Research units	1.2	1.2.1	3 (14,3%)	3,9,11
Cultural alignment	1.2	1.2.1	2 (9,5%)	1,9
Strategic alignment	1.2	1.2.1	1 (4,8%)	2

Source: Author's Elaboration

These findings support Teece (2019) suggestion that to develop and improve the ability to seize it is crucial to get the timing right and to foster employee motivation and an accurate cultural alignment. Although no interviewee identified employee motivation *per se* it could be argued that nourishing a talented human resources capability approximates employees for an ideal level

of motivation, it is also important to notice that cultural alignment was also identified by interviewees albeit only 2 times.

8.3 Knowledge repository types utilized by the company to yield sensing and seizing

In this third question the aim is to understand what kind of knowledge repositories are used by the companies in which the interviewees are employed to ensure organizational learning and knowledge sharing so companies can yield sensing and seizing processes routines and activities. Interviewees were asked what types of knowledge repositories their company had and how could these knowledge repositories yield sensing and seizing capabilities. As table 13 demonstrates 13 interviewees (61,9%) identified past projects repositories to be the best knowledge repositories to yield sensing and seizing as they offered the possibility for synergies among different teams/departments both when looking in the market for opportunities but especially when they could seize an opportunity serving another project as stepping stone. It is also relevant to mention network knowledge integration, answered by 12 interviewees (57,1%), described as knowledge gained among different teams or business units inside the same country but especially among different countries in multinational firms, and internal learning models as web-learning and physical training, answered by 11 interviewees (52,4), as the second and third knowledge repositories most identified for yielding sensing and seizing capabilities.

Table 13. Possible knowledge repositories that yield sensing and seizing

Transcript	Generic Category	Subcategory	Times Repeated	Interviewees
Past projects repositories	1.3	1.3.1	13 (61,9%)	3,8,11,12,13, 14,15,16,17,18,19,20,21
Network knowledge integration	1.3	1.3.1	12 (57,1%)	1,4,8,12,13,14,15,17,18,19,20,21
Internal learning models (online/blended)	1.3	1.3.1	11 (52,4%)	1,2,3,5,7,8,9,11,15,18,19

Case studies	1.3	1.3.1	9 (42,9%)	3,6,9,12,14,1 5,18,20,21
Data analysis and analytical output	1.3	1.3.1	6 (28,6%)	2,4,7,9,17,19
Internal forums, webinars, and formative talks	1.3	1.3.1	6 (28,6%)	3,6,9,11,12,1 4
On job learning	1.3	1.3.1	4 (19,0%)	3,5,6,10
Structural alignment to yield information and learning	1.3	1.3.1	4 (19,0%)	2,4,6,21
Longevity plan to assure knowledge from experienced workers is shared before they leave the company	1.3	1.3.1	2 (9,5%)	2,10
Risk management models	1.3	1.3.1	1 (4,8%)	7

Source: Author's Elaboration

During the interviews a remarkable number of interviewees after hearing this question stressed the importance of knowledge management, some stressed that most people have the skills necessary to perform well in their job and that they become particularly good with experience and time (at that company or in their professional careers), having their knowledge integrated to the company should be a priority, and others stressed that knowledge integration is particularly useful when companies suffer from turnover problems.

8.4 Resources and capabilities considered Dynamic Capabilities

In this fourth question the aim is to understand what resources and capabilities have been object of adaptation, renovation, recombination and reconfiguration that can be described as dynamic capabilities in the companies for whom the interviewees are employed. As table 14 demonstrates 12 interviewees (57,1%) distinguished their companies for their devoted relationship with their customer which also implicated a strong word-of-mouth and for the company's strategical alignment where business models underpin environmental fitness where firm values, products and/or services, communication (among others) were aligned along the firm. It is also relevant to mention product/service excellence, mentioned by 10 interviewees

(47,6%) which however can have similar traits to customer relationship as most interviewees stressed the effort their company made to properly understand the client's needs enabling tailor made solutions.

Table 14. Possible resources and capabilities that can be considered dynamic capabilities

Transcript	Generic Category	Subcategory	Times Repeated	Interviewees
Customer relationship management and word-of-mouth	1.4	1.4.1	12 (57,1%)	1,5,6,8,10,13, 14,16,17,19,20,21
Strategical alignment	1.4	1.4.1	12 (57,1%)	4,5,6,7,9,12,13,14,15,17,18,21
Product/service excellence – having the best product/service and tailored made solutions	1.4	1.4.2	10 (47,6%)	3,4,11,12,14,16,17,19,20,21
Environmental positioning	1.4	1.4.1	8 (38,1%)	4,5,7,8,9,13,14,18
Human resources – the right roles for the right people, the right team	1.4	1.4.1	7 (33,3%)	7,8,10,11,15,19,20
Project management – capability to continuously create and adapt business models	1.4	1.4.1	7 (33,3%)	5,7,9,11,12,14,18
Brand management	1.4	1.4.1	6 (28,6%)	1,4,5,12,14,17
Organizational learning and development of new solutions based on the analysis of past errors	1.4	1.4.1	2 (9,5%)	2,8
Patenting	1.4	1.4.1	2 (9,5%)	3,4
Cultural alignment	1.4	1.4.1	1 (4,8%)	1

Technological knowledge gained through investigation and research units	1.4	1.4.1	1 (4,8%)	1
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Source: Author's Elaboration

If we consider Teece et al. (1997) definition of dynamic capabilities where dynamic is the ability to “renew competencies so as to achieve congruence with the changing business environment” (p.515) then we can consider these capabilities as dynamic. Winter (2003) suggests that dynamic capabilities are hard to develop and require time and Teece (2019) suggest that they cannot be purchased but instead need to be developed over time as the capabilities identified by the interviewees.

8.5 Dynamic Capabilities formed through explorative processes and activities

In this fifth question the aim is to understand what resources and capabilities object to adaptation, renovation, recombination and reconfiguration that can be described as dynamic capabilities were formed by explorative routines, processes and/or activities in the companies for whom the interviewees are employed. As table 15 demonstrates 11 respondents (52,4%) identified strategical alignment and investigation and research and development to be capabilities developed through explorative processes and activities by an effort of their company to prepare the future and continuously obtain market fitness and innovation. It is also relevant to mention the capacity to benchmark, answered by 9 interviewees (42,2%), as a capacity that evolved through explorative processes and activities which consist in proficiently identify threats and opportunities among competitors so that the company can readily neutralize or take advantage of them.

Table 15. Possible dynamic capabilities formed by explorative processes and activities

Transcript	Generic Category	Subcategory	Times Repeated	Interviewees
Strategical alignment	1.4	1.4.2	11 (52,4%)	4,5,6,8,10,11, 15,16,18,19,2 1

Investigation and research and development	1.4	1.4.2	11 (52,4%)	3,7,9,10,11,12,16,17,18,19,21
Benchmarking	1.4	1.4.2	9 (42,9%)	1,3,7,8,11,13,17,19,20
Independent innovation centre	1.4	1.4.2	6 (28,6%)	3,9,10,11,18,21
Project management – capability to continuously create and adapt business models	1.4	1.4.2	5 (23,8%)	9,11,12,14,21
Organizational learning and development of new solutions based on the analysis of past errors	1.4	1.4.2	2 (9,5%)	2,10
Patenting	1.4	1.4.2	2 (9,5%)	3,4

Source: Author's Elaboration

O'Reilly and Tushman (2008), explained how an ambidextrous firm's ability to exploit and explore acts as a dynamic capability and in 2013 they strengthen this understanding suggesting that ambidexterity enabled the ability to sense and to seize opportunities. Our findings support this suggestion as interviewees identified capabilities, they recognized their companies to have and promptly identify which of these capabilities came from explorative processes and activities.

Benchmarking was identified in point 8.1 by 12 respondents (57,1%) as a resource and capability used to sense the market. Processes and activities are not direct links to dynamic capabilities, but bundles of resources and capabilities enhance these processes and/activities conferring a dynamic capability. Benchmarking is the best example of this link between explorative processes and sensing capabilities as it is a widely known term for series of processes and activities on gathering information about competitors, but strategical alignment and investigation and research and development are also capabilities nourished by field knowledge shared by commercials, market data analysis, environmental analysis and other less recurrent on point 8.1.

8.6 Dynamic Capabilities formed through exploitative processes and activities

In this fifth question the aim is to understand what resources and capabilities object to adaptation, renovation, recombination and reconfiguration have been that can be described as dynamic capabilities were formed by exploitative routines, processes and/or activities in the companies for whom the interviewees are employed. As table 16 demonstrates 12 interviewees (57,1%) recognized their company's customer relationship management capability and word-of-mouth and the company's perceived expertise, answered by 11 interviewees (52,4%) to be capabilities formed by exploitative processes and activities.

Table 16. Possible dynamic capabilities formed by exploitative processes and activities

Transcript	Generic Category	Subcategory	Times Repeated	Interviewees
Customer relationship management and word-of-mouth	1.4	1.4.3	12 (57,1%)	1,5,6,8,10,11, 13,14,16,17,20,21
Perceived expertise	1.4	1.4.3	11 (52,4%)	3,4,6,11,12,14,15,17,18,20,21
Brand management	1.4	1.4.3	8 (38,1%)	1,4,5,11,12,14,17,19
Human resources – the right roles for the right people, the right team	1.4	1.4.3	7 (33,3%)	7,8,10,11,15,19,20
Reputation	1.4	1.4.3	7 (33,3%)	3,11,15,18,19,20,21
Product/service excellence – having the best product/service and tailored made solutions	1.4	1.4.3	6 (28,6%)	11,14,15,16,20,21
Environmental positioning	1.4	1.4.3	6 (28,6%)	4,5,7,12,14,18
Cultural alignment	1.4	1.4.3	2 (9,5%)	1,11
Trade-off management	1.4	1.4.3	1 (4,8%)	7

Source: Author's Elaboration

As mentioned above (point 8.5) O'Reilly and Tushman (2013) suggest ambidexterity translated into exploration and exploitation processes and/or activities enhance the ability to sense and to seize opportunities. Customer relationship management does not share a direct association as benchmarking did for sensing capabilities but could be linked with consumer feedback and pilot testing, (identified by 5 interviewees as a capability to seize opportunities), among other possible associations. However perceived expertise was identified by 10 interviewees (47,6%) as a seizing capability having a more direct association with a dynamic capability formed by exploitative processes and activities.

The analysis of both dynamic capabilities formed by explorative and exploitative and processes suggest an association between sensing capabilities and explorative activities and processes while seizing capabilities an association with exploitative capabilities as our conceptual model (see theoretical approach – chapter VI) implies.

Chapter IX – Conclusion

9.1 Discussion and final remarks

Organizational strategy can be seen as the vehicle conceived to drive the company from the current status to a desired one. One of the core purposes of strategic management is to explain how firms outperform each other so it can serve as example for managers and scholars. As markets became ever more dynamic and the competitive landscape ever more challenging, strategy discipline started to shift its focus from competitive and positioning strategies (Porter, 1979, 1980, 1985b), an outside-in approach, to a resource-based approach, an inside-out approach to strategy. This change brought novelties to the field and the Resource-Based View (Barney, 1986, 1991; Peteraf, 1993; Wernerfelt, 1984) became one of the most prominent research streams in management theorizing (Kraaijenbrink et al., 2010) until the Dynamic Capabilities View (Teece et al., 1997) came to stage as an enhancement of the RBV becoming one of the leading research streams in organizational strategy (Albort-Morant et al., 2018).

The Dynamic Capabilities View cannot yet be considered a theory (Barreto, 2010), most of the criticisms associated with the DCV point to tautology (Williamson, 1999), improper operationalization and fundamental constructs (Winter, 2003). The investigation made in this dissertation had the objective to present a model that links the DCV with Organizational Ambidexterity, complementing both research streams, having the specificity to not be tautological and to be more easily operationalized.

After conceiving the investigation model and in order to understand if such model had applicability for both scholars and practitioners, a set of interviews took place to realize what sensing and seizing capabilities companies have, what knowledge repositories yielded sensing and seizing processes and/or activities, what capabilities were object to reconfiguration and finally what dynamic capabilities were formed by exploration and exploitation processes and/or activities. These interviews supported our understanding that sensing and seizing capabilities are linked with exploration and exploitation, an organizational ambidexterity construct.

The capability to sense translates into the ability to identify and shape opportunities. Upon the analysis of the interviews we conclude that the field knowledge shared by commercials throughout the hierarchy, with many interviewees emphasising the feedback from clients,

market data analysis, environmental analysis and benchmarking to be the most identified resources and capabilities used to sense the market. The identification of what resources and capabilities firms use to sense attends the first research objective

The capability to seize opportunities comes after sensing and perceiving an opportunity as worthy of subsequent effort to understand if it has potential to derive value to the company. Upon the analysis of the interviews we conclude that timing, human resources (the right roles for the right people) and the companies perceived expertise to be the most identified resources and capabilities to seized opportunities. The identification of what resources and capabilities firms use to seize attends the second research objective.

In an attempt to understand what knowledge repositories could yield the processes and/or activities that grant companies their sensing and seizing capabilities we conclude that past projects repositories, network knowledge integration and internal learning models were the most mentioned knowledge repositories. This is of the most importance as companies should aim to train and support their employees with such repositories capable to on an iterative basis strengthen the capabilities to sense and seize opportunities. It became clearer that it would be valuable to establish a stronger link between knowledge repositories and the enhancement of sensing and seizing over time. The identification of the repository's firms use to yield sensing and seizing attends the third research objective.

The reconfiguration capability translates into on an ongoing basis renew, adapt, and recombine the company's resources and capabilities in order to achieve congruence to the changing business environment. Upon the analysis of the interviews we conclude that customer relationship management and word-of-mouth, strategical alignment, and product/service excellence to be the most identified capabilities that went thru adaptation, renewal and reconfiguration making them dynamic capabilities. From the two questions that followed, within the same generic category, we conclude that strategical alignment, investigation and research and development and benchmarking were dynamic capabilities to have evolved thru exploration processes and activities and customer relationship management and word-of-mouth and perceived expertise to have evolved thru exploitation processes and activities. the identification of what capabilities were object to reconfiguration and can be considered

dynamic capabilities, and which of these capabilities evolved by exploration and by exploitation processes attains the fourth research objective.

During the interviews analysis, started to become clear a significant pattern among sensing capabilities identified in the first question of the interview and dynamic capabilities that evolved by exploration processes and/or activities and seizing capabilities identified in the second question and dynamic capabilities that evolved by exploitation processes and capabilities. O'Reilly and Tushman (2008 and 2013) had already suggested that a firm's ability to be explore and exploit is an ambidextrous dynamic capability. Ambidexterity meets all the requirements to be considered a dynamic capability as O'Reilly and Tushman suggest, and it would be expected that over time further research flourish approaching both fields, yet that opportunity still stands and our investigation model is the first step to do so, the fact that the pattern between sensing and exploration and seizing and exploitation became so evident strengths our suggestion.

9.2 Contributions to the state of the art

Strategy assumes a significant role in the managerial field. From the primordial military setting to the managerial context, strategy is becoming increasingly noticeable due to the complexity of the business context itself. It aims to define value creation strategies in order to achieve sustainable competitive advantages.

The literature review presented in this report helps understand what type of resources and capabilities firms should aim to obtain and the investigation developed defined what resources and capabilities are used to sense and seize opportunities, knowledge repositories aimed to yield this capabilities and finally what dynamic capabilities companies have and which came from exploration or exploitation processes and/or activities. The goal was to understand the applicability of an investigation model that combines sensing, seizing and reconfiguring from the DCV and organizational ambidexterity. After the analysis of the 21 interviews carried out a pattern emerged supporting the suggestion that sensing is linked with exploration processes and/or activities and seizing is linked with exploitation processes and/or activities.

The present thesis contributes to the state of the art of the strategic management field in an effort to assist in the operationalization of the DCV but mainly by laying the first stone in an

investigation model connecting both DCV and Organizational Ambidexterity research streams which might flourish into a value creation model for sustainable competitive advantage, setting the pace for a new research stream focused in the complementarities between sensing, seizing and reconfiguring, DCV constructs, and Organizational Ambidexterity.

9.3 Contributions to practitioners

Resource-Based strategy formulation is hard to operationalize, and does not yet drive consensus among academics (Sigalas & Pekka Economou, 2013), there is also a firm frontier from academic to the “real world”, to academics it has been hard to quantify and prove strategic theory, Newbert (2008) tried to operationalize the RBV, and succeeded at a certain level, and even so this frontier from the RBV research stream to practitioners failed to be weakened. Over time academics develop the field of work and get closer to operationalize strategy, specially resource-based approaches. The implications of this dissertation shall contribute to the development of resource-based approaches, the Dynamic Capabilities View and Organizational Ambidexterity which will assist in the operationalization of organizational strategy as whole.

Besides this indirect contribution the present dissertation outlines, defines and enlists popular research streams in the field of strategic management, particularly in resource-based approaches, having as undoubtedly the most prolific views (RBV and DCV) which can help practitioners to get acquainted to such subjects. In a more specific manner this investigation identified most used process and/or activities that confer sensing, seizing and reconfiguring capabilities, and which of these come from exploration and exploitation processes and/or activities.

9.4 Research limitations

It is essential to bear in mind that the findings displayed in this thesis are inherent to a reduced investigation in terms of sample size (interviewees) and contextualization in a given country (Portugal). It is important to consider distinct limitations, either methodological or associated with the research, this is a restricted investigation as mentioned above in terms of contextualization and sample size.

Over the course of the research some more limitations arose linked to background of the interviewees, different backgrounds usually resulted in different responses along the interview, as if a pattern could be identified between more entrepreneurial profiles versus more executive profiles. It becomes relevant to notice that although different profiles this limitation also contributed to an extra fertile sample as it can be categorized as a diverse sample.

In terms of external validity, this study starts from existent theory and tries to create an innovative approach to the DCV and Organizational Ambidexterity combining both research streams into an investigation model. Nevertheless, it is an exploratory study and it cannot be considered representative.

9.5 Suggestions for future research

Some of the limitations mentioned above may be mitigated through changes to be taken into account in future studies, as research is an iterative process much more investigation is needed to approximate this investigation model to be ready to be operationalized, for that to happen it is suggested to establish a correlation between processes and/or activities to sense the market and sensing dynamic capability and processes and/or activities to seize opportunities and seizing dynamic capability, perhaps by defining quantitatively how strong sensing, seizing and reconfiguration capabilities are or need to be to attain sustainable competitive advantage.

In a broader manner, DCV would particularly benefit from the development in an empirical level to establish correlations between sensing, seizing and reconfiguration and sustainable competitive advantage and value creation. Finally, this investigation suggests a close relationship between sensing and exploration processes and/or activities and seizing and exploitation processes and/or activities which approximates both sensing, seizing and reconfiguring and organizational ambidexterity constructs which to this day remained unexplored. O'Reilly and Tushman (2008 and 2013) suggested ambidexterity to be a DC and until now no further research explored the possible relation and complementarities between these two research streams.

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Appendix A

Interview Script

1st Question – What is the process that the company uses to generate knowledge about the market so that it is possible to seize opportunities and respond to consumer needs? What are the resources and capabilities that the company has and that are useful in this process?

2nd Question – When an opportunity is perceived in the market, whether for a new service, solution, or a new product, how is the process used by the company to be able to take advantage of this opportunity? What resources and capabilities are used and useful to seize opportunities through new solutions, new services and/or products?

3rd Question – What types of knowledge repositories does the company have? How can the knowledge integration process improve the activities described in question Q1 and Q2 through the evolution of the knowledge generation process of the market (sensing) and the evolution of the process of creating new solutions, products, or services (seizing)?

4th Question – What capabilities does the company have that have undergone adaptation, renovation, reconfiguration and recreation, which can be considered dynamic capabilities?

5th Question – From this adaptation and recreation process, which of these capabilities evolved through exploration processes, activities and routines?

6th Question – From this adaptation and recreation process, which of these capabilities have evolved through the exploitation processes, activities and routines?