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Building Sustainable Competitive Advantage through Resources and Dynamic Capabilities: The Case of the Portuguese Auto Parts Market

Miguel Carneiro de Melo Pereira de Magalhães

PhD Degree In Management

Supervisor:

Doctor Marjan Sara Fonseca Jalali, Associate Professor
ISCTE - Instituto Universitário de Lisboa

December, 2022



**BUSINESS
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À minha família

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Resumo

O principal foco no campo da gestão estratégica é de perceber como as empresas são capazes de criar e manter a vantagem competitiva no longo prazo. A literatura sobre gestão estratégica contém várias descrições de empresas que em tempos foram líderes na sua indústria e perderam estas posições de mercado ou até desapareceram. As descrições e análises destas organizações são uma forma de avaliação *post-mortem* de empresas que sucumbiram às forças do mercado. Estudos a empresas que navegam e se adaptam a estas forças de mercado à medida que passam por mudanças intensas, por outro lado, são muito mais escassos. A literatura propõe que os recursos e as capacidades, capacidades dinâmicas em particular, serão cruciais para esta adaptação, mas não é claro o que permite a algumas empresas implementá-las com sucesso durante uma mudança de paradigma da indústria e sobreviver, enquanto outras não. Nesse sentido, a presente tese visava identificar o papel dos recursos e capacidades dinâmicas na criação de vantagem competitiva sustentável em empresas a operar no mercado altamente competitivo, fragmentado e em rápida mudança do negócio de peças auto em Portugal. A investigação baseou-se em entrevistas semiestruturadas realizadas a gestores pertencentes a empresas a operar no mercado de peças auto. Em termos de contributo teórico e prático, este estudo demonstrou o papel das capacidades dinâmicas na criação de vantagem competitiva sustentável em contextos de grande incerteza e rápida mudança, bem como os elementos necessários para o seu desenvolvimento. Este estudo contribuiu igualmente para fazer a ponte entre a visão baseada na indústria, a visão baseada nos recursos e as capacidades dinâmicas, demonstrando que a componente de deteção do modelo de capacidades dinâmicas é o factor de interligação entre as diferentes abordagens.

Palavras-chave: gestão estratégica, vantagem competitiva sustentável, capacidades dinâmicas, rigidez estrutural, incerteza, inovação

JEL Classification System Codes: M10, O30

Abstract

The main concern in the field of strategic management is how firms achieve and sustain competitive advantage. The literature on strategic management contains several descriptions of companies that were once leaders in their industry and lost these market positions or even disappeared. These descriptions and analyses are a form of *post-mortem* assessment of companies that succumbed to market forces. Studies of companies navigating and adapting to these market forces as they go through intense changes, on the other hand, are far scarcer. The literature proposes that resources and capabilities, dynamic capabilities in particular, will be crucial to this adaptation, but it is not clear what allows some companies to successfully deploy these during an industry paradigm shift and survive, while others do not. As such, this thesis aimed to identify the role of resources and dynamic capabilities in creating sustainable competitive advantage in the highly competitive, fragmented and rapidly changing market of the Portuguese auto parts business. The research was based on semi-structured interviews conducted with stakeholders belonging to companies operating in the auto parts market. In terms of theoretical and practical contributions, this study demonstrates the role of dynamic capabilities in creating sustainable competitive advantage in contexts of great uncertainty and rapid change, as well as the elements required for their development. This study also contributes to bridge the gap between the industry-based view, the resource-based view and dynamic capabilities, demonstrating that the sensing component of the dynamic capabilities framework is the linking factor between the different approaches.

Keywords: strategic management, sustainable competitive advantage, dynamic capabilities, core rigidities, uncertainty, innovation

JEL Classification System Codes: M10, O30

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List of Abbreviations

ADAS	- Advanced driver-assistance systems
BEV	- Battery electric vehicles
CAE	- Economic Activity Code
CEO	- Chief Executive Officer
COVID-19	- Coronavirus-2019
DC	- Dynamic capabilities
E/E	- Electrical/electronic (E/E) starter batteries, E/E starters and alternators
ERP	- Entreprise Resource Planning
GFC	- Global Financial Crisis
HEV	- Hybrid electric vehicles
IAM	- Independent Aftermarket Manufacturer
IBV	- Industry-based view
ICE	- Internal combustion engine
IoT	- Internet of things
MaaS	- Mobility-as-a-Service
MCPC	- MCovalho Peças
OEM	- Original Equipment Manufacturer
PHEV	- Plug-in hybrid electric vehicles
RBV	- Resource-based view
VRIN	- Valuable, Rare, Inimitable and Non-substitutable
VRIO	- Valuable, Rare, Inimitable and Organisation
VUCA	- Volatile, uncertain, complex and ambiguous
xEV	- Passenger vehicles with partially- or fully-electric powertrains

CHAPTER 1

Introduction

1.1. Contextual background

One of the critical topics in strategic management in recent decades focuses on how companies can adapt to a rapidly changing world. Businesses now operate in a highly volatile, deeply uncertain, increasingly complex, and extraordinarily ambiguous world (Millar et al., 2018; Schoemaker et al., 2018). Reinforcing the evidence of this context, the world was taken by surprise by the Coronavirus-2019 (COVID-19) pandemic and, two years later, just as it was preparing to overcome it, in February 2022, the Russian Federation started a war invading Ukraine.

Although few, if any, industries have remained unaffected by this climate of uncertainty, the automotive industry is a notable case. The industry as a whole is facing several disruptions; and the auto parts sector in particular, is also coping with the consolidation dynamics currently underway in the European market. At the industry level, the consensus is that there are at least four major disruptive changes currently taking place (Capgemini, 2017; KPMG International, 2018; McKinsey & Company, 2016; Roland Berger GmbH and Lazard & Co. GmbH, 2017). The first of these disruptions is the paradigm shift from personal car ownership to mobility-as-a-service. Several recent studies have shown that personal cars remain parked approximately 95% of the time (Morris, 2016). Thus, owning a car can be considered an expensive privilege, as it is a considerably depreciating asset. Use of vehicle sharing programmes, either through existing services such as Uber or Cabify, or more novel concepts such as DriveNow or Carsharing, combined with other sources of mobility, for example, scooters and electric bikes, are likely to result in a significantly diminished overall spending on cars. The term “mobility” was first popularised in Finland in 2014. The proponents of this concept present it as a new paradigm, describing it as one of the most powerful tools that might be used to decarbonise transport for future generations and the biggest revolution in transportation thus far in the 21st century (Smith et al., 2022).

The second disruption is the shift from cars with internal combustion engines to electrically-powered vehicles. For the past 100 years, car manufacturers have developed and produced cars based entirely on combustion engine technology. A sizable infrastructure has been created based on this technology, including a large network of associated products and

services involving trillions of euros every year. Almost overnight, the entire industry and its associated markets now face a radical change. In October 2022 the European Union (EU) decreed that the sale of cars with combustion engines will end beginning in 2035 (*EU Approves Effective Ban on New Fossil Fuel Cars from 2035 | Reuters*, n.d.); and it is expected that the cars of the future will all be fuelled by electricity (*Auto Environmental Guide 2022*, n.d.).

The third disruptive change is the introduction of autonomous cars. An autonomous vehicle can be described as “a vehicle that is capable of sensing its environment and navigating without human input” (Ondruš et al., 2020, p. 227). The gradual introduction of technology that supports driverless cars will have a tremendous impact on people's lives as well as on automotive industry professionals. Recent studies have shown that the overwhelming majority of collisions on the road are the result of human error and therefore avoidable. Autonomous driving technology, which is based on the use of numerous sensors, radar, and the implementation of artificial intelligence algorithms, is expected to have a drastic impact on reducing collisions. The result will be an increase in safety, reduced fuel costs and a lower carbon footprint, due to route optimisation, and due to the reduction in the number of cars on the road through car sharing. The adoption of this technology is expected to have a profound impact on the insurance industry, as well as leading to a drastic reduction in the consumption of car parts, oil, and fuel. It will also create a space for new players, notably those focused on generating technological solutions, to enter the auto industry.

The fourth disruptive change in the automotive industry is the development of telematics, including the connections between cars and the Internet of Things (IoT). A connected car can be described as a vehicle capable of accessing the Internet with the ability to communicate with smart devices, other cars, and road infrastructure and thus collect real-time data from multiple sources (Coppola et al., 2016). Several vehicles are already equipped with highly-developed devices designed to monitor driving behaviour and register and transmit relevant information about the vehicle's status to the car manufacturer and other service providers (Löffler et al., 2016).

All these changes are expected to have a drastic effect not only on the automotive industry, but also (directly or indirectly) on all its related industries, including those that are currently upstream (e.g., raw materials, components) and downstream (e.g., insurance companies, financial credit, gas stations, mechanical workshops, collision repair shops, and spare parts, amongst others). Electrically-powered cars require relatively little maintenance in comparison to those that rely on a typical internal combustion engine. They also have fewer moving parts and fluids, as well as extended brake wear intervals because of regenerative braking technology.

Similarly, electric cars do not need spark plugs and wires, air/fuel filters, or maintenance of the exhaust system (i.e., the muffler and the catalytic converter). Furthermore, autonomous vehicles typically have a wide range of sensors and radar-emission devices that will considerably reduce the number of crashes and thus dramatically reduce the need for collision repair services and car body parts. Recent studies predict reductions of around 80% in the number of accidents by 2040 (Ondruš et al., 2020). While the automotive industry currently lives under conditions of profound uncertainty, it seems certain that disruptions are on their way, that they will have a major impact on various sectors of the economy, and that the path toward these outcomes is irreversible.

In addition to the uncertainty resulting from the upstream disruptions in the auto industry, the European auto parts market is also dealing with the volatility resulting from recent concentration movements (Brenner et al., 2018). Since 2015, the auto parts sector has experienced a wave of acquisitions across Europe, particularly by North American companies. This has upset the industry balance, resulting in a great deal of volatility in the market, as well as substantial uncertainty for the incumbents. The question that arises (particularly for these incumbents) is how companies can compete in this new setting, where the rules of the game seem to be changing and moving in directions that are not entirely clear. How can companies cope with these changes, and ensure they are not eliminated from the market, as has happened with many companies during an industry paradigm shift in the past?

1.2. Research questions

A first response to more turbulent market environments was the resource-based view of the firm (RBV) (Barney, 1991; Wernerfelt, 1984), which put the focus on the firm and its distinctive bundle of resources, rather than the industry (as had traditionally been done up to then – e.g.: Porter (1979, 1980, 1981); Shapiro (1989)) as the starting point for strategy formulation. Most applications of resources and (dynamic) capabilities in the face of industry paradigm shifts have been examined post hoc. While this has resulted in highly detailed and extremely useful examinations from which lessons have been learned, the information mostly became available only after the events (Danneels, 2010; Giachetti & Marchi, 2017; Heracleous et al., 2017; Lucas & Goh, 2009; Tripsas & Gavetti, 2000). There is a comparatively limited understanding of these processes as they are happening; for example, how changes are understood and interpreted as they occur, what facilitates or inhibits adaptive measures, and how resources and capabilities can be used to adapt, survive, and obtain a competitive advantage.

To fill this gap, an examination of the auto parts market in Portugal is proposed, with a focus on its upstream and downstream components. The auto parts market (which is downstream of automotive industry) is highly relevant due to the consolidations it is experiencing. The automotive industry (which is upstream of the auto parts market) is, as described above, undergoing a series of disruptions which, in due time, are expected to have a profound impact on the auto parts market. Likewise, Portugal is relevant for the study because its market structure has several unique characteristics, namely the fact that it has not yet undergone consolidation to the extent experienced by other nations in Europe. The changes in the Portuguese market are clearly on the horizon, but not yet underway to the same extent as in the rest of Europe, making the context particularly interesting to study firms' understanding of, planned responses to, and current adaptations to, these changes.

Thus, it is of interest to understand to what extent the stakeholders operating in the Portuguese auto parts market are sensing the profound changes that are taking place in the sector, as well as in the automobile industry as a whole, and to determine what courses of action they are adopting in the face of these changes, and to what extent these might contribute to eliminate threats and/or permit them to seize new opportunities.

Within this context, it is also of interest to understand which resources and capabilities are identified by key market stakeholders as providing auto parts distributors with a competitive advantage over the years and into the future; and in particular, how the dynamic capabilities framework can be applied in a highly dynamic and uncertain context.

To explore these phenomena, the following research questions are posed:

- RQ1: How do stakeholders in the auto parts market perceive the current paradigm shift in the automotive industry, and in the auto parts market in particular?
- RQ2: What are the key resources and capabilities identified by stakeholders as necessary for a company working in the auto parts market to build sustainable competitive advantage in a context of high uncertainty?
- RQ3: What role do key stakeholders in the auto parts market attribute to dynamic capabilities in a company's response to the changes occurring in the market?

As noted above, much has been gleaned in previous research from the examination of individual firms and their particular responses to industry changes. As such, it was deemed of interest to apply that same approach in the context of the auto parts industry, and examine one of its key players and its current and on-going approach to the industry disruptions:

- RQ4: How has MCoutinho Peças used its resources and dynamic capabilities (if any) to build sustainable competitive advantage?

It is hoped that addressing these questions will contribute to our understanding of the role that the resource-based view and the dynamic capabilities framework can play in creating and maintaining a competitive advantage in markets of deep uncertainty, as well as to bridging the divide between these approaches, and among them and the industry-based view. In addition, understanding the individual and collective roles of sensing, seizing and transforming (Schoemaker et al., 2018; Teece, 2007, 2018b) as key elements of dynamic capabilities can be expected to be of significant practical use to not only those operating in the auto-parts industry, but managers in any similarly turbulent context.

1.3. Research paradigm

In terms of ontology, i.e., assumptions regarding the nature of reality (Saunders et al., 2019), this research adopts a relativist approach. In contrast to a realistic ontology, which is a set of beliefs based on the premise that only one reality exists, a relativist ontology considers reality to be a human construction and that reality is relative, based on what each person experiences in a given time or space (Moon & Blackman, 2014).

With regard to epistemology, which is concerned with actions and beliefs that are considered acceptable, the identification of valid and legitimate knowledge, and determinations of how this knowledge is transferred to others (Saunders et al., 2019), the research follows a subjectivist approach (Moon & Blackman, 2014). Subjectivist epistemology posits that what constitutes knowledge relies on how individuals realise and understand reality.

This study is thus developed based on the notion that the forces and disruptions affecting the auto parts industry might best be understood from the perspective of those working within it. It thus follows an interpretive philosophy, which seeks individual perceptions (i.e., an internal view) and considers people, their thoughts, and their opinions as the primary source of data. This is considered “highly appropriate in the case of business and management research”, because “not only are business situations complex, they are often unique (Saunders et al., 2019, p. 149).

Because it is based on subjective interpretations, the interpretivist philosophy is closely associated with an inductive approach (Saunders et al., 2019), whereby the researcher draws on the data collected and attempts to understand its meaning. An inductive approach thus provides

the research with access to a rich source of information based on the experience and perspective of the participants (Mason, 2002; Saunders et al., 2019).

The remainder of the thesis is organised as follows. Chapter 2 presents a review of the relevant literature on topics related to strategic management, with a particular focus on the resource-based view and the dynamic capabilities framework. Given that the research was based on an empirical study related to dynamic capabilities, Chapter 3 describes some historic empirical cases analysed through the lens of the dynamic capabilities framework. Chapter 4 describes the market in which the research was conducted in more detail, with a focus on the evolution of the industry and the disruptions within it that are predicted to potentially irreversibly change the economic, social, and environmental landscape. The methodological choices are presented in Chapter 5, in which we describe the data collection process and highlight the precautions taken to ensure rigour, particularly with respect to data reliability and validity. The findings presented in Chapter 6 relate to the themes that emerged from the interviews and responses to the research questions. In Chapter 7, the findings are discussed and considered with respect to the literature. Finally, Chapter 8 includes the major conclusions of the study, outlines some of the limitations, and provides recommendations for future research.

CHAPTER 2

Literature Review

The global economy as a whole, and the automotive industry, in particular, are becoming increasingly more competitive. Some companies struggle to survive, while others fight to achieve market leadership. Scholars and managers have devoted themselves to efforts to understand why some companies survive and even thrive, while others languish (Barney, 1991; Eisenhardt & Martin, 2000; Porter, 1979; Teece et al., 1997; Wernerfelt, 1984). To adapt to the business context, companies must have the capacity to renew themselves, at the risk of compromising the firm, its employees, and the communities in which they operate (Pisano, 2017; Teece, 2018; Teece et al., 1997).

In the last few decades, a considerable body of literature has developed around the theme of strategic management. The search for sources of sustainable competitive advantage has been and remains a major concern in the field (Barney, 1991; Dias et al., 2021; Eisenhardt & Martin, 2000; Linde et al., 2021; Teece, 2018b; Teece et al., 1997). The topic of strategy has been developed primarily based on a framework proposed by Kenneth R. Andrews in his 1971 book *The Concept of Corporate Strategy* (Collis & Montgomery, 2008). Andrews characterised strategy as a combination of what a company *can* do (i.e., an internal analysis that allows it to identify its strengths and weaknesses) and what the company *might* do (i.e., an external analysis that allows it to identify critical environmental opportunities and threats) (Collis & Montgomery, 2008). According to this framework, sustained competitive advantage can be achieved through the exploitation of a firm's internal strengths and its ability to seize environmental opportunities while neutralising external threats and avoiding internal weaknesses (Barney, 1991; Collis & Montgomery, 2008). This question of whether to emphasise external or internal factors when considering a firm's ability to compete has been an ongoing discussion ever since.

This chapter begins by introducing the industry-based view (IBV) and its limitations and leads to an introduction of the resource-based view (RBV) as a reaction. This is followed by a list of some of the criticisms of the resource-based view and the emergence of the dynamic capabilities framework as a response to these limitations. Given the importance of this overall theme, this chapter will be followed by several more focused approaches that consider the

importance of dynamic capabilities in contexts that include uncertainty and the role of management in the developmental process.

Finally, given the empirical nature of this research, it will be analysed companies that were once very successful but proved unable to adapt to disruptions that occurred in their respective markets. These analyses will be conducted in parallel with interpretations based on the dynamic capabilities framework.

2.1. The Industry-Based View (IBV)

Although the framework developed by Andrews (1971) was considered powerful, in practical terms it provided little information on how managers might apply its principles to their companies (Collis & Montgomery, 2008). An important step forward in strategic management was Michael Porter's seminal article entitled, '*How competitive forces shape strategy*', in which he posited that the essence of strategy formulation resides in the way firms deal with competition (Porter, 1979). By 'competition', the author clearly meant to include not only other participants in the markets in which a firm operates but also other forces that ultimately influence the potential overall profitability of an industry.

The approach presented by Porter was based on the structure-conduct-performance (S-C-P) paradigm that was developed in industrial organisation economics. The S-C-P paradigm was the first and most notable contribution of the industrial organisation to strategic management (Porter, 1981; Teece, 1984). The fundamentals of this paradigm are that the performance of a company depends critically on the industrial context of the market in which it operates (Porter, 1981). According to this framework, industry structure imposes a behaviour or mode of conduct (i.e., strategy) for each firm, and the joint conduct of all firms determines their collective performance in a given market (Porter, 1981; Teece, 1984). Porter dedicated himself to the study of the structural forces—which he called the 'Five Forces'—that determine the average profitability of a specific industry. Porter's Five Forces framework refers to competition generated by (1) the bargaining power of buyers, (2) the bargaining power of suppliers, (3) the threat of new entrants, (4) the threat of substitute products or services, and (5) rivalries that develop amongst existing competitors (Porter, 1979, 1980, 2008). While not ignoring the specific characteristics of individual firms, the model was clearly focused on the industry level (Collis & Montgomery, 2008; Teece et al., 1997). The basic concept describes the features of an attractive industry in which there would be greater opportunities and fewer threats (Barney, 1991) and discusses how a firm might position itself to defend against competitive forces (Teece

et al., 1997). The Five Forces framework had been “remarkably successful” (Pisano, 2017, p. 749) and was considered the dominant paradigm for a generation of theoretical research and business practice (Porter, 2008; Teece et al., 1997).

However, one of the main critiques of Porter’s framework is that it was not able to explain the profits and superior performance of some firms within an industry relative to others over long periods. This is because, according to the framework, the source of profits does not reside in the company, but in the industry structure, and is mainly determined by the balance of competitive forces (McWilliams & Smart, 1995; Pisano, 2017; Priem & Butler, 2001; Schoemaker, 1990). Some authors argue that due to the strong analytical emphasis on the competitive environment in the industry-based view, “researchers implicitly adopted two important simplifying assumptions. The first was that firms within an industry are homogeneous regarding resources and strategies. The second was that firm resources are highly mobile” (Priem & Butler, 2001, p. 29).

According to the Five Forces framework, a good strategy involves selecting an attractive industry and positioning oneself to be protected against the competition. Several authors consider this view as somewhat static and argue that the Five Forces framework does not permit effective responses to dynamic and competitive markets (Eisenhardt & Martin, 2000; Teece et al., 1997) and that it ignores the uniqueness (Rumelt, 2005), the “characteristics of ‘good firms’” (Teece, 2019, p. 6), and “the role of complementaries, path dependencies, . . . and/or the enterprise to properly sense opportunities and threats and properly calibrate strengths, weaknesses, and technological and market trajectories” (Teece, 2007, p. 1325).

Several studies were conducted that aimed to understand the impact of firm-specific factors compared to industry effects in terms of profits. One of the most relevant studies was developed by Rumelt (1995), who demonstrated that the differences in profits within the same industry were significantly higher than the differences in profits between companies from different industries. These findings suggested the relevance of firm-specific factors and de-emphasised the importance of industry effects.

2.2. The Resource-Based View (RBV)

The gap between theory and observation and the need to explain the superior performance of individual firms within the same industry led to the resource-based view of the firm. This concept was originally proposed by Wernerfelt (1984) and was based on the work of Penrose (1959). Wernerfelt highlighted “the usefulness of analysing firms from the resource side rather

than from the product side” (Wernerfelt, 1984, p. 171). In fact, the RBV is complementary to, but not a substitute for the IBV (Amit & Schoemaker, 1993; Barney, 1991; Eisenhardt & Martin, 2000; Kraaijenbrink et al., 2010; Pisano, 2017; Teece et al., 1997). Proponents of the RBV defend it as a theory that attempts to explain the sustained competitive advantage of some firms over others (Amit & Schoemaker, 1993; Barney, 1991; Collis & Montgomery, 2008; Peteraf, 1993; Wernerfelt, 1984, 1995).

Table 2.1. Some of the most prominent authors on the industry-based view (IBV) and respective criticisms by proponents of the resource-based view (RBV).

Authors	Description
Industry-based view (IBV)	
Porter (1979)	The Five Forces that shape strategy.
Porter (1980)	Competitive strategy: the Five Forces framework developed.
Porter (1981)	The contributions of industrial organisation to strategic management. The four key elements of effective strategy formulation. Presenting Structure-Conduct-Performance (S-C-P) paradigm.
Shapiro (1989)	The theory of business strategy: an approach that utilises the tools of game theory to analyse the nature of competitive interaction between rival firms. Strategic conflict.
Critiques of the IBV	
Schoemaker (1990)	The IBV is unable to explain the relatively high profits and superior performance of individual firms within the same industry.
Rumelt (1991)	Showed that intra-industry differences in profits are greater than inter-industry differences in profits, which strongly suggests the importance of firm-specific factors and the relative unimportance of industry effects.
Teece, Pisano & Shuen (1997)	The Five Forces framework does not respond to dynamic and competitive markets.
Eisenhardt & Martin (2000)	The Five Forces framework does not respond to dynamic and competitive markets.
Priem & Butler (2001)	The IBV is unable to explain the relatively high profits and superior performance of individual firms within the same industry.
Rumelt (2005)	The IBV ignores the unique natures of individual firms.
Teece (2007)	The IBV ignores the role of complementaries, path dependencies, and/or the capacity to sense opportunities and threats and to calibrate strengths and weaknesses as well as technological and market trajectories.
Pisano (2017)	The IBV is unable to explain the relatively high profits and superior performance of individual firms within the same industry.
Teece (2019)	The IBV ignores the characteristics of “good firms”.

Wernerfelt defines a resource as “anything which could be thought of as a strength or weakness of a given firm” (Wernerfelt, 1984; p. 2). Amongst these are both tangible and intangible “assets which are tied semi-permanently to the firm” (Wernerfelt, 1984, p. 2). The RBV characterises firms as bundles of resources that are distributed heterogeneously within the same industry and in patterns that persist over time (Eisenhardt & Martin, 2000; Wernerfelt, 1984, 1995). Examples of firm resources include brand names, technology know-how, skilled human resources, equipment, efficient procedures, and capital (Pisano, 2017; Wernerfelt, 1984). The RBV focuses on exploiting existing resources and developing new ones (Wernerfelt, 1984). In this regard, Prahalad and Hamel (1990) advocate the need to define a company's core competences. Several critical theoretical concepts have been converted into practical approaches for managers which have driven the RBV into practice (Wernerfelt, 1995).

Barney (1991) made a strong contribution to advancing the concept of the RBV. The author defined three key concepts related to the RBV framework, including firm resources, competitive advantage, and sustained competitive advantage (Barney, 1991). The question of competitive advantage and in particular, how firms achieve and sustain competitive advantage, is central in the field of strategic management. According to Barney (1991), a firm holds competitive advantage when it adds more economic value than its competitors. If the strategy implemented by this firm cannot be duplicated by its rivals, its competitive advantage will be sustained. Furthermore, the author notes that sustained competitive advantage may not persist indefinitely. One or more disruptions in the market can render a specific resource or capability that was once a source of sustained competitive advantage as obsolete. On the other hand, first-movers or new entrants to an industry that can implement new strategies can achieve a competitive advantage over their pre-existing rivals through, for example, improved access to distribution channels, better customer management strategies, or by developing a good reputation. According to Barney (1991), this is possible if the firms operating in a given industry maintain heterogeneous resources that are not perfectly mobile. In his seminal paper, Barney (1991) introduces the concept of Valuable, Rare, Inimitable (“imperfectly imitable”), and Non-substitutable (VRIN) resources as sources of sustained competitive advantage. Barney later reformulated the concept as VRIO, i.e., valuable, rare, inimitable (difficult or costly-to-imitate), and organisation-based. In other words, the potential of a company to develop competitive advantage depends on the value, rarity, and inimitability of its resources and capabilities. However, to take advantage of their full potential, the firm needs to have an organisation capable of exploiting these resources and capabilities (Barney, 2015).

In contrast to Porter's Five Forces Framework (1979), the RBV of competitive advantage recognises the importance of the unique history and social background of a given firm and other idiosyncratic attributes as sources of competitive advantage (Ambrosini & Bowman, 2009; Barney, 1991; Collis & Montgomery, 2008; Conner, 1991; Nelson, 1991; Schoemaker, 1990; Wernerfelt, 1984). RBV principles also indicate that sustained competitive advantage cannot be "purchased" in open markets (Barney, 1991).

The RBV of strategic management was first developed between 1984 and the mid-1990s. Since that time, it has achieved great popularity and has been recognised as a very useful approach to strategic management (Foss & Knudsen, 2003; Priem & Butler, 2001). Nonetheless, the RBV was not immune to criticism. Amongst the critiques of the RBV, it cannot explain how sustained competitive advantage is achieved (Cardeal & António, 2012; Kraaijenbrink et al., 2010; Schoemaker, 1990) or how the allocation of resources should be carried out (Kraaijenbrink et al., 2010), especially in situations of rapid change and uncertainty; in other words, it provides an essentially static view of management strategy (Ambrosini & Bowman, 2009; Eisenhardt & Martin, 2000; Priem & Butler, 2001; Teece et al., 1997). Some of the most prominent authors who focused on the RBV as well as several notable critiques are listed in Table 2.2.

2.3. Dynamic Capabilities

In response to the limitations associated with the RBV, Teece & Pisano (1994) presented their first essay describing a dynamic capabilities approach. In this paper, they noted that some successful firms showed "timely responsiveness and rapid and flexible product innovation, along with the management capability to effectively coordinate and redeploy internal and external competences" (Teece & Pisano, 1994, p. 1). This approach was developed further to explain how a dynamic capabilities view might overcome the limitations of both the IBV and the RBV (Teece et al., 1997). The framework was developed specifically for rapidly changing environments and was considered "especially relevant in a Schumpeterian world of innovation-based competition, price/performance rivalry, increasing returns, and the 'creative destruction' of existing competences" (Teece et al., 1997, p. 509).

Table 2.2. Some of the most prominent authors that discuss the RBV and respective critiques.

Authors	Description
Resource-based view (RBV)	
Warnerfelt (1984)	Introducing the RBV of the firm.
Rumelt (1984)	Toward a strategic theory of the firm. The RBV is a theory that aspires to explain the sustained competitive advantage of some firms over others.
Barney (1986)	Strategic factor markets: expectations, luck, and business strategy.
Dierickx & Cool (1989)	Asset stock accumulation and sustainability of competitive advantage.
Schoemaker (1990)	Increased focus on firm resources has been beneficial in helping to (1) clarify the potential contributions of resources to competitive advantage, (2) introduce strategy scholars to a number of useful descriptive theories from industrial organisation economics...and (3) alleviate a previous analytical overemphasis on the opportunities and threats that arise from the product side". The RBV is a framework that focuses on improving our understanding of why some companies sustain above-normal returns in equilibrium.
Prahalad & Hamel (1990)	Wernerfelt (1995) considered that this paper by Prahalad & Hamel (1990) was "responsible for the diffusion of the resource-based view into practice", instilling a new dynamic to RBV (p. 171).
Conner (1991)	A historical comparison of resource-based theory and five schools of thought within industrial organisation economics.
Barney (1991)	First scholar to develop a theoretical tool that explains the RBV and to identify the RBV as complementary to IBV: RBV recognises the importance of the unique history and social background of an individual firm together with other idiosyncratic attributes as sources of competitive advantage. Presented the VRIN framework. Three key concepts related to the RBV framework: firm resources, competitive advantage, and sustained competitive advantage.
Nelson (1991)	The RBV is a theory that aspires to explain the sustained competitive advantage of some firms over others.
Amit & Schoemaker (1993)	The RBV is complementary to IBV.
Peteraf (1993)	Presented a model based on four conditions that are critical for sustained competitive advantage, all of which must be met: (1) possession of superior resources (heterogeneity within an industry), (2) <i>ex-post</i> limits to competition, (3) imperfect resource mobility, and (4) <i>ex-ante</i> limits to competition.
Collis and Montgomery (2008)	Proposed a test to determine whether a firm has strategically valuable resources that will lead to sustained competitive advantage.
Teece, Pisano & Shuen (1997)	The RBV is complementary to the IBV.
Eisenhardt & Martin (2000)	The RBV is complementary to the IBV.

Authors	Description
Ambrosini & Bowman (2009)	The RBV is a framework that focuses on improving our understanding of why some companies sustain above-normal returns in equilibrium.
Kraaijenbrink, Spender & Groen (2010)	The RBV is complementary to the IBV.
Pisano (2017)	The RBV as complementary to the IBV. The RBV is a framework that focuses on improving our understanding of why some companies sustain above-normal returns in equilibrium.

Critiques of RBV

Schoemaker (1990)	The RBV does not explain how sustained competitive advantage is achieved.
Teece, Pisano & Shuen (1997)	The RBV cannot explain how and why some companies show competitive advantages in situations of rapid change and uncertainty.
Eisenhardt & Martin (2000)	The RBV cannot explain how and why some companies show competitive advantages in situations of rapid change and uncertainty.
Priem & Butler (2001)	The RBV is essentially a static view. The RBV has no managerial implications. The RBV entails an infinite regress. The RBV is insufficient as a theory of the firm. The RBV definition of a resource is unworkable.
Foss & Knudsen (2003)	The RBV is insufficient as a theory of the firm. VRIN/O criteria are not necessary to explain sustained competitive advantage. Uncertainty and immobility are the truly basic conditions for sustained competitive advantage to arise.
Lado, Boyd, Wright & Kroll (2006)	If a resource cannot be observed, it cannot be accurately measured and empirically verified. This compromises the ability of a firm to generate sustained competitive advantage.
Foss, Klein, Kor, Mahoney (2008)	The RBV does not provide sufficient recognition of the role of the individual judgments or mental models of entrepreneurs and managers.
Ambrosini & Bowman (2009)	The RBV is essentially a static view.
Kraaijenbrink, Spender & Groen (2010)	VRIN/O criteria are not necessary to explain sustained competitive advantage. The RBV is insufficient as a theory of the firm. The RBV definition of a resource is unworkable.
Cardeal & António (2012)	The RBV does not explain how sustained competitive advantage is achieved.

Companies that operate in high-velocity markets need to respond rapidly to changes with high flexibility, innovation-oriented capacity, and support from management that is capable of coordinating and adjusting both internal and external features. Teece et al. (1997) described the capacity of a given company to rearrange itself and adapt rapidly to market changes and thus achieve new forms of competitive advantage as its *dynamic capabilities*.

Eisenhardt & Martin (2000) introduced a version of the dynamic capabilities concept as an extension of the RBV. These authors have been considered as providing a critical second seminal contribution to the dynamic capabilities framework via their reconceptualisation of the model proposed by Teece et al. (1997) (Peteraf et al., 2013). Eisenhardt & Martin (2000) state that dynamic capabilities “consist of specific strategic and organisational processes like product development, alliancing, and strategic decision making that create value for firms within dynamic markets by manipulating resources into new value-creating strategies” (Eisenhardt & Martin, 2000, p. 1106). Of note, these two papers differ in their approach to dynamic capabilities particularly with respect to boundary conditions, competitive advantage, and sustained competitive advantage. In contrast to Teece et al. (1997), Eisenhardt and Martin (2000) argue that while dynamic capabilities are not by themselves a source of sustained competitive advantage, they can bring competitive advantage to a firm within a given industry.

The publication of those two seminal papers, “...triggered a flood of debate and discussion on the topic [of dynamic capabilities]” (Pisano, 2017, p. 747). Since the original Teece et al. (1997) publication, many authors have contributed to the discussion as well as the development of the dynamic capabilities framework. In Figure 2.1, the number of publications listed in Google Scholar that were obtained using the search term “dynamic capabilities” is shown.

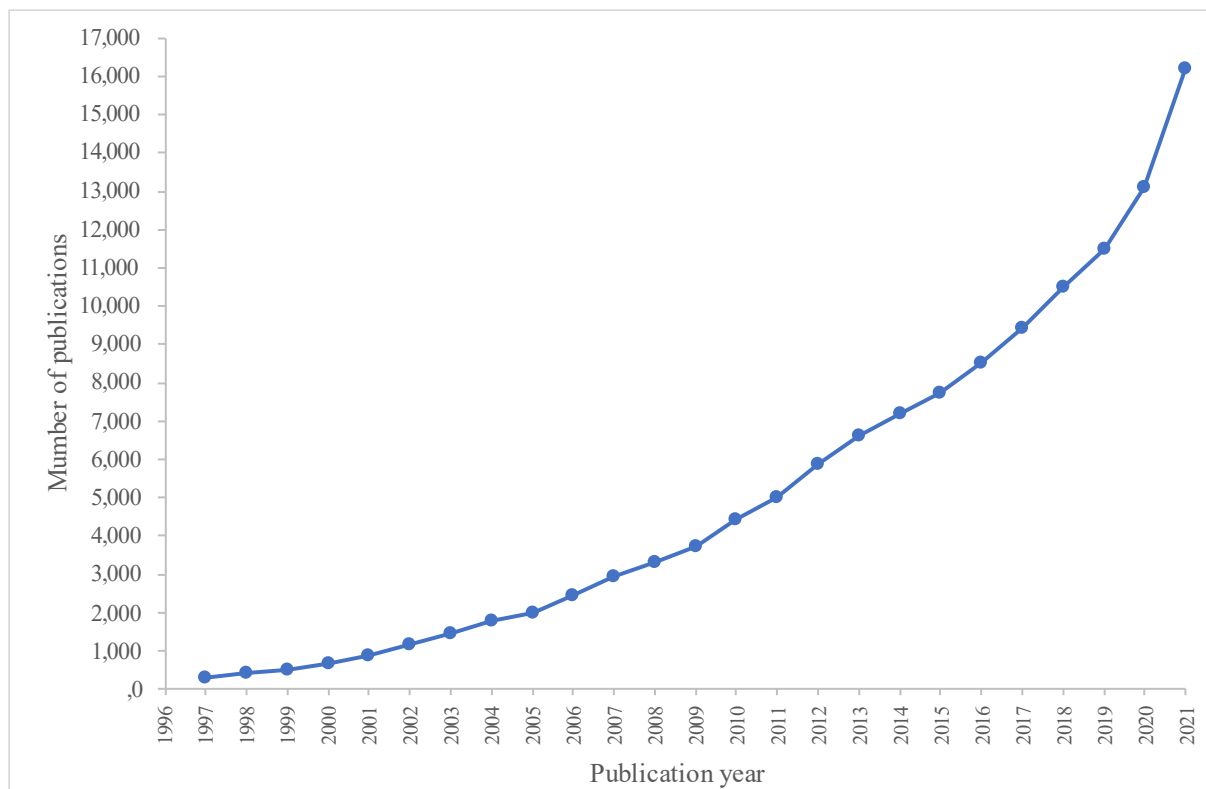


Figure 2.1. Publications in Google Scholar that use the term “dynamic capabilities”. This search was performed on December 14, 2022

The study of dynamic capabilities has become a subject of great interest in several areas of strategic management research, notably those focused on entrepreneurship (Dias & Pereira, 2017; Ferreira et al., 2020; Santoro et al., 2021; Teece, 2016; Zahra et al., 2006), innovation processes (Linde et al., 2021; Lucas & Goh, 2009; Millar et al., 2018), technological innovation (Heracleous et al., 2017; Khurana et al., 2022; Lucas & Goh, 2009), business model innovation (Bocken & Geradts, 2020; McDonald & Eisenhardt, 2020; Parida et al., 2019; Teece, 2018a), operations management (Gutierrez-Gutierrez & Antony, 2020; Hansen & Møller, 2016), marketing management (Dias & Pereira, 2017; Giachetti & Marchi, 2017), and knowledge management (Kapoor & Aggarwal, 2020; Pellizzoni et al., 2020), amongst others.

The dynamic capability framework has developed into one of the most influential theoretical frameworks in management academics (Di Stefano et al., 2014; Schilke et al., 2018). In the current literature, the definition of dynamic capabilities refers to the ability of a firm to create new forms of competitive advantage over time via specific path dependencies and market positions (Teece et al., 1997), specifically by intentionally modifying its resource base (Helfat & Peteraf, 2009) and maintaining the relevance of the company’s unique asset base (Helfat et al., 2009). Some authors associate dynamic capabilities with organisational and strategic routines used by firms to alter their resource base in response to market activity, including their

physical, human, and organisational assets (Eisenhardt & Martin, 2000). Dynamic capabilities can also be considered as those that increase effectiveness on a routine basis (Zollo & Winter, 2002) and/or those that work to enhance, change, or build ordinary capabilities (Winter, 2003).

Dynamic capabilities are based on three critical activities: (1) sensing threats and opportunities, (2) seizing opportunities, and (3) sustaining competitiveness by transforming (or reconfiguring) resources (Teece, 2007). Sensing capabilities refer to the need for constant awareness of the environment and involve an understanding of the markets, technologies, current and potential customers, competitors, and other stakeholders in the business ecosystem. Sensing includes scanning, learning, creation, and interpretive activities. Seizing capabilities refers to the capacity of the system to respond quickly once threats or opportunities have been identified and to offer innovative value propositions (Teece, 2018b). Transforming or reconfiguring capabilities involves the need to remain competitive over time by systematically adapting resources and structures in response to market changes. These three elements are fundamental for companies that need to remain competitive in a dynamic environment and imply that companies must be capable of sensing, seizing, and reconfiguring their processes in order to respond effectively to market requirements and constraints (Teece, 2007).

A summary of the definitions of dynamic capabilities according to several prominent authors in the field of study is presented in Table 2.3. These definitions include a common structure of dynamic capabilities as factors that facilitate responses to environmental changes, are supported by organisational processes or routines, contain learning mechanisms, and allow firms to extend, modify, or create a new resource base (Gutierrez-Gutierrez & Antony, 2020). Although they are concerned with sustained competitive advantage, dynamic capabilities are not a synonym for this process. Several authors highlight that paths and positions are factors that remain widely-discussed with respect to their role in creating and developing dynamic capabilities (Ambrosini & Bowman, 2009; Eisenhardt & Martin, 2000; Teece, 2019; Teece et al., 1997).

Although the dynamic capabilities framework has become one of the most frequently-used approaches in management, some criticisms have been raised (Dias & Pereira, 2017; Helfat & Peteraf, 2009; Nonaka et al., 2000; Schilke et al., 2018; Williamson, 1999). Amongst these criticisms, some authors note that classifications associated with dynamic capabilities are "vague" or "tautological" (Dias & Pereira, 2017; Williamson, 1999) and that there is a lack of clarity regarding the mechanisms that might be used for its implementation (Cyfert et al., 2021; Schilke et al., 2018). Others note that there is little to no empirical knowledge regarding the

application of dynamic capabilities principles (Cyfert et al., 2021; Dias & Pereira, 2017; Schilke et al., 2018).

Table 2.3. Definitions of dynamic capabilities based on reports published by several prominent authors in the field.

Concept	Explanation
Dynamic capabilities Definitions	Ways in which dynamic capabilities have been conceptualised
Teece, Pisano & Shuen (1997, p. 516)	“We define dynamic capabilities as the firm’s ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments. Dynamic capabilities thus reflect an organization’s ability to achieve new and innovative forms of competitive advantage given path dependencies and market positions...”
Eisenhardt & Martin (2000, p. 1107)	“The firm’s processes that use resources—specifically the processes to integrate, reconfigure, gain and release resources—to match and even create market change. Dynamic capabilities thus are the organizational and strategic routines by which firms achieve new resource configurations as markets emerge, collide, split, evolve, and die”.
Zollo & Winter (2002, p. 340)	“A dynamic capability is a learned and stable pattern of collective activity through which the organization systematically generates and modifies its operating routines in pursuit of improved effectiveness”.
Winter (2003, p. 991)	“Defining ordinary or ‘zero-level’ capabilities as those that permit a firm to ‘make a living’ in the short term, one can define dynamic capabilities as those that operate to extend, modify or create ordinary capabilities”.
Zahra, Sapienza & Davidsson (2006, p. 918)	“We define as the abilities to reconfigure a firm's resources and routines in the manner envisioned and deemed appropriate by its principal decision-maker(s)”.
Helfat, Finkelstein, Mitchell, Peteraf, Singh, Teece & Winter (2007, p. 1)	“A dynamic capability is the capacity of an organization to purposefully create, extend, or modify its resource base”.
Teece (2007, p. 1319)	“These capabilities can be harnessed to continuously create, extend, upgrade, protect, and keep relevant the enterprise’s unique asset base”.
Wang & Ahmed (2007, p. 35)	“We define dynamic capabilities as a firm's behavioural orientation constantly to integrate, reconfigure, renew and recreate its resources and capabilities and, most importantly, upgrade and reconstruct its core capabilities in response to the changing environment to attain and sustain competitive advantage”.

Additional knowledge regarding the empirical application of the dynamic capabilities framework is both relevant and necessary for academic researchers and business managers. In a later section, I will use this framework to analyse the reactions of several companies to profound changes in their specific markets.

2.4. Dynamic Capabilities, Uncertainty, and Innovation

The current business world is increasingly volatile, uncertain, complex, and ambiguous (VUCA), and thus challenges management's capacity for ongoing innovation (Millar et al.,

2018; Schoemaker et al., 2018). The VUCA concept, which was introduced by the United States (U.S.) Armed Forces in the late 1990s, epitomises the difficult contexts in which businesses must operate. In addition to managing a budget and developing detailed planning, managers must be able to perceive or anticipate changes in the market and react quickly to eliminate threats and seize opportunities (Millar et al., 2018; Schoemaker et al., 2018; Zapata-Cantu et al., 2016). Managers “may continue to manage for risk (quantifiable) when they should manage for deep uncertainty (unfathomable)” (Schoemaker et al., 2018, p. 16). Successful business managers must recognise the difference between risk and uncertainty. Risk can be estimated by calculating probabilities, whereas uncertainty is not ordinarily quantifiable in the same way. Teece (2016, 2019) applies the concept of “unknown unknowns” to illustrate the theme of uncertainty, which remains a great challenge for all business managers. While a “known unknown” is a vital piece of knowledge that, while currently unknown, could be known, given sufficient time and resources. For example, in the Battle of Midway, both sides knew that the enemy fleet existed, but they did not know where they were located. This information existed and was essentially “knowable” given other circumstances. By contrast, an unknown unknown describes a situation or event that cannot be determined under any circumstances or in some cases even perceived. Deep uncertainty is ubiquitous in today’s complex business world. Major unexpected shocks, dubbed “Black Swan events” by financial theorist Nicholas Taleb, occur “outside the model” (Teece et al., 2016, p. 8).

One important example of an unknown unknown was the COVID-19 pandemic (Schulman, 2022). Beyond its implications for health and well-being, the pandemic led to disruptions in the global supply chain with profound and long-lasting economic and social impacts worldwide. This was followed by the surprise invasion of Ukraine by the Russian Federation, creating panic about a potential nuclear war.

To survive and even thrive in a world of deep uncertainty, firms must develop the “three primary clusters “ (Teece, 2019, p. 10) of higher-order dynamic capabilities, i.e., sensing, seizing, and transforming capabilities (Chen et al., 2020; Khurana et al., 2022; Teece, 2019). These three clusters of dynamic capabilities, although frequently invisible to outsiders, imply the existence of strong strategic leadership as well as the internal competencies that companies need to adapt rapidly. This is of critical importance particularly when companies need to introduce disruptions in the organisation, for example, innovation or new business models in order to remain competitive (Bocken & Geradts, 2020; Khurana et al., 2022; Schoemaker et al., 2018; Teece, 2018b; Zapata-Cantu et al., 2016). Teece (2007) notes that “the enterprise will

need sensing, seizing and reconfiguring capabilities to be simultaneously developed and applied for it to build and maintain competitive advantage” (Teece, 2007, p. 1341).

A company with strong dynamic capabilities will sense and seize opportunities before its competitors, even when it becomes necessary to collaborate with agents that are currently in conflict with those currently existing in the company (Linde et al., 2021; Millar et al., 2018; O’Reilly & Tushman, 2004, 2008; Teece, 2019). The concept of sensing is closely related to the capacity for exploration while seizing is related to exploitation. Exploration is a concept that describes the capacity to detect new opportunities outside the organisation and can lead to disruptive innovation (Santoro et al., 2021). By contrast, exploitation is concerned with the utilisation of existing expertise and fosters incremental innovation. Exploration and exploitation “are potentially incompatible inside a single organisation” (Teece, 2007, p. 21). Furthermore, “executing both these activities simultaneously leads to many tensions and managerial issues” (Santoro et al., 2021, p. 379). O’Reilly & Tushman (2004) introduced the concept of ambidextrous companies, which are organisations that can simultaneously operate using the dynamics of exploration and exploitation to promote and stimulate necessary innovation and transformation. Ambidexterity is, in itself, a dynamic capability (O’Reilly & Tushman, 2008; Teece, 2019; Vahlne & Jonsson, 2017). Exploration and exploitation demand distinct management approaches. In ambidextrous organisations “two separate subunits with different cultures are linked by shared company-wide values and senior managers with a broad view” (Teece, 2019, p. 21). Hence, companies that can cannibalise current products or services to drive their entry into new businesses, and those that can enter into competition with businesses inside the firm have historically met with great success (Danneels, 2016; Giachetti & Marchi, 2017; Schoemaker et al., 2018; Song et al., 2016; Teece, 2018b). This happens with some frequency when a company adopts a digital business model that could cannibalise current sales (Teece, 2018b) or when a company needs to introduce a disruptive technology that will compete with its currently successful programmes (Chen et al., 2020; Danneels, 2016; Giachetti & Marchi, 2017; Parida et al., 2019; Song et al., 2016; Suddaby et al., 2020). In other words, while a company may have sensing skills, if it has not developed the ability to cannibalise entities within its own organisation it may lose the ability to seize opportunities. Danneels (2016, p. 2184) pointed out that “willingness to cannibalise reflects a lack of constraint by current resources in investment decisions, and hence, facilitates seizing”.

However, even while sensing threats or opportunities, many companies find it difficult to abandon businesses that have historically contributed to their growth and notoriety. These companies may find themselves getting stuck in past successes and falling into what is referred

to as a competency trap (Giachetti & Marchi, 2017; Heracleous et al., 2017; Hernández-Linares et al., 2021) which can lead to “incumbent inertia” (Lieberman & Montgomery, 1988, p. 48). Leonard-Barton (1992) pointed out that, over time, companies can become so fixated on the success of their core activities that they become rigid and unable to respond to new innovations. The authors of this and a subsequent publication presented four dimensions of a core capability, including: (1) employee knowledge and skills, (2) technical systems that embed knowledge and support innovation, (3) managerial systems that guide knowledge creation and control, and (4) values and norms associated with various types of knowledge (Leonard-Barton, 1992; Nonaka et al., 2000). Leonard-Barton argued that core capabilities that are appropriate in one situation may be completely unsuitable in other contexts. Nonaka et al. (2000) summarised these findings as follows: “core capabilities can turn into ‘core rigidities’ (Leonard-Barton, 1992), or ‘competence traps’ (Levitt and March, 1988), which hinder knowledge creation rather than promote it” (Nonaka et al., 2000, p. 13).

These competency traps frequently lead to the development of attributes that are the opposite of dynamic capabilities, i.e., these organisations develop core rigidities (Heracleous et al., 2017). Core rigidities inhibit structural change in the organisation and prevent a company from introducing the necessary disruptions or innovations that they need to adapt (Leonard-Barton, 1992). This problem is particularly evident under conditions of high uncertainty (Teece, 2019). Thus, in these settings, core competencies may become core rigidities (Heracleous et al., 2017; Leonard-Barton, 1992; Nonaka et al., 2000; Teece, 2019; Tripsas & Gavetti, 2000).

Thus, the transformational capacity of a company will depend on the leadership competencies of a given organisation (Heracleous et al., 2017; Millar et al., 2018; Teece, 2019). The need to reconfigure resources in an organisation becomes particularly important in situations in which disruptive solutions need to be implemented. Companies also need to find ways to accommodate smaller and more subtle changes to smooth out rigidities that may have developed over time (Teece, 2019). The success of a company operating in a VUCA context will depend on its capacity for renewal. This requires management to pay special attention to the development of the transformational skills of each employee (Cyfert et al., 2021; Millar et al., 2018). For example, Millar et al. (2018) suggested that “executives should emphasise agility, dexterity, flexibility, and resilience to navigate VUCA environments, updating capabilities and advantages frequently and dynamically through organisational and resource fluidity as is usually found in start-ups but not in mature enterprises” (Millar et al., 2018, p. 11).

2.5. Dynamic Capabilities and The Role of Managers

The role of managers has been recognised as a critical factor in the success of companies. Managers have the task of directing operations and are responsible for allocating resources in order to improve a firm's performance (Augier & Teece, 2009; Bocken & Geradts, 2020; Cyfert et al., 2021; Eisenhardt & Martin, 2000; Teece, 2018b, 2019; Teece et al., 1997). A firm's performance is dependent on strategic, organisational, and human resource decisions made by its management. Managers must have the entrepreneurship skills necessary to develop their organisation to sense and seize opportunities and to transform and reconfigure itself in response to competitive forces (Augier & Teece, 2009). As a critical factor for the success of a company, managers can be considered a dynamic capability in and of themselves (Augier & Teece, 2009). Alternatively, they might be seen as possessing "dynamic managerial capability", that permits some managers to "build, integrate, reconfigure, and competitively reposition organisational resources and competences" (Adner & Helfat, 2003, p. 1020). Adner & Helfat (2003, p. 1021) defined managerial cognition as related to "managerial beliefs and mental models that serve as a basis for decision making". Therefore, managerial cognition strategies, particularly those used by top executives, are critical and fundamental; organisational responses depend on managers' interpretations of the context as determined by their cognitive capabilities (L. Wang et al., 2018).

The results of several empirical studies revealed that high-level managerial and entrepreneurial skills provide a company with a greater capacity to deal with changes in its environmental conditions (Cyfert et al., 2021; Helfat & Peteraf, 2015; Zuzul & Tripsas, 2020). Zollo and Winter (2002) designed a study aimed at understanding how managerial cognition shapes organisational learning and the consequent development of dynamic capabilities. The authors suggest that dynamic capabilities are developed as a function of accumulated experience and effective knowledge management.

A study performed by Adner & Helfat (2003) revealed the profound impact of corporate strategy on firm performance. Their findings also strongly suggested that corporate managers make a profound difference. Another study, performed by Quigley and Hambrick in 2011, validated the relevance of individual top managers on firm performance; this has since been termed the "CEO effect" (Helfat & Peteraf, 2015).

Recognition of the importance of top management for company performance has also led to renewed interest in corporate governance structures (Chen et al., 2020; Gutierrez-Gutierrez & Antony, 2020; Vahlne & Jonsson, 2017). The relationships between management and the

board of directors and between management and shareholders can have a profound influence on company performance, especially in the context of deep uncertainty (Teece, 2019). Some studies have highlighted the importance of governance models in a company's ability to develop dynamic capabilities and to create sustainable competitive advantage (Bocken & Geradts, 2020; Chen et al., 2020; Felin & Zenger, 2014; Schilke et al., 2018; Suddaby et al., 2020).

While several studies highlight the positive impact of corporate governance, many also describe its negative effects. Corporate management typically seeks to maximise short-term shareholder value and thus tends to avoid dealing with uncertainty; in these situations, managers frequently create institutional barriers that compromise sensing, seizing, and transforming capabilities and thus inhibit the company's capacity for adaptation and innovation (Bocken & Geradts, 2020; Teece, 2019; L. Wang et al., 2018). Corporate bureaucracy frequently leads to slower decision-making and a resulting delay in resource allocation, acquisition, or reconfiguration; as a result, sensing and seizing capabilities can be compromised leading to demotivation of those responsible for promoting creativity and innovation throughout the company (Bocken & Geradts, 2020).

A study by Bocken & Geradts (2020) addressed how organisational design affects the dynamic capabilities required for sustainable business model innovation and identified both barriers to and drivers of this process at the institutional, strategic, and operational levels. These authors identified eleven barriers at each of the aforementioned three levels (Bocken & Geradts, 2020). The authors also propose specific drivers that might be used to overcome each of these barriers. At the institutional level, the authors identified a barrier associated with the need to maximise shareholder value; this results in the avoidance of uncertainty and overall "short-termism". To overcome these barriers, management might focus on balancing shareholder and stakeholder value, embracing ambiguity, and valuing business sustainability. At the strategic level, barriers included functional strategy, a dominant focus on exploitation, and prioritising short-term growth. These barriers might be overcome by encouraging collaborative innovation, strategic focus, and patient investments. Finally, at the operational level, the authors refer to barriers associated with functional excellence, standard innovation processes and procedures, and fixed resource planning, and allocation. These barriers might be addressed with drivers that include development of personnel capabilities, revised innovation structure, and introduction of ring-fenced resources as well as incentive schemes and performance metrics focused on sustainability. The graphic shown in Figure 2.2 outlines the barriers and drivers for sensing,

seizing, and transforming to promote sustainable business model innovation proposed by Bocken & Geradts (2020).

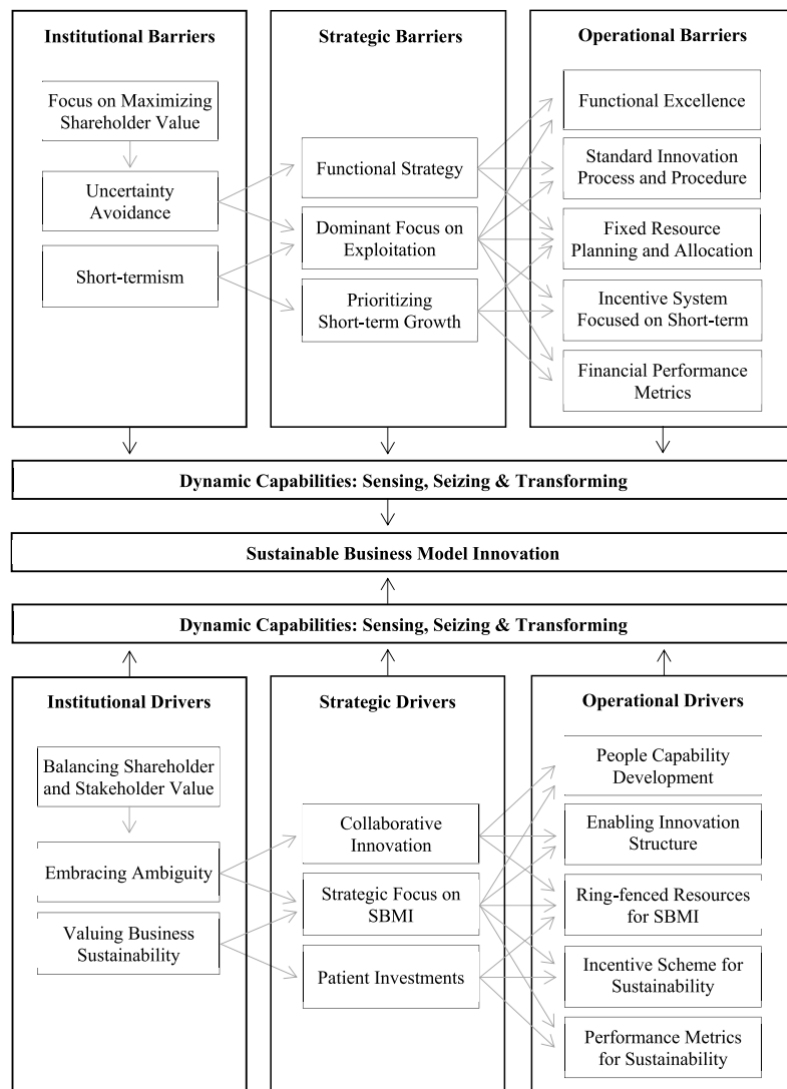


Figure 2.2. Barriers to and drivers of sensing, seizing, and transforming capabilities to promote innovation for sustainable business models (Source: Bocken & Geradts (2020))

Corporate governance plays a critical role in determining the capacity for innovation and thus long-term competitive advantage (Bocken & Geradts, 2020; Felin & Zenger, 2014; Schilke et al., 2018). Many companies remain stuck on programmes and processes that supported their historical success and are unable to transform themselves to respond to market disruptions (Danneels, 2010; Giachetti & Marchi, 2017; Heracleous et al., 2017; Lucas & Goh, 2009; Tripsas & Gavetti, 2000; J. Wang et al., 2016). In a context of profound uncertainty and imminent change, companies need to have strong transforming capabilities and the capacity to develop governance models that provide top management with the agility needed to enact rapid

nullification of threats and seize opportunities. Executive managers have a decisive role in the development of sensing, seizing, and transforming capabilities. However, to do so, they will need to be provided with a high degree of autonomy (Bocken & Geradts, 2020; Felin & Zenger, 2014; Schilke et al., 2018).

Chen et al. (2020) found that part of what allowed the Haier Group Corporation (<https://www.haier.com/global/>) to be so successful was their highly decentralised corporate management model. The model is based on the concept of micro-divisionalisation that permitted this company to expand successfully into new businesses in diverse areas, including healthcare, agriculture, computer technology, automobiles, fashion, and clothing manufacturing, amongst others. From the perspective of the dynamic capabilities framework, the decentralisation that resulted from micro-divisionalisation, enabled the firm to empower its employees to develop new capabilities (Chen et al., 2020; Felin & Powell, 2016; Teece, 2007). A high degree of decentralisation provided flexibility across the organisation and permitted rapid responses to perceived changes in context (Chen et al., 2020; Cyfert et al., 2021; Song et al., 2016; Teece, 2016, 2018b; Vahlne & Jonsson, 2017).

CHAPTER 3

Dynamic Capabilities and Empirical Studies

The dynamic capabilities framework has been the subject of research in companies to understand its role in building and developing sustainable competitive advantage. Empirical evidence has shown that existing companies often struggle to respond to disruptions in the market that challenge their successful business models (Lucas & Goh, 2009; Tripsas & Gavetti, 2000). While a company achieves success in the marketplace based on certain competencies, the organisation frequently is not prepared to give them up in favour of new ones. This phenomenon, which is known as "incumbent inertia" (Lieberman & Montgomery, 1988, p. 48), highlights the absence of dynamic capabilities (Heracleous et al., 2017; Tripsas & Gavetti, 2000). It is particularly relevant to analyse cases of highly successful companies within the dynamic capabilities framework and to identify leaders that had serious difficulties in adapting to market disruptions, even when they sensed those changes, and in some cases even seized the opportunities. As Williamson (1999, p. 93) noted "more informative, often, than success stories are stories about failure—especially the failures of once successful enterprises to adapt to new circumstances". However, it is also of interest to analyse companies that maintain, or even increase, their level of success in highly competitive environments. These cases will also be addressed in this section.

Research developed by Tripsas & Gavetti (2000) focused on Polaroid Corporation and that reported by Lucas & Goh (2009) and L. Wang et al. (2018) focused on the Eastman Kodak Corporation demonstrate the negative impact of inertia and core rigidities and their power over dynamic capabilities during the shift from analog to digital imaging. These case studies highlight the sharp decline of both companies which were once fierce rivals that led to the obsolescence of both companies.

Tripsas & Gavetti (2000) studied the influence of managerial cognition on the evolution of capabilities and its contribution to organisational inertia, and thus the ability to sense, seize and reconfigure capabilities at Polaroid. Polaroid was founded in 1937 by Edwin Land, who developed the technology of light-polarising filters. However, it was Edwin Land's dedication to instant photography that made the Polaroid brand famous. Polaroid launched the first instant camera in 1948; the company focused primarily on this capability since then. The company showed a remarkable performance with an annual average growth rate of 23% from 1948 to

1978 and was the undisputed leader in the analogic instant imaging market throughout its history (Tripsas & Gavetti, 2000). For most of its life, the company was technology-driven with a patent position that could be considered a valuable, rare, difficult-to-imitate, and non-substitutable (VRIO) asset. In 1976, Polaroid sued Kodak for patent infringement; in 1991, after a long court battle, Kodak provided Polaroid with a compensation payment of \$924.5 million, which was the highest dollar amount ever awarded for patent infringement at that time. This pushed Kodak out of the U.S. market. Thus, holding more than 500 patents and no longer facing any significant competition, Polaroid took complete control of the entire instant photography market (Suddaby et al., 2020; Zuzul & Tripsas, 2020).

The case studies document how the Polaroid Corporation maintained a set of beliefs that led to the development of its core capabilities (Suddaby et al., 2020; Tripsas & Gavetti, 2000). However, these firmly held beliefs limited the managerial cognition of the market. The company became trapped in its own vision and turned its core competencies into core rigidities (Heracleous et al., 2017; Leonard-Barton, 1992; Suddaby et al., 2020; Tripsas & Gavetti, 2000). Some of the company's beliefs did change over time, for example, their move from technology to marketing-driven product development. Polaroid also eventually abandoned its historical belief that success resulted from long-term, large-scale research projects (Tripsas & Gavetti, 2000). During the 1980s Polaroid did increase its number of patents and developed leading-edge technical capabilities in digital imaging. By 1989, the company was well-positioned to develop a leading-edge digital camera. However, many of the original core beliefs remained throughout the company, for example, the value of an instant print, "photographic" quality, and the razorblade business model¹ that distorted managers' vision of the market and kept them distracted from the critical industry disruptions introduced by digital technology. Polaroid's core capabilities had clearly become core rigidities (Heracleous et al., 2017; Leonard-Barton, 1992; Nonaka et al., 2000; Teece, 2019).

However, Polaroid was not the only company that appeared to be unaware of the disruptive changes occurring in this market. Its competitor, Kodak, also suffered from its own success. Eastman Kodak Company was founded in 1880 and developed the first snapshot camera in 1888. Kodak invested heavily in film technology and was one of the few companies prepared to succeed when colour photography was introduced. In 1962, the company achieved \$1 billion in sales, and by 1976 it had achieved more than 85% of the U. S. share of both the film and

¹ The razorblade business model consists of a strategy in which a razor (for example) is sold at a very low price or offered at zero cost; the customer will then be required to buy blades of the brand, as these will be the only ones compatible with the razor.

camera markets. In 1981, Kodak had achieved \$10 billion in sales. The Kodak brand became the gold standard for high-quality in the analog photo industry (Lucas & Goh, 2009). In the early 1990s, Kodak was prepared to take the lead in the imminent digital imaging revolution (L. Wang et al., 2018). Between 1991 and 1993, Kodak invested more than \$1.3 billion per year in research and development and was recognised as an industry innovator in core digital camera technologies.

Lucas & Goh (2009) developed a case study on Kodak in order to understand how existing companies respond to disruptions in the market, particularly those that challenge their successful business models. The authors concluded that “one of the key failures at Kodak was the inability of the organisation to bring about change: it was not able to marshal dynamic capabilities for change or successfully counter core rigidities” (Lucas & Goh, 2009, p. 53). Kodak was so successful in developing and promoting high-quality film and printing paper products that managers were not open to change. Digital cameras were not considered an important product unless they were related in some tangible way to the more traditional products (Lucas & Goh, 2009; Schoemaker et al., 2018; L. Wang et al., 2018). Although Kodak had several important capabilities, “its capabilities in film overshadowed those in digital processes” (Lucas & Goh, 2009, p. 53).

Despite its previous success, Kodak’s organisational culture, especially the beliefs of some of the employees (nb: top management emphasised the company’s very people-centred culture and technological skills) inhibited its capacity to react effectively to a critical disruption in the market (Lucas & Goh, 2009; L. Wang et al., 2018). This is yet another example of “incumbent inertia” (Lieberman & Montgomery, 1988, p. 48). Similar to Polaroid, Kodak’s core capabilities were transformed into core rigidities (Heracleous et al., 2017; Leonard-Barton, 1992; Nonaka et al., 2000; Teece, 2019; L. Wang et al., 2018).

Another example of a company that had difficulties with adapting to changes in the market is Smith Corona, formerly one of the world’s leading manufacturers of typewriters (Danneels, 2010). In 1980, Smith Corona owned about 50% of the market share of typewriters in the U.S. At that time, the company employed 4000 workers and shipped over one million typewriters per year. Despite its long history of success in the field, in 2001 Smith Corona filed for bankruptcy. Smith Corona is a powerful example of a company that was forced to renew its resource base because of disruptive changes in the market, in this case, changes that rendered its core product—typewriters—obsolete. The demand for this product declined rapidly because of the development and availability, democratisation, and distribution of personal computers and word-processing software.

Danneels (2010, p. 2) analysed the last two decades of the life of Smith Corona and examined how the company “attempted each of the various modes of dynamic capability: leveraging existing resources, creating new resources, accessing external resources, and releasing resources”. Danneels (2010) provided two reasons to explain Smith Corona’s failure to correct its resource cognition with respect to brand and customer understanding, despite failures that accumulated over an entire decade. First, no matter how many failed attempts were made to leverage the brand, the belief that the brand would eventually drive the company's renewal was never challenged. The second was the lack of a culture of constructive conflict between senior management and the board; the chief executive officer did not tolerate dissenting ideas. This lack of constructive conflict protected the development of an inadequate knowledge base that was neither challenged nor questioned despite an abundance of evidence.

An analysis of the Xerox Palo Alto Research Center (PARC) case also highlights difficulties faced by incumbent companies that have been historically successful with a particular product or business model and their inability to adapt to or even anticipate critical market disruptions. Innovation is well-recognised as a critical factor that promotes growth, differentiation, and performance; companies must be able to develop new solutions that respond to market needs. At Xerox PARC, tension arose between those who supported the exploration of new products and those focused on the exploitation of existing products, particularly given the ongoing pressures for business efficiency. The Xerox PARC case provides insight into the value of implementing structural ambidexterity, how it works in practice and the organisational challenges faced by companies seeking to develop this capability. Heracleous et al. (2017) developed a case study on Xerox PARC which helps us to understand corporate dysfunctions that can inhibit the implementation of structural ambidexterity as a dynamic capability.

While Xerox was founded in 1906, the 1959 launch of the Xerox 914, which was the world’s first automatic commercial plain-paper copier, led to its exponential growth. From 1959 to 1968 sales grew from \$32 million to \$1.1 billion per year, and the number of employees from 900 to 24,000. By 1970, Xerox owned 95% of the global copier market with gross margins between 70 and 80%. At that time, Xerox created the Xerox Palo Alto Research Center (Xerox PARC) as an exploratory subsidiary. It was strategically located in California and was tasked with creating the technologies that would enable Xerox to prepare for the future paperless office. By 1980, Xerox had already achieved record sales of \$8.2 billion, with the copier business accounting for 94% of this revenue. Given the success and overall market share held by its copier business, a dominant logic developed that was focused on leveraging this business even further. At the same time, Xerox PARC's technological innovations were radically

different from those that were in use for commercial products and were perceived to be of very little relevance to the copier business. In addition, these innovative technologies by nature were associated with a high degree of uncertainty; thus, it was difficult to determine their long-term commercial potential. The difficulties inherent in efforts to measure the potential of innovative products remained a problem for Xerox, as the company believed that each newly-developed product needed to be a rapid sales and profitability success to justify ongoing investments in research and marketing.

Xerox was characterised as a highly complex and bureaucratic organisation. This led to delays in decision-making and situations in which responsibilities were unclear. With a dominant market share and high levels of risk aversion, Xerox was not prepared to launch innovative products that had no clear market and potential that was difficult to assess. Furthermore, Xerox PARC was located almost 5,000 km from the parent company. The difference in corporate cultures could not be greater; the dress code at PARC was relaxed and informal, and employees enjoyed a high degree of autonomy. By contrast, the parent company on the East coast had a formal and hierarchical culture with formal business attire at all times as well as rigid processes and rules. The tension between the two branches became a permanent fixture of the organisation, which meant that knowledge that flowed easily within PARC was not transferred to the parent company, thereby further isolating PARC. Similarly, the lack of communication between the parties prevented market information from flowing directly to the PARC staff. As a result, PARC innovations were not commercialised. While Xerox engaged in several meetings with the hope of bringing the units closer together, this did not meet with success. Using the logic of ambidexterity as a dynamic capability, the authors found that dysfunctions within the organisation compromised its potential for structural ambidexterity.

In reality, Xerox sensed that the market was about to undergo a major disruption and had the vision to create an independent new business unit that was separate from the core business and tasked with promoting innovation; the intent was to avoid contaminating the business that contributed most to the company's revenue and results. A culture of innovation was quickly implemented, and over time PARC actually developed exceptional, disruptive, and groundbreaking inventions. However, Xerox was unable to absorb these innovations and integrate them into its portfolio of product offerings. The authors attribute this inability to competency traps that seriously compromised Xerox's ambidexterity capability. One of the competency traps was reflected in the barriers that prevented senior managers from appreciating the enormous commercial and differentiation potential of many of these disruptive innovations.

Top managers were also discouraged from promoting innovative but potentially lower-profit products because of objectives on which their annual bonuses depended.

Heracleous et al. (2017) argue that their analysis showed that

“Xerox as a corporation lacked dynamic capabilities as defined by Teece (2007); the ability of a corporation to sense opportunities and threats, seize opportunities, and reconfigure its operations as needed to accomplish sustainable competitive advantage. The lack of dynamic capabilities led to what Lieberman and Montgomery (1988) refer to as ‘incumbent inertia’, organisational inflexibility arising from such conditions as asset lock-in, organisational routines and political dynamics (p.336).”

The authors stressed the importance of the role played by top management in the transformational capability of the company. They noted that, when faced with market changes, “dynamic capabilities of sensing, seizing and performing may be put into action (to the extent that they are indeed present in an organisation). However, if managers see technology inventions as unrelated to current capabilities and offerings, then the cognitive, organisational and behavioural dimensions of competency traps come into play and divert attention away from these inventions and the prospects of commercialisation” (Heracleous et al., 2017, p. 336). Unfortunately for Xerox, the company was unable to integrate the disruptive innovations made by PARC. This provided other companies with the opportunity to take advantage of these innovations, as was the case with Apple (Schoemaker et al., 2018). Clearly, Xerox’s core capabilities transformed into core rigidities (Heracleous et al., 2017; Leonard-Barton, 1992; Nonaka et al., 2000; Teece, 2019).

All four of these cases have several factors in common. As a group, these companies suffered from what Montgomery & Lieberman called “incumbent inertia” (Lieberman & Montgomery, 1988, p. 48). Incumbent inertia results from the fact that these companies achieved so much of the market share in certain product categories that they became hostages of their own success. While each had powerful core capabilities, these ultimately became competency traps. In these cases, core capabilities became core rigidities (Danneels, 2010; Heracleous et al., 2017; Leonard-Barton, 1992; Nonaka et al., 2000; Teece, 2019; Tripsas & Gavetti, 2000; L. Wang et al., 2018). Although the companies had powerful resources and capabilities, and did have the capacity for sensing and even seizing opportunity, the top management was unable to undergo the necessary transformation that would permit the company to adapt and prosper in the face of market disruptions. In short, the capabilities they possessed were not dynamic; thus, the companies were unable to sustain their earlier competitive advantage.

As noted by Williamson (1999), the analysis of these failure stories provides us with precious information on the trajectories of once-successful companies that were unable to adapt to radical changes in the market. It is, in a way, the performance of an autopsy intended to investigate the reasons why the company or core business died.

Similarly, analyses of successful companies, including those with great vitality that continue to prosper in the face of high uncertainty and fierce competition, provide us with powerful insights into the nature and existence of dynamic capabilities and the ability to create sustained competitive advantage.

As one example, Song, Lee, & Khanna (2016) developed a clinical study on Samsung Group that describes how this company became a smartphone market leader. The authors performed a decade-long research study at Samsung Group based on data collected both from internal and external sources that included interviews with more than 80 senior executives. The authors also interacted with Samsung executives engaged in executive education programmes. This is an important case because Apple's iPhone was launched in 2007 and quickly became a global success. This caught the mobile phone industry, including Samsung (Song et al., 2016; J. Wang et al., 2016), Nokia (Schoemaker et al., 2018; Teece et al., 2016; Vuori & Huy, 2016; J. Wang et al., 2016), BlackBerry (Schoemaker et al., 2018; J. Wang et al., 2016) by surprise.

Samsung had a strong base in traditional feature phones and was not prepared for the disruption caused by the introduction of smartphone technology into the mobile communications industry. The first Android-powered device was launched as a partnership between Google and T-Mobile in September 2008. In 2011, Android became the world's best-selling operating system, driven largely by Samsung smartphones (and the simultaneous decline of Nokia's Symbian operating system) (Giachetti & Marchi, 2017). Samsung launched its first Android-based smartphone, the Galaxy S, in May 2010; three years later, Samsung would reach global market leadership in smartphone sales. By 2013, Samsung had a global market share of 32%, compared to Apple's market share of 15% (Song et al., 2016). Song et al. (2016) argue that Samsung achieved market leadership because of the development of its dynamic capabilities, particularly its capacity to engage in "co-opetition".

Co-opetition is a term inspired by game theory that involves simultaneous cooperation and competition between two entities. Although most earlier studies focused on co-opetition between firms, Song et al. (2016) developed their research findings based on a programme of internal co-opetition at Samsung. The authors argue that internal cooperation between business units can promote relationship-specific investments, particularly in groups that are vertically integrated. Internal cooperation also stimulates sharing of knowledge and learning between

different departments in the same company, thereby enhancing its innovation capabilities. At the same time, internal cooperation can degrade organisational flexibility, especially when there is an obligation to rely solely on internal transactions.

By contrast, internal competition between different business units enhances institutional flexibility as it encourages employees to improve their performance for the good of the company. However, internal competition can lead to duplication of investments, strategic misalignment, and conflicts between business units; this can lead to a loss of team spirit, overall unity, and economies of scale. However, although internal competition can result in the cannibalisation of existing products and businesses, it may also lead to competitive advantage (Danneels, 2016; Giachetti & Marchi, 2017; Harreld et al., 2007; Schoemaker et al., 2018; Song et al., 2016; Teece, 2007, 2018b).

With respect to competition, Samsung introduced a dual-sourcing system in which its affiliates were encouraged to purchase components both internally and externally; at the same time, the component-making affiliates were also encouraged to sell their products outside the company. The implementation of this dual-sourcing model enhanced the development of dynamic capabilities at Samsung. The fact that it allowed its managers to function with this level of competitive intensity led the company to intensify its sensing and seizing capabilities. The authors emphasised that the third cluster of dynamic capabilities (i.e., transforming) gains particular prominence because “reconfiguration of existing capabilities is of a broader nature than has traditionally been emphasised by the DC literature, as it includes seeding the ecosystem appropriately to permit a more expansive set of possibilities for future imagined reconfigurations, not just current ones” (Song et al., 2016, p. 27).

In its efforts to foster the development of new technologies, Samsung frequently promotes internal competition so that different teams are tasked with the development of the same product or technology; this is especially important in cases in which there remains uncertainty regarding which technology is the most suitable for a particular project. While intense internal competition can lead to mismatches between competing units, duplication of work, and thus waste of resources, when properly managed, internal competition fosters rapid development and increases knowledge diversity while minimising adverse effects. In addition, this parallel development model motivates a break with previous practices and facilitates change, thereby preventing organisational inertia and promoting a competitive culture that results in the “survival of the fittest”. Song et al. (2016) conclude that by fostering internal co-operation through dual-sourcing and parallel development, Samsung “amplified its sensing capacity, seized new business opportunities faster and captured values with co-specialised assets, and

promoted asset orchestration and corporate renewal to adapt to rapidly changing environments” (Song et al., 2016, p. 121).

Song classifies Samsung's ability to manage simultaneous co-operation and competition between business units as a dynamic capability. Co-opetition has facilitated Samsung's successful reinvention of itself and achievement of market leadership. Several other existing companies also exhibit dynamic capabilities, for example, Apple and Google, which have both experienced sustained competitive advantages over time. Apple and Google have even entered the automotive industry. Although this industry has several new entrants, for example, Tesla, Apple and Google intend to present disruptions to the incumbent market (i.e., traditional car manufacturers) (Schoemaker et al., 2018). In a VUCA world, strong dynamic capabilities will be needed to build sustained competitive advantage (Millar et al., 2018; Schoemaker et al., 2018).

CHAPTER 4

Contextualisation: the Auto Parts Market

Automobiles have historically had the role of transportation of people and goods, but in fact, they also have always been an object of worship. Especially in the post-war period, the world watched the development of cars that led to new designs, higher performance and greater comfort. The 1950's and 1960's marked its democratisation, with the launch on the market of more economic, and in some cases simultaneously charismatic models, some of them becoming real icons (Fiat 600, Volkswagen Beetle, Citroën 2CV, Renault 4L, [British Motor Corporation] Mini, to name few). Soon, with the development of marketing and supported by new ways of mass communication – like radio and television – each family aspires to have its own car.

On the other hand, luxury car manufacturers exhibit true works of art combining design, comfort, performance and safety, that are used to express their owners' economic and social status (Aston Martin DB4 GT Zagato, Aston Martin DB5, Ferrari 250 GT, Alfa Romeo 33 Stradale, Jaguar XK120, Bentley R-Type Continental, BMW 503 Cabriolet, Maserati 3500 GT Vignale Spyder, Mercedes-Benz 300SL, Porsche 911, to name few).

By the end of the 20th century, most of adult population in the western world owned a car. However, the 21st century brings new challenges, triggered by increasing environmental concerns, especially among younger generations—Millennials (born 1980 or later)—and Generation Xers (1965-1979)², and the exponential development of the new technologies. The automotive industry, which in spite of its association to continuous (incremental) innovation has been relatively stable in the past 100 years, is now expected to face several major disruptions in the short to medium run (Capgemini, 2022; KPMG International, 2021; Roland Berger GmbH and Lazard & Co. GmbH, 2017).

4.1. The automotive industry

The automotive industry is one of the best performing sectors worldwide; it has a very relevant role in the global economy, and one of the main drivers of macroeconomic growth (Klink et al., 2013; Laborda & Moral, 2020). The impact of the automotive industry goes beyond its core activity (automobiles and parts manufacturers), to involve other businesses both upstream and

² Classification according to Lyons, Schweitzer, & Ng (2015).

downstream, leading “to a multiplier effect for growth and economic development” (Klink et al., 2013, p. 2). Figure 4.1 presents some of the main businesses directly or indirectly related to the automotive industry.

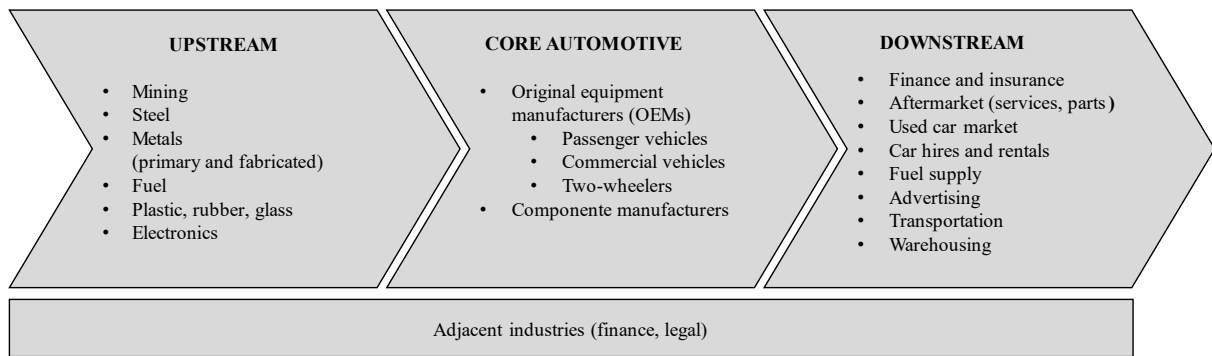


Figure 4.1. The core automotive industry supports upstream and downstream industries (Klink et al., 2013).

The automotive industry accounts for about 3% of global Gross Domestic Product (GDP), and at the country level, generates government revenue through taxes, fosters economic development and encourages people development (Klink et al., 2013).

Car sales had been growing consistently since the turn of the century. However, in 2020, the covid-19 pandemic led to a historic drop in sales (Statista, 2022), from which the market is still recovering, as shown in Figure 4.2.

Even before these most recent disruptions, relating to Covid 19 and the war in Ukraine, much was being written about the so called “paradigm shifts” happening in the automotive industry: the paradigm shift from personal car ownership to mobility as-a-service; the shift from internal combustion engine to electric vehicles; the introduction of autonomous cars; and the development of telematics, connected cars and Internet of Things (IoT).

4.1.1. From car ownership to shared mobility

Recent years have seen a change in individual consumer mobility behaviours, driven by environmental factors, the introduction of more stringent regulation, and technological advances (McKinsey & Company, 2016; Smith et al., 2022). Smith et al. (2022) refer to this trend as the paradigm shift from ownership to a Mobility-as-a-Service model (Smith et al., 2022). In addition to apps that allow a consumer, through their smartphone, to request convenient, fast and safe taxi services, with prior knowledge of the amount she will pay; other options such as car sharing or carpooling have also been on the rise (Smith et al., 2022). Many

cities across Europe have been investing in integrated public transport and mobility solutions, providing electric scooters or electric bicycles at zero or very low cost to encourage forms of travel with lower environmental impact, greater ease of urban mobility, with a simultaneous reduction in urban traffic.

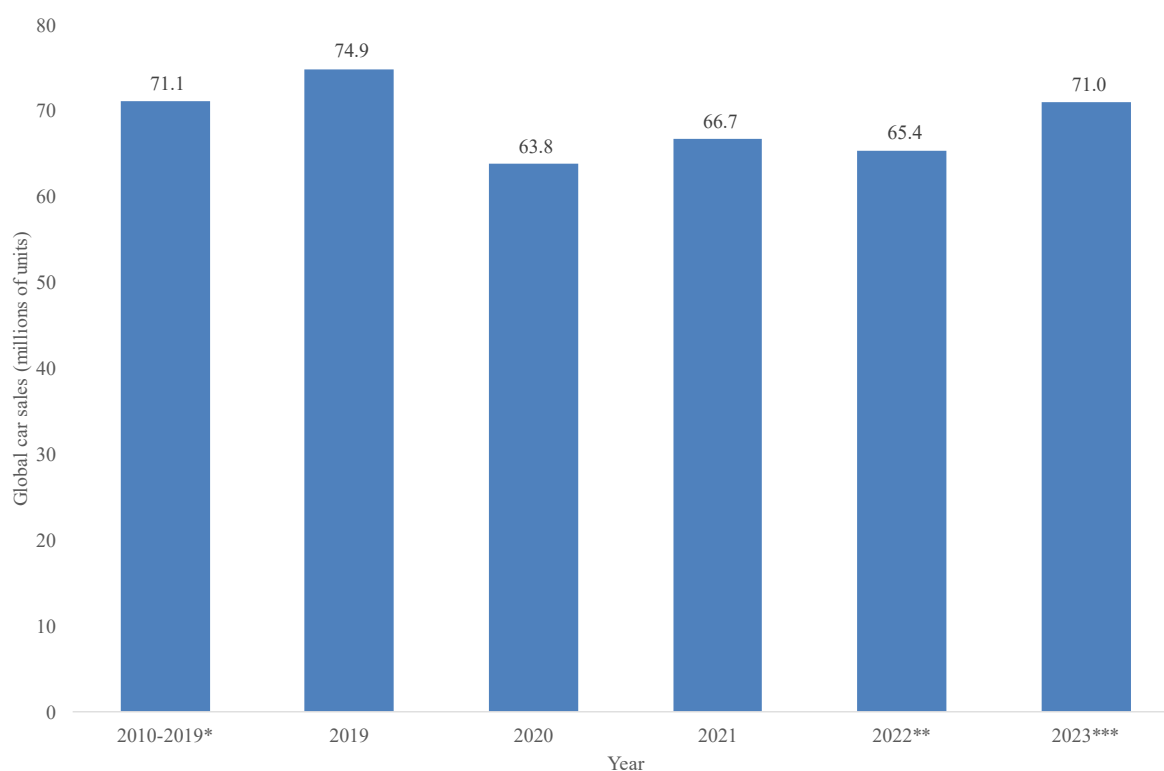


Figure 4.2. Number of cars sold worldwide from 2010 to 2022, with a 2023 forecast (in million units). In Statista.

Studies highlight the decreasing importance of car ownership in favour of mobility solutions, namely among the younger population (McKinsey & Company, 2016; Smith et al., 2022). Forecasts suggest that this shift towards mobility solutions could lead to ten per cent of new cars sold in 2030 being car sharing vehicles (McKinsey & Company, 2016).

4.1.2. From internal combustion engine to electric vehicles

For over a century, the automotive industry has been marked by the absolute dominance of the internal combustion engine (ICE). Now, the automotive industry is focused on the development of electric motor technology. The considerable success of Tesla, coupled with global environmental concerns and increasingly restrictive legislation, have condemned the combustion engine to villain status. In fact, the increasing electrification of cars is one of the

biggest trends in the automotive industry and is expected to translate into a major impact in the automotive aftermarket (Kempf et al., 2021).

Studies involving market projections to 2030 estimate the share of passenger vehicles with partially or fully-electric powertrains (xEV) to be between 10 per cent in the US and 24 per cent in China (Kempf et al., 2021). This shift to electric technology involves significant changes in terms of components and the technical skills for car construction and maintenance. In particular, battery electric vehicles (BEVs) are expected to have a significant impact on the parts business, as they have fewer moving parts, fewer wear parts and therefore lower repair costs.

Cars based on plug-in hybrid electric vehicles (PHEVs) and hybrid electric vehicles (HEVs), being hybrids, are more complex, as they have both an electric motor and a combustion engine, as well as a more complex transmission system. The aftermarket may still temporarily benefit from hybrid technology, given its complexity relative to pure electric cars; and as electric technology is still new, the expectation is that it will still take a few years before engines with this technology enter the relevant age of the aftermarket.

4.1.3. Autonomous cars

The topic of autonomous cars has sparked a lot of interest among consumers (Markwalter, 2017). Consumers have the expectation that autonomous driving will bring more safety, reduce driving stress and free the driver to think about other things, or even occupy themselves with other activities while on the move. In the US, for example, every year around 30,000 people die, and many more are injured, due to road accidents, most of which are caused by human error. It is estimated that the implementation of self-driving cars could lead to the elimination of around 90% of these deaths and injuries (Markwalter, 2017).

Not surprisingly, traditional car manufacturers are engaged in the development of autonomous driving cars, but new players like Google and Uber are already positioning themselves in this market. Entertainment companies are allegedly also starting to think about the potential of such cars, as every person becomes a passenger and so a potential consumer of their services.

4.1.4. Telematics, connected cars and Internet of Things

Several vehicles are already equipped with sophisticated sensors that can monitor not only miles driven, location, and routes used but also a person's driving behaviour as well as vehicle data such as oil temperature, brake wear, and tire pressure (Löffler et al., 2016). This technology is

enabling a host of new applications that are meeting customer demand for convenience, safety, and security features; advanced vehicle maintenance; and better fleet management. Regarding maintenance services, for instance, customers can expect remote-vehicle diagnostics and predictive/automated maintenance services based on aggregated data (Löffler et al., 2016). Car makers will have access to all the information about each car and driver behaviour, and each time the car needs maintenance or repair, it will communicate to the car maker. In turn, the car maker will prepare all the spare parts needed and send them to the official workshop. When the car arrives at the workshop (and if it is a self-driving car, it can go while the owner is at work or sleeping), all the parts will be available for the maintenance.

4.2. The auto parts business

In addition to car sales, after-sales services are a high-margin business, and they contribute with a large slice of corporate profits (Cohen et al., 2006; Laborda & Moral, 2020). According to Johnson (2003) although accounting for only 25% of revenue, services contribute with 45% of gross profit in the automotive retail business. Cohen et al. (2006) refer the example of GM, where the relative income resulting from after-sales revenues in the value of \$9 billion was higher than the profits obtained from \$150 billion on car sales. Importantly, despite the age of this data, this is still the standard in this market. Some studies have revealed a correlation between stock prices and the quality of after-sales services provided (Cohen et al., 2006). In fact, Cohen et al. (2006) propose that one way to evaluate the loyalty of clients is to ask them to evaluate the company's after-sales services (Cohen et al., 2006).

An inseparable part of after-sales services is the spare parts business. According to Breitschwerdt, Cornet, Kempf, Michor, & Schmidt (2017) in Europe around 45% of total aftermarket revenues come from the service business (maintenance and repair of vehicles), while retail and wholesale of spare parts contribute with the remaining 55%. The authors stress the role played by the two businesses in the overall automotive industry, representing about USD 760 bn of revenues globally in 2015, which corresponds to around 20% of total automotive revenues, one of the most profitable subsector of this industry (Breitschwerdt et al., 2017).

The stakeholders related to the aftermarket are generally divided into Original Equipment Manufacturer (OEM)—the parts applied in the assembly line during the manufacturing of a new car – and the Independent Aftermarket Manufacturers (IAM)—parts made by companies other than the OEM, that can be used in maintenance or to repair the car after it comes out of the factory. Figure 4.3 shows the five main stakeholder groups that comprise the automotive

aftermarket, and the two supplier models (OEM and IAM). Parts manufacturers refer to OEMs (car manufacturers), automotive suppliers (that produce parts for OEMs, but also have their own independent supply chain) and generic manufacturers. Another stakeholder group is parts distributors, that include OEM's own affiliated distributors, powerful buying groups, independent distributors and online distributors. Workshops include OEM garages and franchised dealers, auto centres and fast fits, workshop networks (system chains) and small garages. Intermediaries involve insurance companies, automobile clubs, leasing companies and routing portals. Finally, end customers are the stakeholders group that refer to the private, business, and fleet market. This business is traditionally highly fragmented and intermediated, as can be seen in Figure 4.3. Every stakeholder has a role in the supply chain, with different approaches regarding the service provided.

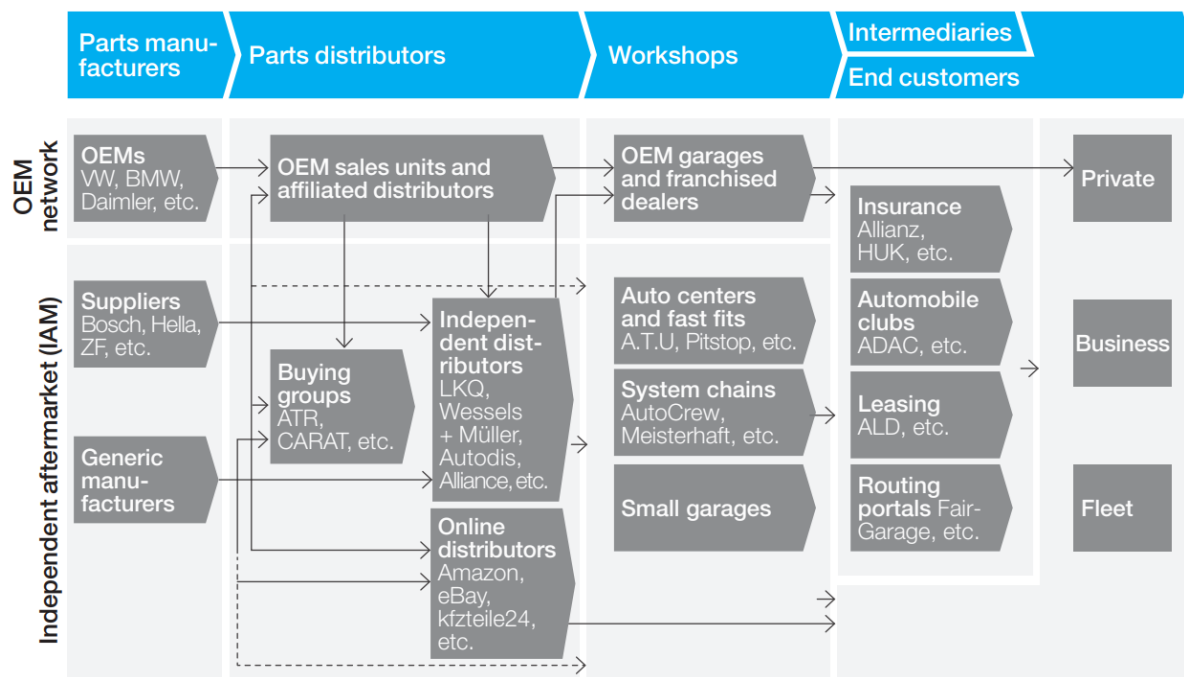


Figure 4.3. The aftermarket's five stakeholder groups and two supplier models (OEM, IAM) (Breitschwerdt et al., 2017) .

4.2.1. The automotive industry disruptions and the potential impact in the parts business

The disruptions happening in the automotive industry are expected to significantly change the aftermarket landscape. The changing trends in the aftermarket are associated with three categories: changing consumer expectations and value creation; entry into the next-generation vehicle market; and changing competitive dynamics (Kempf et al., 2021).

Figure 4.4 highlights the short, medium and long-term trends that are expected to impact the aftermarket. The potential impact of disruptions in the automotive industry on the aftermarket are shaded in grey.

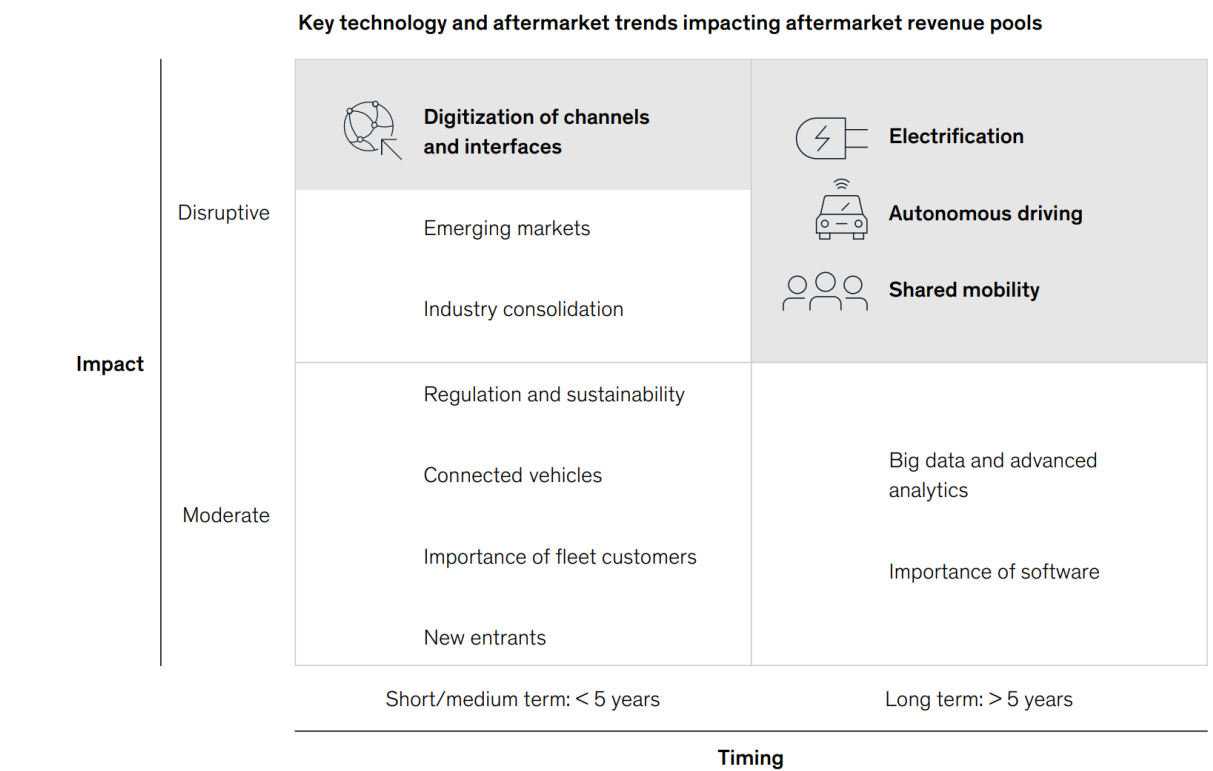


Figure 4.4. Key technology and aftermarket trends impacting the aftermarket business (Kempf et al., 2021).

New mobility concepts, including the growing trend of shared mobility, have been changing the ownership concept to a Mobility-as-a-Service logic, creating new data-driven business models for aftermarket players (Kempf et al., 2021). There is a very strong link between the three trends of electrification, autonomous driving and shared mobility. Shared vehicles have acted as a precursor to autonomous driving, and the much lower maintenance needs of electric vehicles make them even more appealing for commercial fleets. Predictably the increase in shared mobility will decrease the number of cars on the road, but autonomous vehicles are estimated to see higher mileage per vehicle. All these transformations create the conditions for new players to enter the market namely in what concerns fleet management.

The electrification of cars is expected to cause a reduction in the consumption of certain types of parts and components: accessories, brakes, electrical/electronic starter batteries, electrical/electronic starters and alternators, fluids, and traditional powertrain combustion

engine parts. In the opposite direction, electrification should increase demand for powertrain electrified-vehicle parts, thermal parts, and tires.

Autonomous driving will predictably reduce the frequency of collisions, which will cause lower consumption of body parts, but on the other hand should result in a higher demand for advanced driver assistance system (ADAS) components.

The digitisation of interfaces and channels will lead to new revenue opportunities for aftermarket players who move quicker than their counterparts. New platforms and channels can be expected to emerge. For components where replacement is not urgent, there may be price pressure.

Table 4.1 shows the main categories of components that will probably be affected by each of the main four industry trends in the aftermarket.

Table 4.1. The four industry trends and the impact on individual component categories (Kempf et al., 2021).

Category	Components	Electrification	Autonomous driving	Shared mobility	Digitalization of channels and interfaces	Commentary
Accessories	Accessories, appearance accessories, handling and performance accessories, wipers	↓	↓	↓	↓	Lower modification opportunities for electric and autonomous vehicles; homogeneous shared fleets
Body and paint	Collision repair parts		↓			Reduced collision frequency
Chassis – brakes	Brake parts	↓			↓	Reduced wear and tear due to recuperation and anticipatory driving of AV
Chassis – driveline, suspension, and steering	Suspension and steering parts, driveline parts	↑				Increased weight burden increases replacement frequency
E/E – ADAS	Camera, LiDAR, radar, ultrasonic, central processors		↑	↑		Increased share of autonomous vehicles in the car parc ³

³ Car parc refers to the number of light cars in a region or market and is typically used to measure capacity within a market or region for after sales.

Category	Components	Electrification	Autonomous driving	Shared mobility	Digitalization of channels and interfaces	Commentary
E/E – other modules, sensors, and electrical components	Electronic modules, electrical parts, sensors, ignition parts, lights and lamps				↓	Impacted by the emergence of digital sales channels
E/E – starter batteries	Starter battery	↓	↑			Decreased replacement rate for HEVs and PHEVs; increased requirements for redundancy in AV systems
E/E – starters and alternators	Starter, alternator, hybrid machines	↑				Increased demand for hybrid machines outweighs negative impact of higher BEV share without S&A
Fluids	Motor oil, antifreeze, brake fluid, power steering fluid, additives, chemicals	↓				No motor oil required for BEVs; longer service intervals
Powertrain – ICE parts	Engine parts, exhaust system parts, transmission parts and clutches, spark plugs, belts, filters	↓			↓	Reduced ICE share in the car parc
Powertrain – xEV parts	Electrification parts, HV battery, LV battery	↑		↑		Increased xEV share in the car parc
Thermal	Radiator and engine cooling parts, EV cooling system, air-conditioning parts	↑			↓	Increased air-conditioning performance outweighs decreased replacements for radiator and engine cooling
Tires	Tires	↑	↓		↓	Increased weight requires enhanced tire characteristics; decreased wear and tear for AV due to anticipatory driving

Notes.

ADAS: Advanced driver-assistance systems; E/E: electronical/electric; ICE: Internal combustion engine; xEV: Passenger vehicles with partially- or fully-electric powertrains.

4.2.2. Current trends in the auto parts market

One of the most recent features of the auto parts market is that it has been undergoing concentration movements at the European level. These can be traced back to 2011, when the

American giant LKQ, which had no base of operations in Europe, acquired Euro Car Parts. LKQ entered the European market with a strategy of market consolidation and in a short amount of time became a major player in Europe, through a large number of distributor acquisitions. Supported by the investment fund BlackRock, in the following years LKQ would buy the British 100 years-old Andrew Page, the Italian Rhiag and Sator/Van Heck in Benelux. The Parts Alliance would eventually be bought in 2017 by another major US player, Uni-Select. Alliance Automotive Group (AAG) has also taken some steps in the same direction. Although its Groupauto network was already present in the UK before 2011, AAG developed a similar strategy through acquisitions. In 2015, AAG bought United Aftermarket Network (UAN) and in 2016, it bought BTN Turbo, Apec Braking, FPS, and at least 17 other parts distribution companies in the UK, representing 47 branches (Motor Factor, n.d.). Figure 4.5 schematically represents the increasing number of mergers and acquisitions that took place at European level between 2005 and 2017.

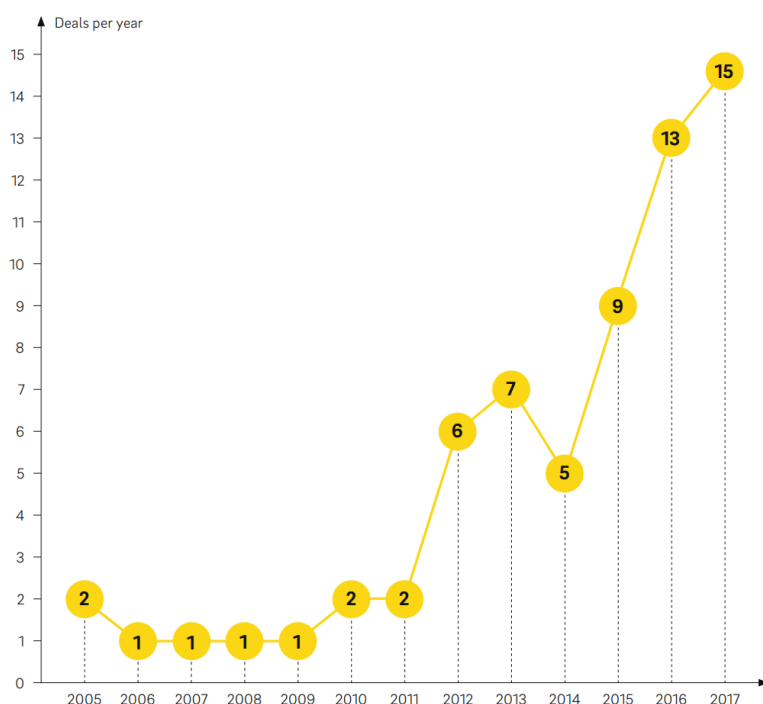


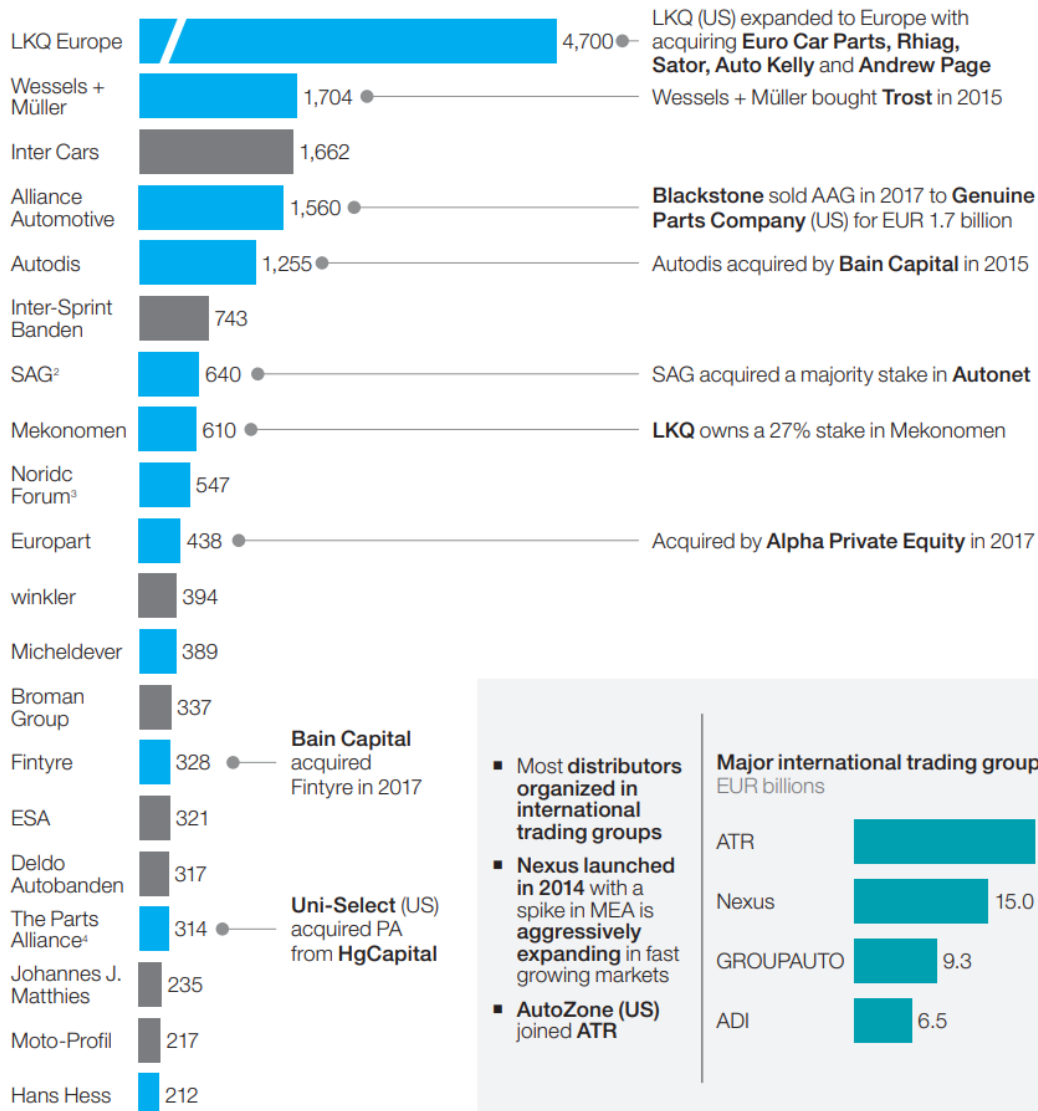
Figure 4.5. Mergers and acquisitions in the European IAM, 2005-2017 (Brenner et al., 2018).

These consolidation movements have been changing the distributor landscape in Europe. Figure 4.6 shows the largest auto parts distributors in Europe.

Largest auto parts distributors in Europe

Sales¹, EUR millions

■ Affected by M&A activities
(either private equity or merger)



¹ As of 2016 or latest available FY, partly estimates

² Including sales of Autonet

³ Nordic Forum comprises FTZ, Inter-team, and Hellanor, all owned by supplier Hella

⁴ Excluding revenue from non-consolidated entities

Figure 4.6. The distributor landscape in Europe has been changing due to strong consolidation activity by private equity and industry players (Heid et al., 2018).

4.3. The Portuguese automotive business

According to the Portuguese National Bank, in 2017 the automotive sector in Portugal represented 8% of total revenue (28 billion euros) and 4% of total workers (113 thousand) (Banco de Portugal, 2019). The new car sales market in Portugal had been growing

successively, reaching its peak in 2000 with 458.536 cars sold. Thereafter, it began a period of decline, which was particularly pronounced at the time of the Global Financial Crisis, and continuing in subsequent years, as shown in Figure 4.7.

From 2000 to 2012 the market for new car sales fell by more than 70%. Since 2012 the Portuguese market began to recover consistently, reaching almost 350 thousand units in 2018 and 2019 (*PORDATA - Ambiente de Consulta*, n.d.). However, due to the covid-19 pandemic, sales dropped dramatically in 2020. The pandemic also brought about a global disruption of the supply chain, with a major impact on virtually every sector, to which the automotive industry was no exception (Contractor, 2022; Hofstätter et al., 2020).

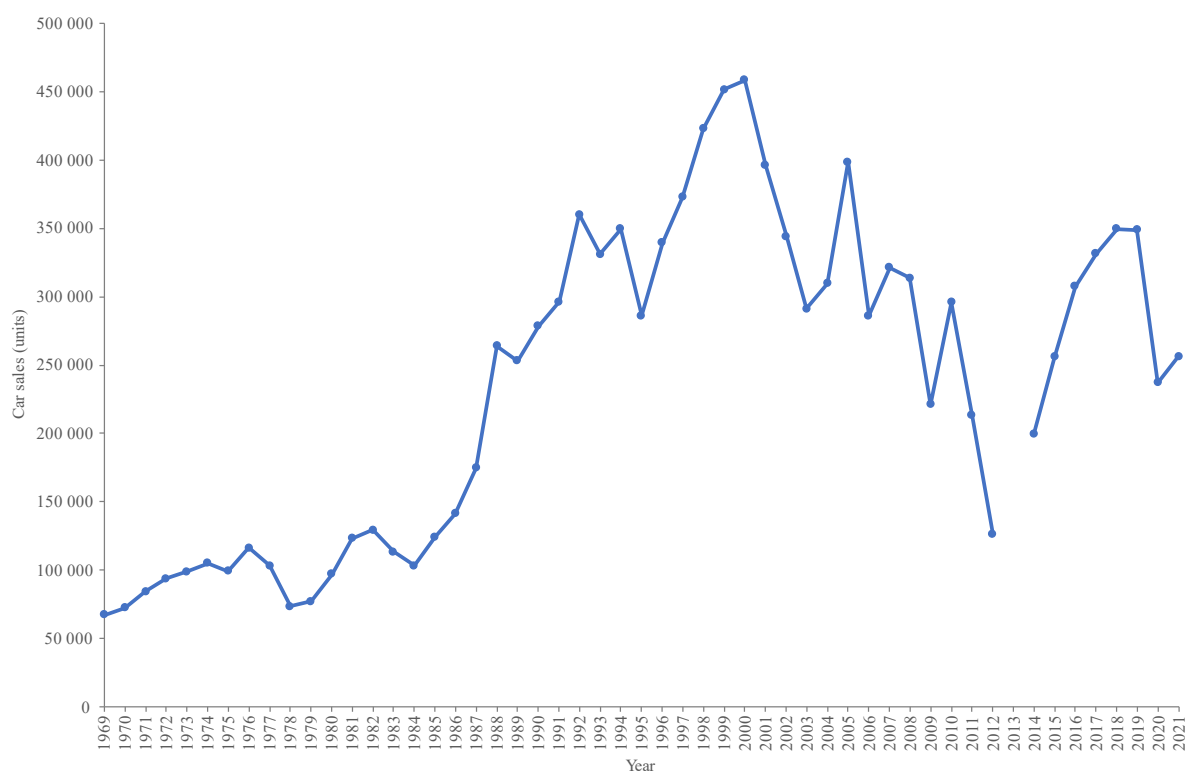


Figure 4.7 - Evolution of car sales in Portugal. In PORDATA.

Analysing the Portuguese aftermarket, in 2019 there was an increase of 4.2% in the turnover of companies with the Economic Activity Code of Maintenance and Repair of Motor Vehicles, but again 2020 saw a downturn (of 5.6%) due to the COVID-19 pandemic (Figure 4.8).



Figure 4.8. Aftermarket sales volume and its annual rate of change, based on Economic Activity Code of Maintenance (CAE) and Repair of Motor Vehicles (DPAI/ACAP, 2022).

Since 2015 there has been an increase in the vehicle parc of light vehicles. In 2020, despite the COVID-19 pandemic, there was a 1.6% increase in the vehicle parc of this vehicle category. It is estimated that the light vehicle parc in 2020 consists of 5,300 thousand light passenger vehicles and 1,140 thousand light commercial vehicles (Figure 4.9).

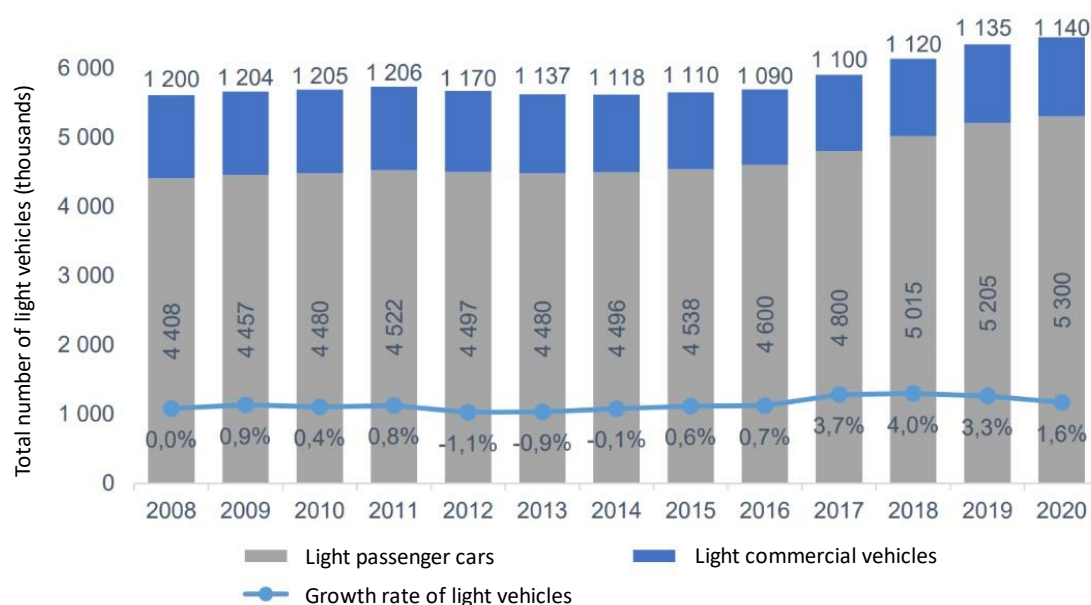


Figure 4.9. Evolution of the car parc of light vehicles 2008-2020 (DPAI/ACAP, 2022).

Figure 4.10 shows the evolution of the average age of the light vehicle parc in Portugal from 2000 to 2020. As can be seen in the figure, since 2000 the average age of the parc has been increasing every year. In 2020 the average age of the parc was 13.2 years for light passenger vehicles and 14.9 years for light commercial vehicles.

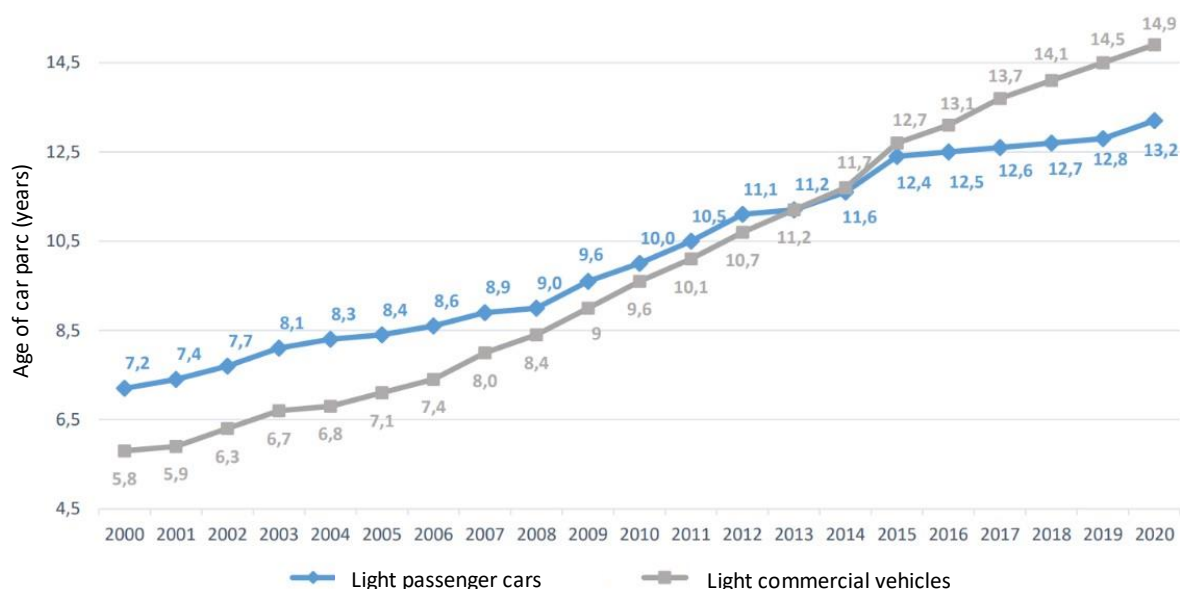


Figure 4.10. Evolution of average age of the light vehicle parc in Portugal 2000-2020 (DPAI/ACAP, 2022).

The Portuguese parc of light passenger vehicles thus underwent significant ageing from 2000 to 2020. In 2000, the vast majority of the parc of this type of vehicle was no more than 10 years old. In 2020 the trend was inverted and the majority of the parc was made up of vehicles more than 10 years old. In 2000 the average age of the Portuguese light passenger vehicle parc (7 years) was one of the lowest in the European Union. By 2020 the average age of this type of vehicle was one of the highest in the European Union.

In terms of the type of fuel or energy used by the cars sold, Portugal has seen a significant increase in the sale of electric and hybrid cars, with particular emphasis from 2017, as shown in Figure 4.11. In 2020, the majority of new passenger cars registered were gasoline-powered (44%), followed by diesel-powered vehicles (33%), and finally vehicles powered by other types of energy (23%). The latter encompasses hybrid electric, non-electric, 100% electric and natural gas vehicles. Compared to the previous year, gasoline and diesel vehicles lost market share to vehicles powered by less polluting energy types.

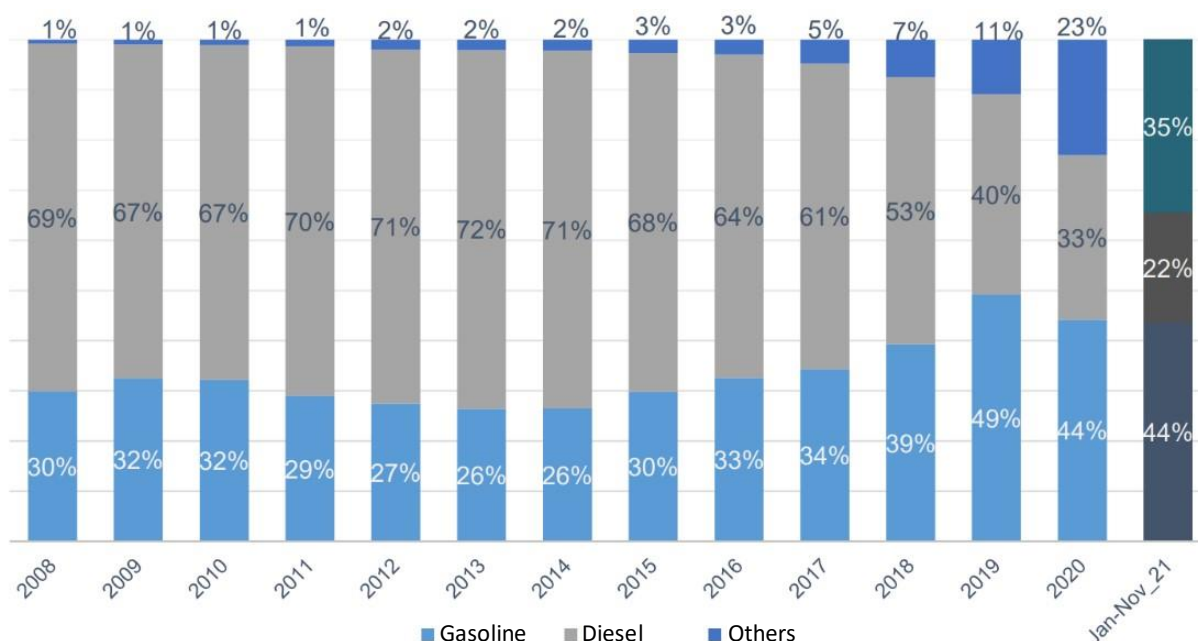


Figure 4.11. Sales of passenger cars in Portugal by type of energy (DPAI/ACAP, 2022).

The Independent Automotive Aftermarket Division of the Automobile Association of Portugal (DPAI/ACAP) (2022) projected the evolution of the car fleet in Portugal using an extreme scenario, in which vehicles with internal combustion engine would no longer be registered from 2022, in order to measure the impact on the composition of the parc until 2035 and consequently on the future of the parts business. Even in such an extreme scenario, vehicles using internal combustion engines would still represent 53% of the fleet in 2035. Applying a more conservative but realistic scenario, the estimate was that in 2035 the parc would still consist of 80% combustion engine vehicles (Figure 4.12). Confronting the conservative scenario with the more extreme scenario, one can conclude that the total electrification of the parc will likely be a slow process.

From January to September 2021, in terms of new electric vehicles registered, Portugal was in ninth place with 7.0% of electric vehicles in the total sales of light passenger vehicles. In the European Union, 7.6% of the registered vehicles correspond to vehicles powered by 100% electricity (Figure 4.13). In 2020 Portugal was in seventh position with 5.4%.

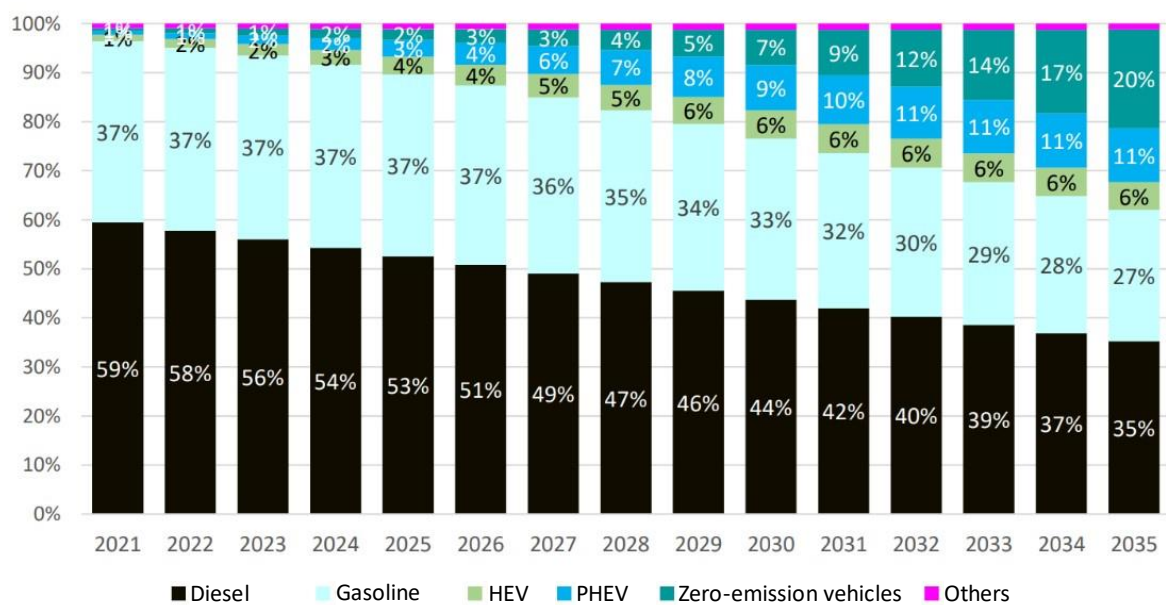


Figure 4.12. Evolution of car parc electrification 2021-2035, conservative scenario (DPAI/ACAP, 2022).

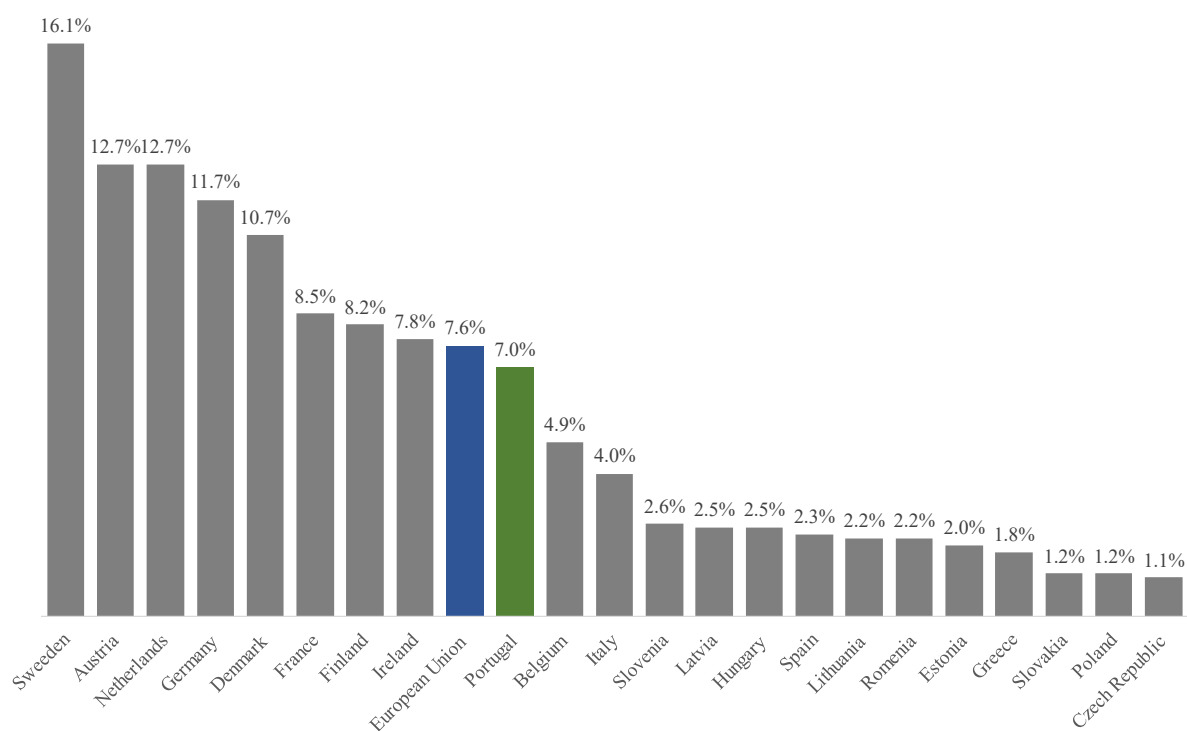


Figure 4.13. Electric vehicle sales as a percentage of total EU passenger car sales - January to September 2021 (DPAI/ACAP, 2022).

4.4. The Portuguese auto parts market

The Portuguese auto parts market is estimated at about €1.5 billion, which represents almost 1% of GDP. The market is highly fragmented, with the market leader holding a share of less than 4%. Table 4.2 lists the top 20 Portuguese auto parts distributors.

The auto parts business is also characterised by a high level of intermediation. The market has three main types of players in the business. The importer or wholesaler, who has the representation of the brands; the retailer, who buys from the importer and sells to the third type of players, the workshop, which then applies the parts. The retailer is, therefore, an intermediary, but one that still has a strong influence in the market.

The parts market, in particular the independent aftermarket (IAM), has three main critical success factors. The first is geographical proximity. Workshops are used to having up to 6 fast deliveries a day and to have so many deliveries and a fast response a parts distributor must have a warehouse nearby. The second critical factor is product range. A single car has about 30.000 parts, and 74% of car sales in Portugal correspond to 50 different models (ACAP, 2017), which makes range and stock management particularly difficult. Finally, price is a crucial factor. In such a mature market, there is always another competitor offering equivalent products at very competitive prices, and keeping high profit margins.

As in the rest of Europe, the Iberian Peninsula has also recently seen a number of merger and acquisition movements. Table 4.3 shows some of the mergers and acquisitions involving Portuguese companies since 2020.

Table 4.2 - Top 20 Portuguese auto parts distributors (adapted from Jornal das Oficinas (2022)).

#	Company Name	Turnover 2021	Growth 2021 vs 2020 (%)	Turnover 2020	Growth 2020 vs 2019 (%)	Turnover 2019	Growth 2019 vs 2018 (%)	Turnover 2018	Growth 2018 vs 2017 (%)	Turnover 2017
1	SOFRAPA AUTOMOVÉIS, S.A	74 471	9.3	68 151	-9.5	75 305	5.9	71 089	17.5	60 527
2	M. COUTINHO-PEÇAS E REPARAÇÃO AUTOMÓVEL, S.A	61 255	16.6	52 524	-7.6	56 873	11.7	50 925	12.6	45 226
3	CREATE BUSINESS-COM. E GESTÃO PEÇAS S.A.	52 941	18.8	44 552	-8.0	48 427	12.9	42 875	13.6	37 748
4	CENTRAUTO-COMPONENTES AUTO, LDA.	48 846	16.4	41 962	-3.5	43 498	3.5	42 010	3.9	40 426
5	AUTOZITÂNIA-ACESSÓRIOS E SOBRESSALENTES, S.A	42 344	20.4	35 162	-5.5	37 213	6.8	34 853	6.7	32 677
6	EUROMAIS-PEÇAS E PNEUS, LDA.	41 859	9.1	38 373	2.1	37 566	-3.5	38 939	12.8	34 518
7	J.P.L.R 1 UNIPessoal, LDA.	37 177	12.0	33 193	2.8	32 296	8.6	29 752	7.0	27 808
8	VAUNER TRADING, S.A	36 729	4.2	35 246	-8.8	38 656	-1.6	39 288	2.1	38 490
9	AUTO DELTA-COM. PEÇAS, ACESSÓRIOS E AUTOMÓVEIS, LDA.	33 866	17.0	28 947	3.9	27 852	12.0	24 872	10.0	22 608
10	NEWONEDRIVE- COMÉRCIO DE PEÇAS AUTO, S.A.	32 035	11.7	28 672	-12.8	32 895	230.7	9 947	1.7	9 780
11	MOTORBUS-REPARAÇÕES E PEÇAS AUTO, LDA.	27 980	59.2	17 575	23.4	14 243	21.7	11 706	20.3	9 729
12	BOMBOLEO, LDA	27 473	44.2	19 046	-8.7	20 862	3.5	20 157	0.3	20 095
13	TRW AUTOMOTIVE PORTUGAL, LDA.	25 895	12.7	22 980	-15.3	27 116	-2.7	27 877	0.6	27 714
14	LUSAVOUGA-MÁQUINAS E ACESSÓRIOS INDÚSTRIAS, S.A.	25 257	11.0	22 762	6.1	21 447	-5.2	22 621	15.6	19 560
15	KRAUTLI PORTUGAL-EQUIPAMENTOS PARA VEÍCULOS, LDA.	20 426	3.4	19 762	-9.5	21 832	6.6	20 479	7.6	19 041
16	CAETANO PARTS, LDA.	20 193	0.4	20 106	-14.9	23 614	-6.4	25 237	-3.1	26 040
17	FERDINAND BILSTEIN PORTUGAL, S.,A.	19 120	15.8	16 506	-2.3	16 895	5.0	16 095	1.1	15 920
18	EUROPEÇAS, S.A	17 928	7.8	16 631	-1.0	16 799	8.3	15 509	6.6	14 551
19	SOULIMA-COMÉRCIO DE PEÇAS, S.A.	17 861	14.6	15 588	2.9	15 153	4.7	14 466	-3.0	14 911
20	FIMAG-IMPORTAÇÃO E COMÉRCIO DE ACESSÓRIOS, LDA.	16 874	16.1	14 534	1.6	14 300	8.3	13 201	-0.2	13 222

Table 4.3. Mergers and acquisitions involving Portuguese companies since 2020.

Purchasing company	Company purchased
Lausan (Spain)	Soulima (Portugal)
Alliance Automotive Group	Lausan + Soulima
Sofrapa	Cosimpor Auto Peças do Barlavento Torres Peças Leirimotor
Grupo JAP	Grupo Entrepasto
Grupo Salvador Caetano	Grupo Gamobar
Autozitânia	Bragalis
Fundo Crest	Auto Delta FIMAG Alecarpeças

4.5. MCoutinho Peças

The MCoutinho Group was founded in 1956 in Marco de Canaveses, 50 km from Oporto. It has been traditionally recognised as having had a pioneering approach in the Portuguese automotive retail business, mainly in body shop repair centres, financial products, used car business and spare parts distribution (*Quem Somos | MCoutinho*, n.d.). MCoutinho Group started as a Ford agent and by 2022 was representing 22 brands as car dealer (Figure 4.14).



Figure 4.14. Automobile brands represented by MCoutinho Group as car dealer in 2022.

The group is organised into five main business units: traditional dealerships (new cars and OEM after-sales services); used cars; rent-a-car; collision; and spare parts. At the end of 2022, the MCoutinho Group had 60 new car sales points, 84 brand authorised repair representations, 14 collision centres, 9 used car sales points and 2 parts logistics centres. Table 4.4 presents a summary of Grupo MCoutinho's financial statements from 2018-2021.

Table 4.4. MCoutinho Group's financial statements summary 2018-2021.

Results	2021	2020	2019	2018
Turnover	263 802 086	221 855 216	242 510 303	221 816 106
EBITDA	10 100 691	7 537 783	8 400 384	7 507 992
EBITDA (%)	3.8%	3.4%	3.5%	3.4%
ROE (%)	11.0%	5.9%	9.8%	7.6%
ROA (%)	3.0%	1.5%	2.1%	1.6%
Productivity	2021	2020	2019	2018
Number of employees	1 035	840	791	762
Turnover/employee (€/empl/year)	254 881	264 113	306 587	291 097

Note. In 2020 the covid-19 pandemic affected the turnover, although the impact on EBITDA was successfully prevented; in 2021 the Group acquired other concessions with a significant volume of activity, which provisionally affected the productivity index.

The MCoutinho Group has been a pioneer in its market, and one of the areas where it broke through was with the parts business. MCoutinho Peças was founded in Oporto in 1999 as an innovative project of parts distribution in Portugal. Until that date, the spare parts market was divided into local or national distributors of independent aftermarket (IAM) parts and local official car dealers (OEM parts). Traditionally, car dealers were totally oriented towards their own workshops, taking a passive stance towards external sales of spare parts, without much concern for added service.

MCoutinho Peças came to the market as a spin-off of MCoutinho's car dealers' parts business, with wide range of OEM parts. MCoutinho Peças' business model was based on a disruptive logistics organisation, a call centre fully dedicated to the professional client and highly qualified people, supported by innovative technological solutions.

Since then, MCoutinho Peças has been the leading original spare parts and accessories distribution specialist in Portugal, now offering a comprehensive portfolio of 32 automotive brands, covering more than 97% of car parc, plus lubricants and tyres, from two warehouses

located in Lisbon and Oporto. Figure 4.15 shows the original parts commercialised by MCoutinho Peças.



Figure 4.15. Original Equipment Manufacturer (OEM) parts commercialised by MCoutinho Peças.

The MCoutinho Group understood that an important part of the parts market corresponded to the independent aftermarket (IAM) parts business, and felt it should also be present in this market. In this sense, in 2009, ten years after the foundation of MCoutinho Peças, the MCoutinho Group entered the IAM parts business, through the acquisition of a wholesaler, AZ Auto. The aim was to be able to offer clients an integrated solution for OEM parts and IAM parts, and, to date, MCoutinho Peças is the only company in the Portuguese auto parts market with this capability.

The parts portfolio offered by AZ Auto—MCoutinho Peças insignia for IAM parts—are presented on Figure 4.16.



Figure 4.16. Independent Aftermarket Manufacturer (IAM) parts commercialised by MCoutinho Peças/AZ Auto.

Figure 4.17 shows the evolution of OEM parts sales by MCoutinho Peças, from 2004 to 2021, both internal sales (supplying Grupo MCoutinho's own workshops) and external sales (independent workshops and retailers).

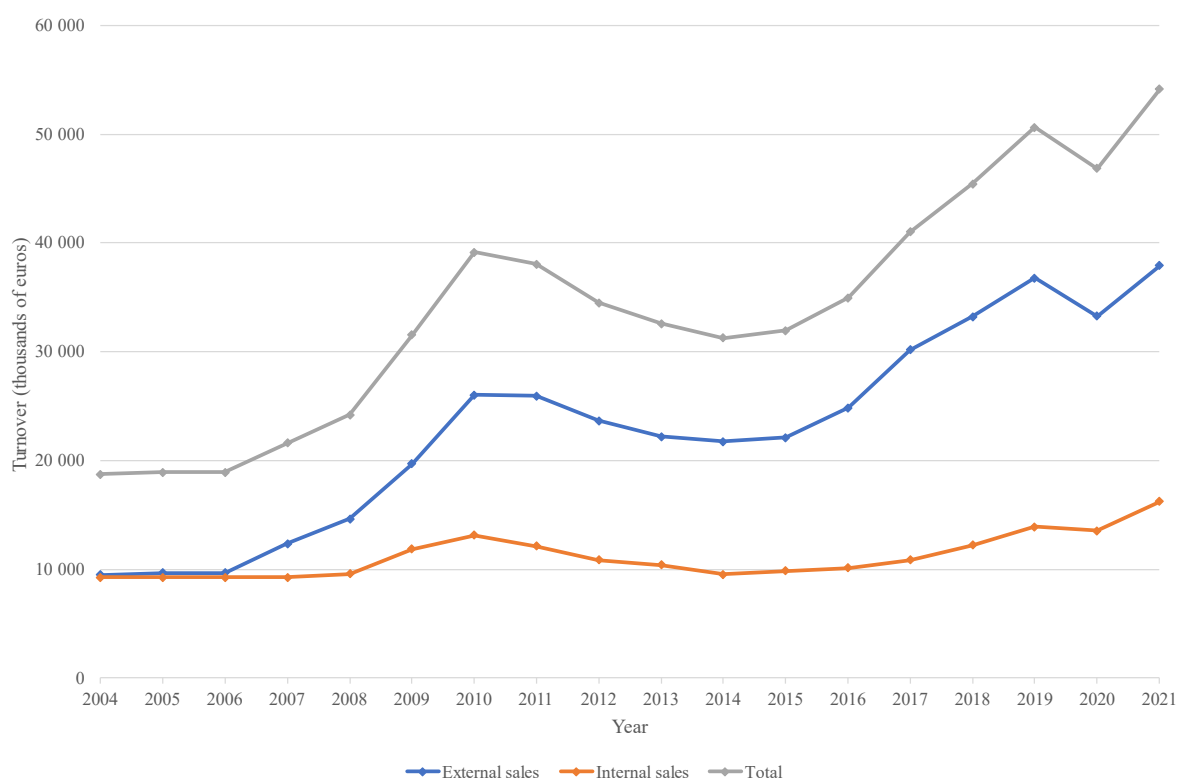


Figure 4.17. Evolution of OEM parts business volume of MCoutinho Peças (2004-2021).

Figure 4.18 presents the evolution of the IAM parts business of MCoutinho Peças, through its insignia, AZ Auto (Note that Grupo MCoutinho acquired 51% of AZ Auto in 2009 and the remaining 49% in 2011).

While in terms of OEM parts MCoutinho Peças is the market leader, when it comes to IAM parts any direct competitor has a much wider and deeper portfolio, as shown in Table 4.5.

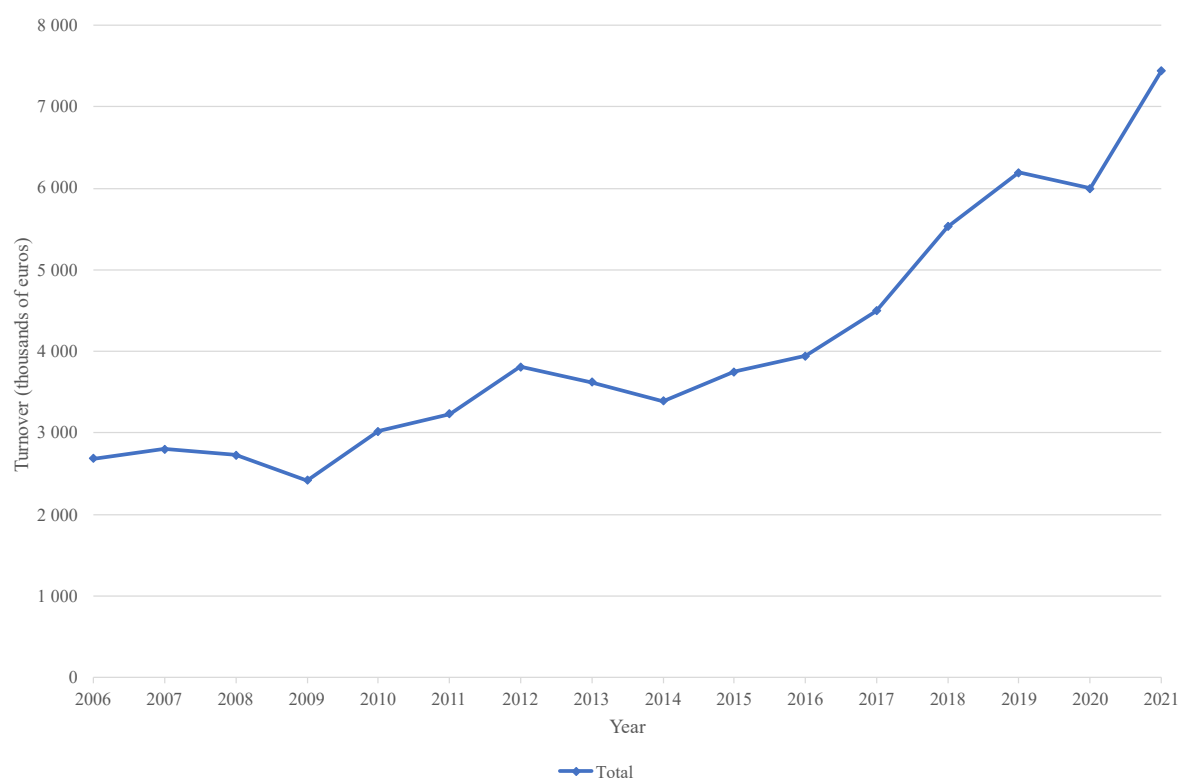


Figure 4.18. AZ Auto (IAM) parts business volume evolution (2004-2021).

Table 4.5. Main competitors of MCoûtinho Peças in terms of IAM parts (AZ Auto) and the respective quantity of brands they commercialize.

Company Name	Turnover 2021	Brand quantity
CENTRAUTO-COMPONENTES AUTO, LDA.	48 846	93
KRAUTLI PORTUGAL-EQUIPAMENTOS PARA VEÍCULOS, LDA.	20 426	90
AUTO DELTA-COM. PEÇAS, ACESSÓRIOS E AUTOMÓVEIS, LDA.	33 866	82
AUTOZITÂNIA-ACESSÓRIOS E SOBRESSALENTES, S.A	42 344	78
AUTO SILVA ACESSÓRIOS, S.A.	8 743	56
A. VIEIRA, S.A	10 231	45
CREATE BUSINESS-COM. E GESTÃO PEÇAS S.A.	52 941	44
SOULIMA-COMÉRCIO DE PEÇAS, S.A.	17 861	41
FIMAG-IMPORTAÇÃO E COMÉRCIO DE ACESSÓRIOS, LDA.	16 874	41
EUROPEÇAS, S.A	17 928	38
NEWONEDRIVE- COMÉRCIO DE PEÇAS AUTO, S.A.	32 035	33
BRAGALIS-PEÇAS E ACESSÓRIOS PARA AUTOMÓVEIS, S.A.	16 588	30
ALECARPEÇAS-ACESSÓRIOS DE AUTOMÓVEIS, LDA.	10 864	28
AZ AUTO	7 367	18

MCoutinho Peças is the company in the Portuguese market with the biggest offer of OEM parts. Moreover, it is the only company with the possibility of integrated offer of OEM parts and IAM parts. However, in terms of IAM parts it has a clear competitive disadvantage, with a limited offer and no geographic capillarity, which prevents it from supplying workshops directly. The automotive industry and the Portuguese auto parts market are clearly changing, so companies operating in the sector, including MCoutinho Peças, should be prepared to adapt to these uncertain contexts.

CHAPTER 5

Methodology

In recent years, industries have found themselves in an increasingly VUCA world (Millar et al., 2018; Schoemaker et al., 2018). The automotive industry has suffered through a series of disruptions that threaten the existing balance. The paradigm shift from car ownership to mobility (i.e., car-as-a-service), the technology shift from combustion engines to electricity, the emergence of self-driving cars, telematics, and the Internet of Things have resulted in instability throughout the value chain in this industry (*Automotive Disruption* | Roland Berger, n.d.). While these factors have already contributed to an environment of great uncertainty in this market, and the decade ended with the COVID-19 pandemic, an “unknown unknown” with severe social and economic impacts (Beßlich, 2020; Teece, 2019; Teece & Leih, 2016). As the pandemic draws to a close, in February 2022 the Russian Federation invaded Ukraine, placing the world in a state of even greater uncertainty.

In addition to the transformations in the automobile industry and the changes in the world at large, since 2015, Europe has experienced several significant consolidations in the auto parts distribution markets (*Consolidation in the European Automotive Aftermarket* | Roland Berger, n.d.). These consolidations became particularly visible with the entry of American automotive giants into the European auto parts distribution market. Business history is filled with examples of companies that thrived despite market changes, but also of companies that were unable to adapt and eventually succumbed to these challenges. This research does not focus on the past as a means to understand why companies succumbed to market changes. Instead, the findings will be particularly relevant because the study was carried out while specific changes are taking place, and thus provides a perspective on the capacities of individuals to adapt to eventual market changes in real time. The study is focused on the auto parts market because there is a built-in delay with respect to events occurring in the automobile industry at any given moment. In other words, as the auto industry is experiencing profound changes, the role of dynamic capabilities can be studied by analysing the downstream auto parts business in real-time. This approach will provide us with insight into the past, present, and future of companies operating in this market and their capacity to respond in a notably VUCA context.

Several authors argue that the dynamic capabilities framework plays a significant role in the dynamic capabilities and their role in promoting sustained competitive advantages that

develop in response to rapid market changes and high levels of uncertainty (Eisenhardt & Martin, 2000; Teece et al., 1997). Thus, this study focuses on the role of this framework in this industry overall and particularly as it affects the auto parts market.

This research aimed to determine whether individuals who are currently working in the Portuguese auto parts market are aware of the changes imminent in the auto industry and the potential impact of these changes on the auto parts business. Specifically, it was intended to understand the role of the RBV and dynamic capabilities framework in building sustainable competitive advantages in the context of high uncertainty amongst Portuguese auto parts distributors. This study aimed to address the following research questions:

- RQ1: How do stakeholders in the auto parts market perceive the current paradigm shift in the automotive industry and the auto parts market in particular?
- RQ2: What are the key resources and capabilities identified by stakeholders as necessary for a company working in the auto parts market to build sustainable competitive advantage in a context of high uncertainty?
- RQ3: What role do key stakeholders in the auto parts market attribute to dynamic capabilities in a company's response to the changes occurring in the market?
- RQ4: How has MCoutinho Peças used its resources and dynamic capabilities (if any) to build sustainable competitive advantage?

5.1. Research design

Ontology positions the research in its perspective concerning the nature of reality. In this sense, the present research is positioned as relativist (Saunders et al., 2019). Reality is considered a relative human construct, with multiple realities co-existing depending on what has been experienced by each individual in a given time or space (Moon & Blackman, 2014). By contrast, realistic ontology states that only one reality exists that can be studied, understood and experienced as “true”. In other words, reality in the world exists independently of human experience.

Epistemology is concerned with assumptions about what constitutes acceptable, valid, and legitimate knowledge, and how this knowledge can be communicated to others (Saunders et al., 2019). In this regard, my research follows a subjectivist approach, in the sense that it assumes that knowledge is related to how people perceive and understand reality (Moon & Blackman, 2014).

Given that this research focuses on the auto parts market in Portugal, it is based on the assumption that these factors can be best understood from the perspective of those operating within it, i.e., an interpretivist approach. The interpretivist approach seeks to collect, evaluate, and understand people's perceptions (i.e., the insider view) in addition to considering people as the primary source of data (Mason, 2002). The purpose of this approach is to obtain an in-depth understanding of the research topic from the industry perspective; this approach seems particularly relevant given the complexity of the unique business and context under analysis. The challenging task for the interpretivist is "to enter the social world of the research participants and to understand that world from their point of view" (Saunders et al., 2019, p. 149).

To gain insights into the role of the RBV and dynamic capabilities, an inductive approach was adopted. With this approach, the researcher follows the flow of the data collected and is challenged to make sense of that data; the outcome of this type of study will reflect the richness of the interviewees' experiences and perspectives (Saunders et al., 2019).

Given the complexity of the context and the theme, a case study format was adopted to study the Portuguese auto parts market under the lens of resources and a dynamic capabilities framework. A case study "might be a country's economy, an industry in the world marketplace, an economic policy, or the trade or capital flow between countries" (Yin 2018, p. 30). The case study strategy, by definition, facilitates the collection of valuable empirical information and insights through in-depth research in a real-life context.

This research aimed to explore the knowledge and vision of the market in which the participants worked in-depth. The study features a cross-sectional case study design with data collected using semi-structured interviews with several stakeholders from different areas related to the distribution of auto parts in Portugal. The semi-structured interviews allowed the interviewees to speak freely about events, behaviours, beliefs, opportunities, and threats to their company in relation to the market as a whole, as well as those associated with their competitors, suppliers, and customers. One advantage of using open-ended questions (typically beginning with "what" or "how") was that such questions encourage the interviewee to provide a more extensive developmental response that reveals attitudes, conveys facts, and provides insights on sensitive topics (Saunders et al., 2019).

5.2. Data sources and collection

Semi-structured interviews are based on a sequence of questions that follows a consistent narrative to uncover what was intended to be known (Saunders et al., 2019). Following the recommendations of Easterby-Smith et al. (2009), open-ended questions were used to minimise biases as well as to obtain a more comprehensive view. Despite the research objectives associated with RBV and dynamic capabilities, care was taken to avoid the use of jargon in the interviews and to ensure that all questions were easy to understand.

5.2.1. The interview guide

The interview guide was developed to understand the context of this specific market together with its evolution and trends and to provide answers to the research questions. Table 5.1 includes the interview guide.

Table 5.1. The interview guide.

Research question	Interview Questions (Script)
RQ1: How do stakeholders in the auto parts market perceive the current paradigm shift in the automotive industry and the auto parts market in particular?	IQ1: How would you describe the Portuguese auto parts market? IQ2: What is your view of how the national auto parts distribution market has evolved over the last 5 years? (2015-2019/2020) What are the trends that mark these last few years in the market? [pre-pandemic] IQ3: In March 2020 the covid-19 pandemic hit Portugal. What impact do you think the pandemic has had on the auto parts distribution market? In your opinion, do you think there has been a change in trend compared to the pre-covid period? IQ4: Other than the auto parts distribution market, the automotive industry has been the object of several disruptions. In the face of so much disruption and uncertainty, how do you think the automotive industry will evolve? And what is the impact on the parts and lubricants business?

Research question	Interview Questions (Script)
RQ2: What are the key resources and capabilities that stakeholders consider a company working in the auto parts market needs to build sustainable competitive advantage in the context of deep uncertainty?	IQ5: What do you think are the auto parts distribution companies that are best positioned to adapt to this context of disruption and uncertainty? IQ6: Why? What characteristics - resources and capabilities - do these distribution companies have that make them unique in the market?
RQ3: What role do key stakeholders in the auto parts market attribute to dynamic capabilities in companies' response to the changes occurring in the market?	IQ7: What special mechanisms, if any, do you think these distributors have to adapt to and even take advantage of these changes in the context of uncertainty?
RQ4: How has MCoutinho Peças used its resources and its dynamic capabilities (if any) to build sustainable competitive advantage?	IQ8: What about MCoutinho Peças? In your opinion, does MCoutinho Peças have any characteristics that make it unique in the auto parts distribution market? How would you assess MCoutinho Peças' ability to adapt to the changes that have taken place over the years?

5.2.2. Participant selection

Purposive sampling, also known as judgemental sampling, is a technique that relies on the researcher's sensitivity and skill to select people who can respond effectively to the research questions and thus achieve the research objectives (Saunders et al., 2019). According to Silverman (2017), “purposive sampling demands that we think critically about the parameters of the population we are studying and choose our sample case carefully on this basis” (Silverman, 2017, p. 269). Given that the aim was to study the market while briefly addressing the case of MCoutinho Peças, special efforts were made to select participants from different positions in the market. This would ensure that we included a participant sample with a wide diversity of characteristics. Purposive sampling helps the researcher to collect data that

describes and explains key observed patterns and also has the potential to document uniqueness (Saunders et al., 2019).

Twenty-four individuals were invited to participate in the study. Twenty individuals accepted the invitation and four declined, referring to potential issues regarding corporate compliance. The sample included participants operating in retailer networks, retailers, independent workshops, independent workshop networks, technology providers, insurance companies, glass workshop networks, car associations, and car rental companies.

Given the small sample size, the risk of participant identification was recognised. To ensure participant anonymity and confidentiality, some participants in different categories were grouped together under the same classification. Specifically, participants associated with glass workshop networks were included in a “workshop network” group. Likewise, a general classification known as “other companies” was created to group together participants affiliated with car associations, car rental companies, and MCoutinho.

Table 5.2 includes the profiles of all 20 participants (2 women and 18 men). All study participants had more than 10 years of experience in the auto parts market. The average age of the participants was 44 years; the youngest participant was 31 years old and the oldest was 63 years old. Eight participants were company owners, and the remaining 12 were employed as directors or in equivalent positions.

The interviews were conducted in Portuguese and lasted between 40 and 130 minutes, with an average interview time of 80 minutes; were mostly carried out in person.

Table 5.2. Participant profiles.

Participant	Type	Position in the company	Sex	Years of experience in the automotive industry	In-person/ Video	Date of the interview	Time required to complete the interview
Participant 01	Independent workshop	Owner	Male	>30	In person	2019-08-22	01:44:02
Participant 02	Retailer	Owner	Male	>20	In person	2021-06-22	01:19:15
Participant 03	Retailer	Owner	Male	>20	In person	2021-06-24	02:09:12
Participant 04	Technology provider	Director	Male	>10	In person	2021-07-15	01:21:38
Participant 05	Other companies	Corporate Manager	Male	>10	(Unknown)	2021-12-08	00:59:51
Participant 06	Other companies	Corporate Manager	Male	>15	(Unknown)	2021-12-08	00:50:04
Participant 07	Other companies	Corporate Manager	Male	>30	(Unknown)	2021-12-08	00:38:00
Participant 08	Independent workshop	Director	Female	>25	In person	2021-08-31	01:34:00
Participant 09	Independent workshop	Owner	Male	>20	In person	2021-09-07	00:51:04
Participant 10	Other companies	Director	Male	>17	In person	2021-09-08	01:08:29
Participant 11	Workshop network	Director	Male	>30	In person	2021-09-10	01:47:52
Participant 12	Independent workshop	Owner	Male	>20	In person	2021-09-15	01:16:53
Participant 13	Retailer	Owner	Male	>30	In person	2021-09-17	01:58:21
Participant 14	Workshop network	Owner	Male	>20	In person	2021-09-22	01:22:05
Participant 15	Other companies	Director	Male	>10	In person	2021-09-23	01:27:25
Participant 16	Insurance company	Director	Male	>10	Video conf	2021-09-23	00:57:27
Participant 17	Workshop network	Director	Male	>15	In person	2021-09-24	01:19:09
Participant 18	Workshop network	Director	Female	>15	In person	2021-09-28	00:39:34
Participant 19	Retailer network	Director	Male	>20	In person	2021-09-28	01:38:14
Participant 20	Insurance company	Director	Male	>20	In person	2021-09-29	01:19:40

Note: Interviews 05, 06, and 07 were performed by third-party researchers.

5.2.3. Data collection and practice

An initial test interview was carried out to refine the process. This procedure permitted me to reformulate some aspects of the plan and the conduct of the interviews. One critical issue that emerged in this process was that I needed to ensure that interviews were conducted in spaces that guaranteed good recording quality and that interruptions were avoided. It also suggested some adjustments to the script that increased participant focus on the research questions.

Each study participant was contacted by telephone to address the invitation; in most cases, the interview was set up immediately. At the time of the call, the researcher provided a disclaimer regarding positions held at the MCoelho Group and explained the scope of the study as well as the importance of the participants' contribution related to their knowledge, experience, and market insight. All were informed that they would remain anonymous and that participation was confidential. All participants were informed of their rights, including the right to withdraw from the interview at any time without justification.

Once they had agreed to participate, the potential interviewees were sent a confirmation email that included the consent form (see Appendix A). The consent form included the presentation of the researcher and respective contacts and the disclaimer regarding his professional positions. The consent form also indicated that the interview would be carried out within the scope of the development of a doctoral thesis and that the participation of the interviewee was a very relevant contribution to the advancement of knowledge in this field. The form noted that all information collected was anonymous and confidential and that the data would be used in aggregate form and exclusively for academic purposes and subsequently discarded. The participants were informed of the anticipated length of the interview and that participation was voluntary and that the interviewee could withdraw at any time without having to provide any justification. Finally, the form noted that no significant risks were associated with their participation in this study.

The participants were reminded of the interview 24 hrs beforehand. Despite the constraints resulting from the ongoing COVID-19 pandemic, most of the interviews were conducted face-to-face. Only three of the 20 interviews were conducted by videoconference, one at the participant's request due to company compliance rules, and the other two for convenience.

At the beginning of each interview, the researcher thanked the participants once again for their willingness to participate in the study. The researcher reminded them of the voluntary nature of their participation and that they could withdraw at any point. Permission was sought and all participants agreed to the audio recording of the interview. As suggested by Aberbach

& Rockman (2002), the use of audio recording devices minimised the loss of information and permitted the interviewer and interviewee to be more at ease during the interview.

The participants signed the Informed Consent form before the interview began. While each interview was based on a script that had been previously prepared, it was applied flexibly and largely followed the course of the interview. Some notes were taken during the interview. Additional notes were taken after the interview that focused on the participant's contribution and any additional data that might be relevant.

After the 14th interview, the saturation point was reached (i.e., the point after which “additional data collected provide little, if any, new information or suggest new themes” (Saunders et al., 2019, p. 315). However, because they had already been scheduled, six additional interviews were conducted.

The full transcription of the first interview was performed by the researcher, as a learning experience and to improve future interviews. In order to save time, a confidentiality agreement was signed with a specialised company that transcribed the remaining interviews. The transcripts were uploaded to MAXQDA where they were processed. As indicated in the Informed Consent, and following Gibbert & Ruigrok's (2010) recommendations on validity and reliability, the MAXQDA-processed transcripts were sent to the participants with the debriefing form. Some of the participants responded by thanking the researcher for the transcript; one inquired as to how participants would be referenced in the thesis. All doubts were clarified, and it was agreed that the researcher would send the final text with all references relating to this participant to him for his final agreement before submission.

5.3. Ethical clearance

This study complied with ISCTE's ethical guidelines embodied by the Code of Ethical Conduct in Research at ISCTE-IUL (2016), Guidelines for Researchers on Data Protection in Scientific Research Activities at ISCTE – Instituto Universitário de Lisboa (26th March 2021), General Data Protection Regulation (27 April 2016), and Implementing Law of the GDPR (08 August 2019). Particular importance was given to guaranteeing the rights and freedom of participants and ensuring anonymity and confidentiality; this information was included in the informed consent and debriefing forms. These forms were submitted and approved by ISCTE's Ethics Committee. Given the researcher's role in the company, and following ISCTE's Ethics Committee's recommendations, the interviews with the members of the MCoutinho Group and the transcriptions were conducted by third-party researchers. In addition, informed consent for

these specific participants was reformulated to state explicitly that the participants' personal data would be stored securely and immediately deleted upon completion of this research project, in accordance with ISCTE's Code of Conduct and the General Data Protection Regulation (GDPR/RGPD).

5.4. Reliability and validity

The issue of rigour is mandatory so that managerial research can be claimed (Scandura & Williams, 2000). Silverman states that “the two central concepts in any discussion of the credibility of scientific research are ‘validity’ and ‘reliability’” (Silverman, 2006, p. 225). In the same vein, based on the studies by Eisenhardt & Graebner (2007), Gibbert & Ruigrok (2010) note that the most influential models used to ensure the rigour of case study research are those that adhere to what is commonly called “the natural sciences model”. The natural sciences model is based on a set of research actions that include four criteria: (1) construct validity, (2) internal validity, (3) external validity, and (4) reliability (Gibbert et al., 2008; Gibbert & Ruigrok, 2010). Validity is a broad term that refers “to the credibility of our interpretations” (Silverman, 2017, p. 384). Construct validity reflects the extent the research is conducted as designed. Internal validity reflects an existing cause-and-effect relationship rather than faults in the research design, and external validity refers to the potential generalisation of the findings (Gibbert et al., 2008; Gibbert & Ruigrok, 2010). Reliability is the extent to which the findings can be replicated and are consistent. For example, if another researcher were to conduct the same study based on the same research design, would they generate the same findings? (Saunders et al., 2019).

Case studies are a particular case of qualitative research that requires special attention to reliability and validity. Gibbert & Ruigrok (2010) developed evidence-based strategies to ensure rigour that were based on the analysis of all the case studies published between 1995-2000 in the 10 highest-ranking management journals. The authors proposed three strategies for insuring rigour in “what” and “how”-based case studies. The first strategy states that the researcher should be able to describe “what” concrete research actions were taken, so that the reader “may appreciate the logic and purpose of these actions in the context of the specific case study at hand” (Gibbert & Ruigrok, 2010, p. 725); the authors offer the analogy of “talk the walk” as opposed to “walk the talk”. The second strategy states that the researcher must be able to create priorities and develop more and more detailed strategies to ensure construct and internal, rather than external validity. The topic of external validity was discussed extensively

in this paper. However, as with the current study, the authors raise some concerns regarding the potential for generalisability of case studies. The current study is based on a small sample, of participants employed in a specific industry (spare auto parts). This industry is not fully representative of the industry as a whole (i.e., the automotive industry) and was geographically limited to a single country. However, more important than its generalisability, the depth of this analysis permitted me to observe concrete events and phenomena from the perspective of many stakeholders.

Third, new strategies or unforeseen situations that arose during the research, including setbacks, were documented so that the original research plan could ultimately be refined.

In general, great pains were taken to report the research process in detail so that readers would understand the rationale and purpose of the options taken. Following the same concern, Guba (1981) studied the issue of how to ensure rigour in qualitative research. The author proposed a framework that considered the aforementioned four criteria—construct validity, internal validity, external validity, and reliability—as a means to assess trustworthiness. Later on, Shenton (2004) developed a table based on the work of Lincoln and Guba (1985) that suggested provisions that should be made by a qualitative researcher choosing to address Guba’s four criteria for trustworthiness. Table 5.3 provides the summary of the actions taken as part of this study to address trustworthiness following the suggestions of Shenton (2004) and Gibbert & Ruigrok (2010).

Table 5.3. Actions taken to address Guba’s four criteria for trustworthiness adapted from Gibbert & Ruigrok (2010), Guba (1981), and Shenton (2004)

Quality criterion	Provisions made by the researcher	Actions that were taken in this research
Credibility (internal validity)	Adoption of appropriate, well-recognized research methods	Thematic analysis, codebook, and research notes. Questions were based on literature and submitted for discussion and approval by a panel as part of the annual research reports.
	Development of early familiarity with the culture of participating organisations	The researcher was already familiar with all the companies. However, before data collection, the researcher updated all information pertaining to the organisations for better contextualisation.
	A random sampling of individuals serving as informants	Interviewees were selected by purposive sampling. The selection and access to some of the interviewees were based on suggestions from people that had superior knowledge about the specific market segment.

Quality criterion	Provisions made by the researcher	Actions that were taken in this research
	Triangulation via the use of different methods, different types of informants, and different sites	In addition to conducting individual interviews, some data mentioned by the participants were checked against published data. The interviewees were selected from companies operating in different segments of the market to obtain different perspectives and potentially heterogeneous views. As Shelton states: "Here steps must be taken to help ensure as far as possible that the work's findings are the result of the experiences and ideas of the informants, rather than the characteristics and preferences of the researcher" (Shelton, 2004, p.72).
	Tactics to help ensure honesty in informants	The participant was informed regarding the research, its objectives and what was intended from the interview; the participant's rights were stated outright, including anonymity and the right to suspend or cancel the process at any time without explanation or justification. In the case of face-to-face interviews, a copy of the consent form that had been signed by the researcher was provided and read to the participant. Informed consent was formalised with the participant's signature. In the case of videoconference interviews, the consent form was shared with the participant and read aloud. The participant's verbal consent was sought and recorded. The researcher provided contact details for additional questions or make comments about the study. The debriefing form was sent by e-mail with the transcript attached. All interviewees participated voluntarily and showed some enthusiasm for presenting their own view of the issues. All interviewees were grateful for the invitation to participate and showed great interest in having access to the study.
	Iterative questioning in data collection dialogues	The interviews were semi-structured. Although they were based on a script, the format facilitated a high degree of flexibility during the interview.
	Debriefing sessions between researcher and superiors	Debriefing sessions were carried out with the supervisor, in addition to the presentation and discussion of annual research reports.
	Peer scrutiny of the project	The findings and their analyses were discussed with the supervisor and selected fellow researchers.
	Use of reflective commentary	The use of reflective commentary was constant across the research process. Throughout the study, various remarks and reflections were noted. These notes were analysed and integrated into the research outcomes.

Quality criterion	Provisions made by the researcher	Actions that were taken in this research
	Description of background, qualifications, and experience of the researcher	The researcher has a professional experience of more than 25 years, of which the last 20 years have been focused on the automotive sector, particularly in spare auto parts. The researcher also has experience as a trainer and teacher in higher education.
	Member checks of data collected, and interpretations/theories formed	All interviews were conducted in Portuguese. The transcripts were sent to informants which provided them with the opportunity to change or refine any ideas, expressions, or words. The information provided by the participants was translated into English without compromising the original meaning.
	Thick description of the phenomenon under scrutiny	Care was taken to provide an adequate contextualisation of the sector and its connection with the research project. This will permit readers to understand the framework and objectives of the study.
	Examination of previous research to frame findings	In preparation for the research, in particular the fieldwork, several case studies were examined. Special attention was paid to the work of Gibbert & Ruigrok (2010) who conducted a study based on the analysis of all case studies published between 1995 and 2000 in 10 high-ranking management journals following the insights from what were considered “good” case studies. Data from some of these specific case studies were also analysed. We also reviewed papers relevant to this study published by Eisenhardt & Graebner (2007), Gibbert et al. (2008), Guba (1981), Scandura & Williams (2000), and Shenton (2004).
Transferability (external validity/generalisability)	Provision of background data to establish the context of the study and a detailed description of the phenomenon in question to allow comparisons to be made	The study in question was carried out in a specific geographical area (Portugal), in a specific industry (automobile), and a specific segment (auto parts distribution). The study was not intended to be generalised to other geographical areas and/or other sectors of economic activity.
Dependability (reliability)	In-depth methodological description to allow the study to be repeated	The methodology is described in detail and is designed to ensure reliability, as much as possible.
Confirmability (objectivity/construct validity)	Triangulation to reduce the effect of investigator bias	In addition to conducting individual interviews, some points mentioned by the participants were checked against published data. The interviewees were selected from companies operating in different segments of the market to obtain different perspectives and potentially heterogeneous views.
	Admission of researcher’s beliefs and assumptions	Given the researcher’s role in the company, following ISCTE’s Ethics Committee’s recommendation, both the interviews with the members of the MCoelho Group and the related

Quality criterion	Provisions made by the researcher	Actions that were taken in this research
		transcriptions were conducted by other researchers. In addition, the informed consent form was reformulated to state explicitly that the participants' personal data would be stored securely and immediately deleted upon termination of the study in accordance with ISCTE's Code of Conduct and the General Data Protection Regulation (GDPR/RGPD).
	Recognition of shortcomings in study methods and their potential effects	The researcher used several tools to make notes about ideas, doubts, and valuable information to use in the future. Notes were taken during the interviews to support future analysis. Shortcomings were registered.
	In-depth methodological description to allow the integrity of research results to be scrutinised	The methodology is described in detail and is designed to ensure reliability as much as possible.
	Use of diagrams to demonstrate “audit trail”	The procedure was described in the related section of this chapter.

5.5. Data analysis and procedures

5.5.1. Data analysis method

Data analysis was carried out by thematic analysis. Thematic analysis is considered a robust and accessible method for initiating qualitative analysis and is applied as a means to develop, analyse, and interpret patterns in a dataset (Braun & Clarke, 2022). Braun & Clarke (2006) describe this process as “a foundational method for qualitative analysis” (p. 78). These authors suggest that this might be the first qualitative method of analysis that researchers should learn, as it facilitates the development of core competences that will be useful in carrying out other forms of qualitative analysis in the future. One of the advantages of thematic analysis is that it provides the researcher with substantial flexibility. This method can be used in different general theoretical frameworks, including those that focus on meaning and other approaches to data.

The method involves the systematic coding of qualitative data to identify themes related to the research question that can be used in future analyses (Braun & Clarke, 2022; Saunders et al., 2019). The process of coding can lead to grouping codes into categories. Once these categories have been compared to one another and undergone a consolidation, the analysis then moves to a thematic conceptualisation that is linked to the research questions (Saldaña, 2013).

Figure 5.1 provides a simple illustration of the coding process that leads to the identification of themes oriented towards the research questions.

Given the position of ontological relativism associated with this project, the analysis aims to identify and unravel the realities that are expressed within the dataset (Braun & Clarke, 2022). This method is particularly useful in cases that involve a large amount of qualitative data that are collected over several relatively long interviews (Saunders et al., 2019). Moreover, it is a particularly important tool that can be used to evaluate qualitative research that follows an interpretivist philosophy, namely, as a means to explore potential different interpretations of a given phenomenon.

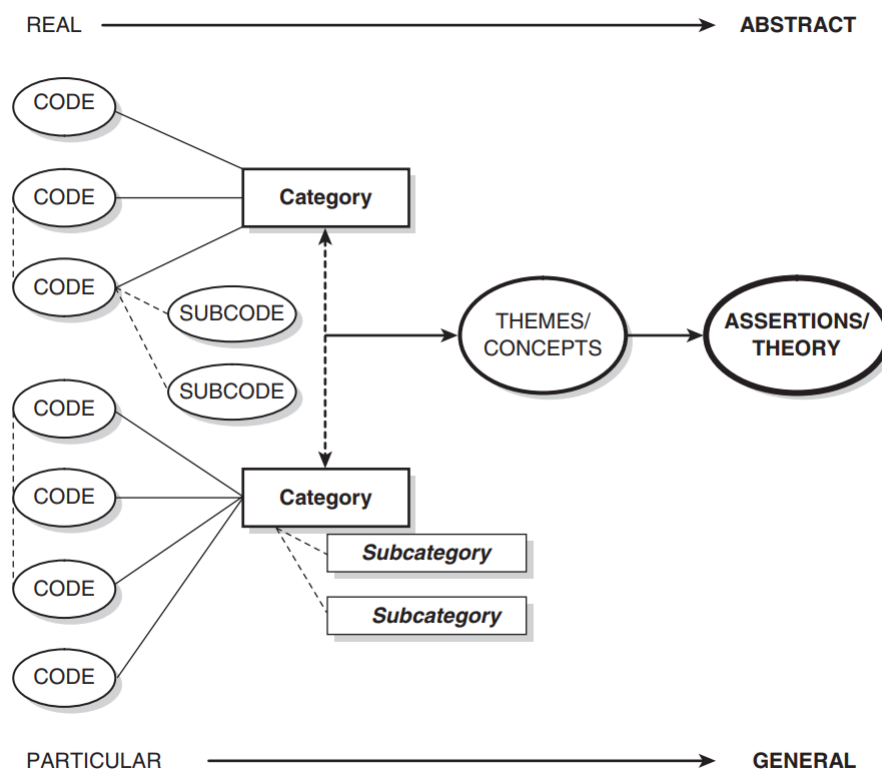


Figure 5.1. A streamlined codes-to-theory model for qualitative inquiry (Saldaña, 2013, p. 13).

5.5.2. Developing the codes

The processing of coding is greatly facilitated by the use of CAQDAS (computer-aided qualitative data analysis software) tools. There were several CAQDAS software options: ATLAS.ti, HyperRESEARCH, NVivo, QDA Miner, Qualrus, or Transana. After some research in books, internet, tutorials and analysis of papers and PhD theses based on qualitative analysis, I found that the trend was mainly towards NVivo and MAXQDA and the opinions were mainly that it was a matter of personal choice. Since most of the ISCTE-IUL doctoral theses consulted

were based on MAXQDA, the choice was made to use this software. The text files with the transcription of each interview were uploaded to MAXQDA together with the audio recording file.

We made a point of transcribing the first interview in full and then performing the qualitative data analysis to gain sensitivity to these methods. Each interview was analysed, and as references to the research questions emerged, a code was assigned to the respective text segment. During the process of coding and re-analysing the text, passages with terms and concepts that seemed relevant were marked, and several notes and memos were recorded. Some passages which raised doubts or whose interpretation was unclear at the earliest stages were marked for later reformulation. The interviews were very rich in terms of information; everything seemed important, so the temptation to assign multiple codes was great. As the interview process progressed, more codes were assigned.

The first few interview evaluations generated over 100 codes; a dataset of this nature would be too complex for our type of analysis and might even be fully unmanageable. Furthermore, because these were semi-structured interviews based on open questions, several interviewees felt particularly motivated to talk about a wide variety of subjects; these individuals frequently extended the conversation even while remaining within the interview topics, which made data analysis somewhat difficult. The text segments ranged from short sentences to long paragraphs. It was necessary to re-read the transcripts of each interview several times in order to determine a strategy to reduce the number of codes by grouping them under the same meaning. Although this was a time-consuming task, I became increasingly familiar with the data and eventually appreciated the extent of the contributions of these findings to the research process. Even after the coding process was complete, I consulted the transcripts numerous times. This permitted me to become even more familiar with the data. This iterative process also permitted me to reconsider text within the context of the existing code list, as well as to refine the coding so that it became increasingly more consistent.

As I navigated through the interviews, I realised that there were more relevant themes associated with these research questions, although the participants tended to address them more indirectly. The fact that many of the codes were applied indirectly, i.e., not literally, was not fully surprising given the specificity of the terms underlying the dynamic capabilities framework.

As predicted by thematic analysis (Saunders, 2019), the iterative process of data analysis and transcript coding resulted in the emergence of several specific patterns and categories. Of note, categories correspond to a set of codes aggregated under a single criterion, while themes

involve several categories or several codes that appear to be interrelated and that indicate an idea that is particularly relevant to the research question (Saunders et al., 2019).

Thus, several themes emerged. As more transcripts were analysed, additional categories were associated with specific themes. Several cycles of transcript analysis were performed until consistency was achieved with respect to the defined themes. The fact that several analyses of each interview were conducted provided me with greater familiarity with the themes and contents, as advocated by Saunders (2019).

5.5.3. Major codes and categories

The transcripts of 20 interviews (248,310 words) were analysed. The interviews were very interesting and generated a lot of information. Great focus was required to avoid straying from the essential research questions. The numerous iterations conducted facilitated the refinement of codes and theme categorisation.

Several categories and themes emerged as a result of this qualitative analysis. Figure 5.2 is a schematic representation of the relationship between the codes and their respective clusters.

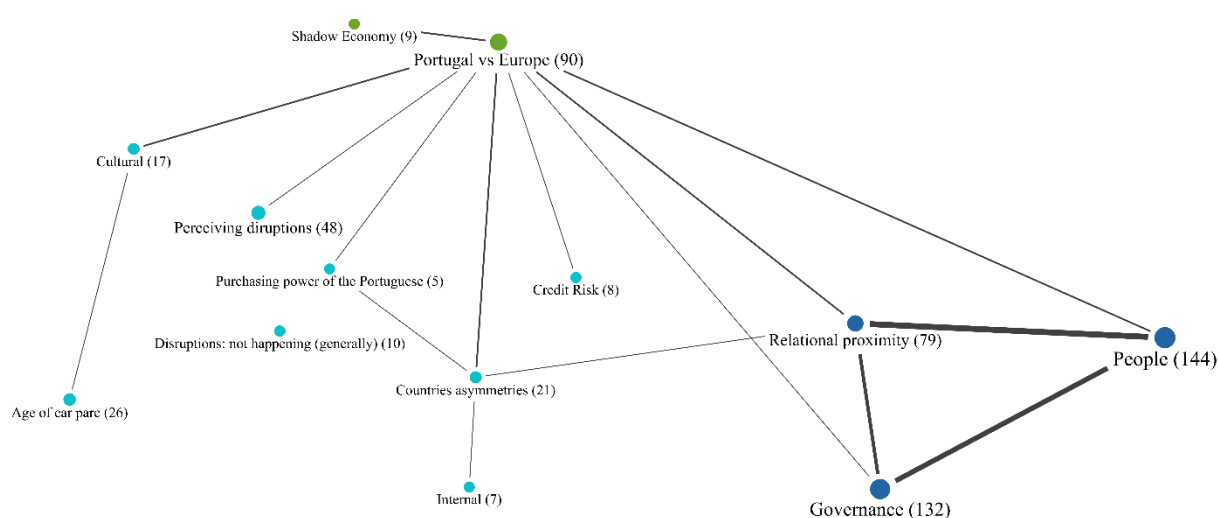


Figure 5.2. A schematic representation of the relationship between codes and their respective clusters obtained from MAXQDA.

Figure 5.2 provides a view of how codes can be organised by themes. Figure 5.3 presents the categories resulting from the responses to Research Question 1 which was “How do stakeholders in the auto parts market perceive the current paradigm shift in the automotive industry and the auto parts market in particular?”.

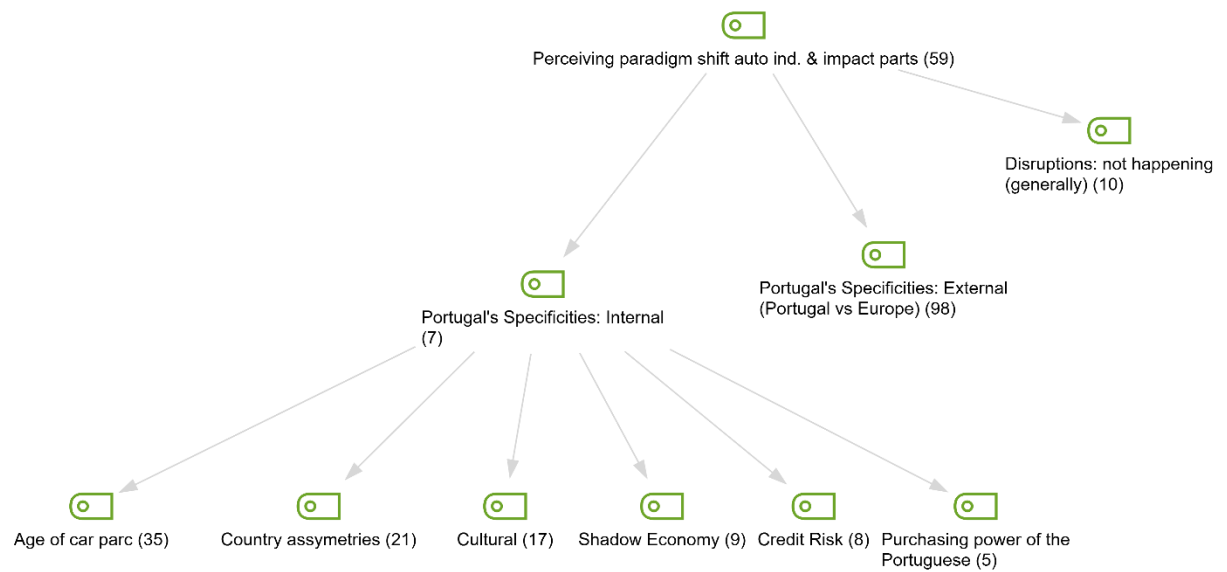


Figure 5.3. MAXMap for RQ1 (Source: MAXQDA 2022 Visual Tools).

The categories that emerged from responses to research questions specifically related to dynamic capabilities are summarised in Figure 5.4.

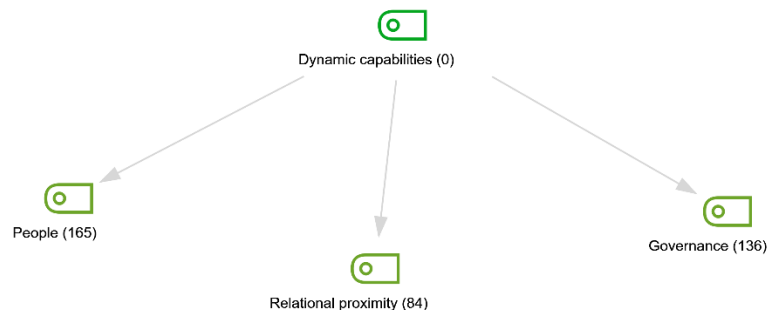


Figure 5.4. MAXMap for research questions focused on dynamic capabilities (Source: MAXQDA 2022 Visual Tools).

The code system was organised by the themes that emerged from the analysis; elements that were too broad, redundant, or merely descriptive were removed. Table 5.4 shows the main categories that emerged and the corresponding descriptions. The final code system will be presented in Chapter 6.

Table 5.4. Description of the main categories that emerged from these data.

Code System (adapted from MAXQDA)	Notes
Perceiving shift auto industry and parts market	
> Portugal's Specificities: External (Portugal vs. Europe)	Regarding the asymmetries between Portugal and the rest of Europe
> Portugal's Specificities: Internal	
> Countries asymmetries	Regarding the asymmetries within Portugal
> Age of car parc	Referring to the average age of the car parc in Portugal
> Cultural	Cultural issues impacting on the parts business
> Shadow Economy	Related to the shadow economy and impact on the parts business
> Credit Risk	Related to credit granting risk and impact on the parts business
> Purchasing power of the Portuguese	Referring to the purchasing power of the Portuguese and potential impact on the parts business
Dynamic capabilities	
Dynamic capabilities > Relational proximity	Related to the development of proximity in professional relationships
Dynamic capabilities > People	The role of people in the parts business
Dynamic capabilities > Governance	Related to the business governance model

CHAPTER 6

Findings

In this chapter, the main themes that emerged from the interviews that relate to the research themes will be presented. The next chapter then discusses the findings in relation to the published literature.

From the analysis of the semi-structured interviews, a list of codes was obtained; some of the themes that emerged were directly related to the research questions. The code system was organised into categories. Other subcodes that were too vague, redundant, or simply descriptive were removed. The main codes can be visualized by a code cloud, as seen in Figure 6.1.



Figure 6.1. The main codes obtained from the interviews as shown with MAXQDA.

Table 6.1 relates the main categories and corresponding themes obtained from a qualitative analysis of the interviews.

Table 6.1. The code system obtained from MAXQDA and the corresponding themes.

Code System (adapted from MAXQDA)	Corresponding Theme
Perceiving paradigm shift auto ind. & impact parts	THEME: Portugal's specificities
> Portugal's Specificities: External (Portugal vs Europe)	
> Portugal's Specificities: Internal	
> Country asymmetries	
> Age of car parc	
> Cultural	
> Shadow Economy	
> Credit Risk	
> Purchasing power of the Portuguese	
Dynamic capabilities	
Dynamic capabilities > Relational proximity	THEME: Relational proximity
Dynamic capabilities > People	THEME: People
Dynamic capabilities > Governance	THEME: Governance

One important theme that was highlighted in the participant responses related to *Portugal's specificities* (both external and internal). Another important theme mentioned frequently in these interviews was *relational proximity*. Another significant finding pertained to the role of *people* in the process of building competitive advantage. The empowerment of people appears to be dependent on leadership—most notably the presence of the business owner—and, therefore, ultimately, the companies' *governance* model.

This chapter is divided into two parts: Part I is dedicated to the findings regarding the Portuguese auto parts distribution *market*. Part II is dedicated to the findings regarding distribution *companies* operating in the Portuguese auto parts market.

Part I: The Portuguese auto parts distribution *market*

Most participants recognised that the auto parts market was highly fragmented and that any new trends would most likely be towards concentration. This was accompanied by what can be described as a certain scepticism; participants thought that the auto parts market should have already consolidated more than it actually had, as explained by Participant 02 (retailer, network):

“[The consolidation movements] that theoretically we were all a little bit expecting them to happen... But, in fact, they don't happen. I don't know why, but they don't happen. But yes, I hoped and still hope that these movements will happen. But, in fact, in relation

to expectations, if they do come, they'll only come late. But I thought that this would be more advanced. Now, in fact, several companies in our business, it seems to me that sometimes they even set up strategies and try to replicate what has already happened in other countries, trying to anticipate a little bit, as if the markets were the same and worked and reacted in the same way. Obviously, our market is very special.”

This same pattern appeared when discussing upstream changes. The disruptions that were taking place in the auto industry, including those that could have an impact on the auto parts industry (mobility, electrification, autonomous cars, telematics, and The Internet of Things) were recognised, but not perceived as a concern. Participants justified this by providing various reasons why these changes were not happening in Portugal at the predicted speed, and why they believed that the impact on the parts market would be contained. Participants argue that Portugal has specificities that limit the transformations that were taking place both in the automotive industry, upstream, and in the parts market, downstream. From the interviews conducted, concrete themes and sub-themes emerged, which are schematised in Figure 6.2.

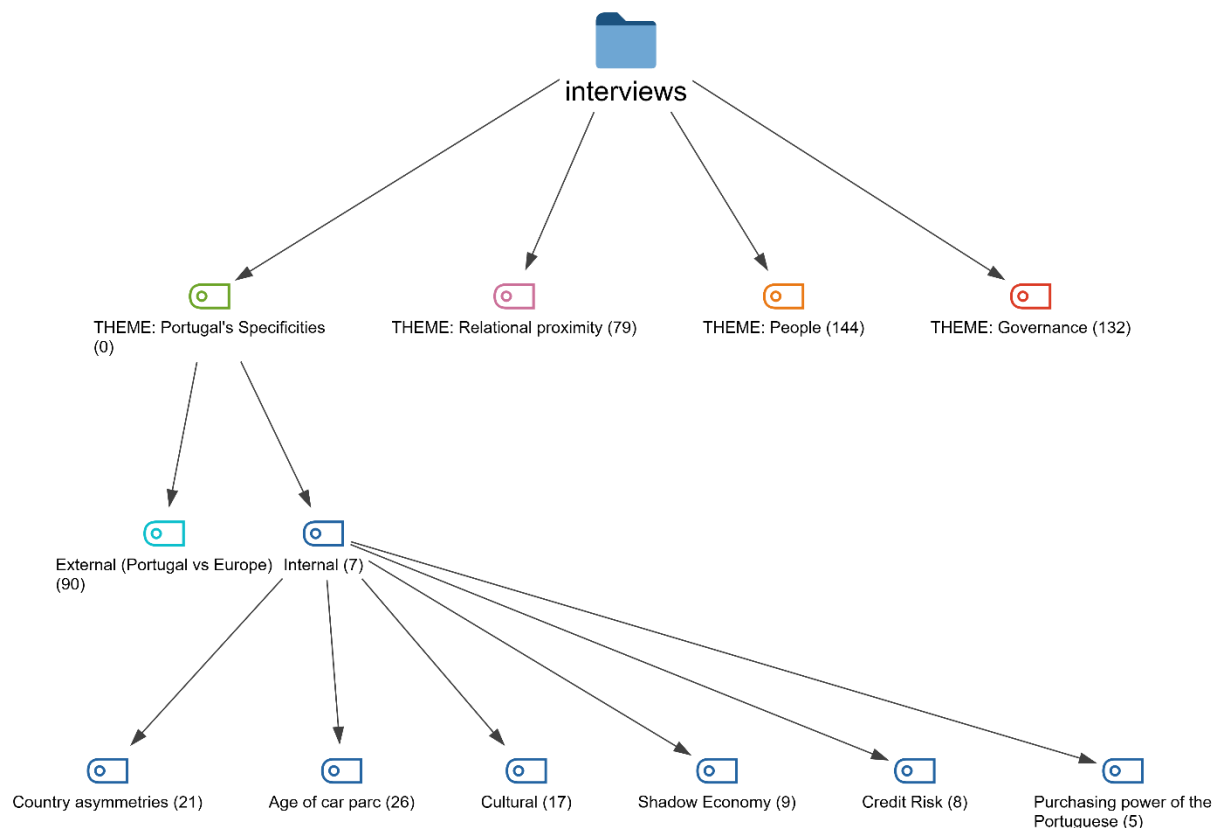


Figure 6.2. Diagram representing the themes and sub-themes that emerged from the interviews obtained using MAXMaps Single-Case Model (Code Hierarchy).

6.1. Theme: Portugal's Specificities

The participants identified two types of specificities of Portugal: specific asymmetries between Portugal and the rest of Europe (*external reasons*), as well as asymmetries within the country (*internal reasons*), including the collective age of the car parc⁴, cultural reasons, the shadow economy, and credit risk.

6.1.1. External Reasons

The interviewees noted that Portugal, in contrast with the rest of Europe, is a small and somewhat peripheral nation with very few large metropolitan areas. Most other nations in Europe have many large urban areas; large commercial hubs have been established. The development of these large commercial hubs provides an attractive scale for concentration and thus favours business consolidation, at least where auto parts are concerned. By contrast, Portugal has few large commercial areas, which has limited efforts toward market consolidation. This is because the national distributors (who are basically wholesalers) will have greater difficulty in increasing the volume of business via efforts to penetrate areas with lower population density. Participant 05 (other companies, corporate management) expressed this point in this way:

“We see news of LKQs that are international groups, some European, some even American making billion euro purchases in central Europe and having their eye on Spain. ... For now, our market is so tiny that it ends up not being very attractive for this type of players . . .”

With regard to the disruptions that were occurring in the automotive industry, all the participants, regardless of their position in the value chain, recognised the paradigm shift from car ownership to car-as-a-service mobility and the trend towards the electrification of cars at the European level. While recognising these paradigm shifts, several participants expressed some reservations about the speed of these transformations in Portugal. These reservations were related to different issues. One of the reasons given was that electric battery technology was not yet sufficiently reliable for long journeys. The range, although continuously increasing, is still somewhat limited and very much dependent on the type of driving. The problem pointed out by the participants is that, unlike other European countries, in Portugal the infrastructure needed to charge electric vehicles is still very limited outside the big cities, which

⁴ Car parc refers to the number of light cars in a region or market and is typically used to measure capacity within a market or region for after sales.

limits the implementation of these changes. Participant 06 (other companies, corporate management) referred to the difficulties in implementing both the mobility model and the switch to electric vehicles:

“I think that in terms of infrastructure, in terms of the country's ability to adapt to this process [of electric vehicles], I think it will still take time. And then, in a country like Portugal, where we have centres that are not very dense... somewhat dispersed, where people have a set of habits, have a transport network that is not public, we already have a network that favours car ownership, and we were used to making these trips. I don't see any significant evolution in the next five years in the issue of mobility as a service, and I don't see any evolution in the issue of autonomy in the next ten years.”

Participant 15 (other companies, director) mentioned that even at the private level, the overwhelming majority of houses and buildings in Portugal are not currently equipped with the infrastructure to permit several vehicles to charge simultaneously:

“I'll give you an example: a condominium with thirty fractions, imagine they all have a Tesla, and we're turning it on at full power in the... just seven kilowatts, man... the others, the building, that street would be cut off from electricity. Because the electricity grid is not structured...”

Another participant pointed out that the shift from combustion to electric cars in Portugal was directly related to consumers' purchasing power. Participant 19 (retailer network, director) stated that purchasing power plays a decisive role in the switch to electric vehicles. This participant mentioned that electric cars were more expensive, largely due to the price of the battery, and, unlike combustion models, the car manufacturers did not have lower-level (i.e., more economical) models available for purchase:

“I don't see any chance of governments having the courage now to say, for example, that only electric cars circulate in Oporto. I don't see it, because people don't have the [financial] capacity to have an electric car, they don't have the capacity to change . . . Even though the Portuguese like to drive cars so much, they never had a four-year-old car... the Portuguese can't afford a four-year-old car...so, it's not on a whim that they keep the older car. The electric ones have an even higher price...I read a study saying that cars in 2023, if I'm not mistaken, the electric one will cost the same as the internal combustion one. But they forget to say that there is no entry range. In other words, yes, the car will cost the same, but in more expensive models, such as the [Renault] Mégane. So, what about the alternative for more economical models? There will be no alternative, so people still don't see where the capacity is in countries like Portugal.”

Another related issue, pointed out by Participant 15 (other companies, director), concerns the fact that electric cars lose value much more rapidly than the equivalent combustion engine car. This is because of the loss of battery capacity, as well as the launch of new batteries with much higher power over the life of the vehicle. In the opinion of the participants, the limitations of electric car technology are a reason to believe that combustion cars will continue to circulate. This situation would imply that there would be less of a drop in the consumption of auto parts.

Participants highlighted several asymmetries between Portugal and the rest of Europe. On the subject of mobility, participants referred that the concept will take a long time to be implemented in Portugal, since there is no real public transport network, much less integrated with mobility solutions. As for the change of technology to electric vehicles, participants mentioned that Portugal is not prepared with the necessary public charging infrastructures, especially outside the big cities. Moreover, some participants claim that even at private level, most Portuguese buildings are not prepared for generalised charging, not to mention the houses in the interior of the country. Regarding the introduction of autonomous vehicles and telematics in cars, although it is not a specific issue for Portugal, they also claim that it is technology that will still take time to be implemented. In what concerns the parts business, participants mentioned that although they understand that the trend in Europe is towards consolidation, in Portugal it will take much longer, since the country is of small dimension, and has few dense urban centres, as well as few and small commercial hubs. They also emphasised the existence of asymmetries inside the country and discussed the nature of the “two realities” in Portugal. As stated by Participant 02 (retailer, owner):

"...there is one country which is the metropolitan area of Lisbon and Oporto, and then there is another country which is the rest".

6.1.2. Internal Specificities

This section highlights the findings related to the internal characteristics of Portugal that were used by the participants to explain why the consolidation of the auto-parts market was not occurring at a pace that might otherwise be expected.

6.1.2.1. Country asymmetries

National wholesalers seeking to consolidate need to consider the geographical distance between their warehouses and the workshops; in many cases, frequent and rapid deliveries would be unfeasible given the distances involved. There are also challenges created by the relational proximity of retailers and local workshops; this will be discussed in the following section.

Portugal, unlike the rest of Europe, has a very fragmented market. The current leader owns less than a 4% share of the market. Thus, consolidation via mergers and acquisitions remains particularly difficult. At this time, the sum of the market shares owned by the 10 largest distributors is less than 25%. This was reported specifically by Participant 05 (other companies, corporate management):

“Mergers and acquisitions tended to start more in central Europe and are now coming here. Now Portugal, effectively, when we look at the top one hundred companies, the volumes are small for what the market is. People say that the market is around two billion euros, but there is no effective data either, and then the national player with the highest turnover has sixty million. We are saying that this is really very little when we look not only at other types of markets but also at other countries. When I say markets, I mean other types, I don't know, food retail where there are distributors with twenty or so percent market share. Here, in the parts business, in Portugal, there are none, but in other countries there are companies with ten, fifteen, twenty, thirty percent. In which they already have a fully implemented chain with wholesalers and their own shops. These are not recent models, but here in Portugal they are not yet very representative because there is the role of the independent retailer, which still carries a lot of influence and still has a very important role”.

With respect to the paradigm shift from ownership to mobility, the absence of a public transportation system both within cities and between localities was mentioned. In the absence of an effective transportation system, it will not be possible to develop an integrated mobility solution. As noted by Participant 02 (other companies, corporate management):

“If we are in a city in the interior, we will have great difficulties to move around within those cities, because we have few public transports and less efficient ones. Maybe we don't have the metro; maybe we don't have the train, and so we'll have more difficulties. But the truth is that the country is very asymmetric . . . So, nowadays we have five million three hundred thousand cars circulating in this country, and most of those cars, I would say forty percent, are between Oporto and Lisbon and the limit cities between Lisbon and Oporto”.

Participants from smaller localities mentioned that they believed that integrated mobility might be implemented in the major cities (i.e., Lisbon and Oporto), but that it was unlikely to take hold in areas with small populations and weak infrastructures. However, several participants from Lisbon and Oporto referred to the same type of limitations. Participant 19

(retailer network, director) described the geographical and demographic limitations of Portugal which were likely to prevent the implementation of mobility-based solutions:

“The lack of urban centres...we have Lisbon and Oporto...go on, Oporto...? Oporto, with three hundred thousand inhabitants, barely counted. How many cities does Spain have over a million? Fourteen or fifteen! Yes, they have urban centres; yes, they can talk about mobility, and different types of mobility, of micro-mobility. Yes, they have critical size for that, but ... how are we going to talk about micro-mobility [in Portugal]? How can we? When we don't even have decent pavements!”

Some participants gave examples of real-life issues. These participants referred that the lack of a public transportation system that would be integrated with other mobility solutions made car ownership more or less essential. Reinforcing this issue, some participants also mentioned that the daily logistics of taking the children to school and going to work would be impossible to accomplish without owning a car. As noted by Participant 20 (insurance company, director):

“One thing is, I leave in the morning to come here. I can take the Uber and I've tried it, it's happened to me, I'm still coming down the stairs and it's almost at my door. And I get here as fast as if I came in my car. And from here to home exactly the same, so there's no difference. But if I have to take the kids to school or if I have to do other laps here... gee!”

Some participants were concerned that electric motor technology would not be effective for professional use and would be unable to support transport logistics. Participant 08 (independent workshop, sales, and purchases manager) believed that, in Portugal, the diesel engine was still the best option for companies in general, and transportation companies in particular. This participant mentioned that electricity was not readily available and that the use of hydrogen was not yet a feasible solution. This participant also noted that Bosch was developing equipment designed to reduce emissions from combustion engines as well as synthetic fuels as a potential replacement for fossil fuels.

6.1.2.2. Age of the car parc

The aftermarket typically focuses on vehicles aged four years or more. Following the same logic, any change in the average age of the car parc would take several years to have an impact on the aftermarket. Many participants mentioned that the impact of the disruptions in the auto and auto-parts industry was likely taking a long time to be seen in Portugal because of the average age of the car parc. Participant 05 (other companies, corporate management) reinforced

this "delay" that generally exists between the emergence of industry disruptions and the time it takes for these changes to affect the parts and repair market:

“Looking at the Portuguese market in particular, we're talking about an average vehicle parc that's twelve years old ... there's already penetration in terms of electric vehicles, but it's still not substantial. So only in a few years' time will we see the reflection of this”.

Participants recognised that, for instance, the replacement of internal combustion engines with ones powered by electricity would lead to a significant reduction in the consumption of parts and lubricants. Most participants noted, however, that the average age of the car parc of light passenger vehicles was more than 13 years. In other words, given a car parc of more than 13 years, they believed that they had time to adapt to the consolidation in the auto parts business as well as to changes resulting from the major disruptions currently taking place in the automotive industry.

Concerning the introduction of self-driving cars in the market, the participants put forward arguments along the same lines. The participants who appeared to be most interested in this question were those employed in collision repair and insurance companies. The general opinion was that full market implementation of autonomous driving remained in the distant future mainly because of legal issues regarding liability in case of accidents. However, several participants mentioned the number of new sensors and technology designed to prevent collisions present in new car models. These participants predicted that the market for collision repair and thus the need for auto parts would decline in the coming years. Participant 10 (other companies, director) summarised the impact of electrification and the increased number of sensors and radar-based devices included in new cars in this way:

“The spare parts market is also going to suffer a strong transformation with this change of electrification of vehicles. In other words, we are killing an after-sales business that will undergo serious changes in the next few years with this electrification issue, because cars will need much less maintenance. The massification of radars, sensors and everything else will mean that there will be far fewer accidents. Therefore, if there are fewer accidents, there will be less service for collision repair shops”.

Although autonomously-driven cars have not yet been introduced, the collision rate has fallen significantly in Portugal in the last two decades, as shown in the graph in Figure 6.3.

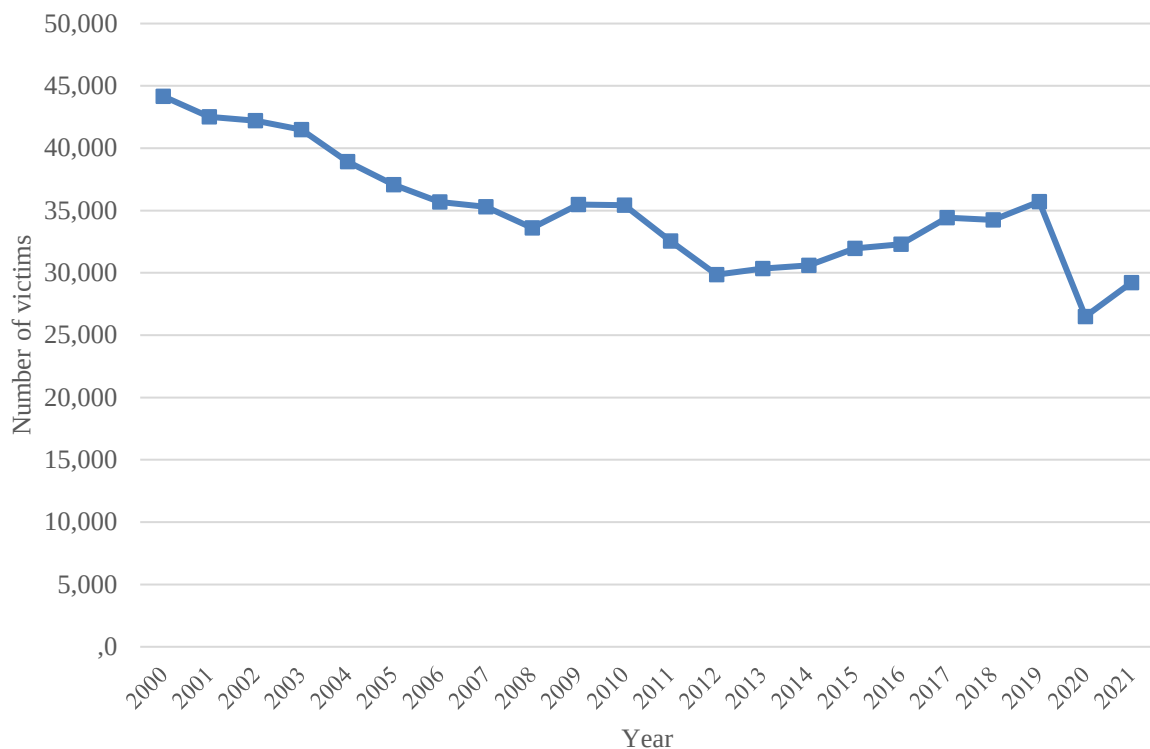


Figure 6.3 - Road traffic collisions with victims, injuries, and deaths in mainland Portugal. Source: PORDATA

Participant 11 (workshop network, director) envisioned that self-driving cars would bring a substantial disruption to the market. The entry of self-driving cars into the market might lead to reduced car ownership as a consequence of the highly-automated management of mobility needs. For the same reason, traffic would be considerably reduced, fuel consumption would be optimised together with reductions in the wear and tear on parts. Despite the expected drop in parts sales due to the introduction of autonomous vehicles, participants argue that the time-to-market will be long and that in the meantime they are protected by the age of the car parc.

On the subject of telematics, some participants revealed some concern, not least because it is a technology that is gradually being introduced in the latest cars. “Telematics” is a term that refers to the development of technology that allows vehicles to communicate critical data, for example, the status of the vehicle, its location, and/or driving behaviour. These data are considered precious as they can channel vehicles to pre-selected repair sites. Currently, this information is shared by the vehicle and the car manufacturer. Participants claim that the current implementation of telematics primarily protects and serves car manufacturers. Participant 10 (other companies, director) argued that the role of car dealers and dealerships was under threat, referring to the trend towards new car sales directly from the manufacturers, including

provisions that direct owners to seek repairs and maintenance from the shops that the automakers have selected. This would constrain customers' (or car users') access to independent repair shops and consequently the sale of parts through independent channels. Participant 19 (retailer network, director) mentioned that this disruption will involve new vehicles exclusively and that the age of the current car parc leaves room for independent aftermarket (IAM) parts distributors.

"...there are already telematics adapted to cars on the road. Therefore, telematics, for example, I find it much more disruptive and much more interesting and much more practical, and much more real than the fleet change".

Participants claimed that because the car parc was old and large, the independent aftermarket had a competitive advantage over those working closer to the disruptions already happening in the automotive industry. Some participants mentioned that brand-name dealerships (particularly those in urban centres) are more likely to experience the impact of industry disruptions and that they should prepare themselves for a potential drop in car sales as well as a change in the type of customers. Participant 10 (other companies, director) expressed this concern:

"Digitalisation has brought some risks, and we can already see that in the sale of vehicles in some parts of the world where there is actually a chain, which is the concession chain, that tends to be eliminated and in which the sale is made by a short circuit from the manufacturer directly to the client, and there is only one logistical act of delivery of the vehicle to the client. In other words, the client, for example, of a Tesla, where we enter the online shop, buy the car, wait the necessary months and then the car arrives at our house, and I haven't been to any Tesla dealership, nor do I know where there is a Tesla shop in Lisbon, but the car is arriving at my door".

This older car parc was also used to justify the lack of concern regarding the emergence of autonomous cars, telematics, and the Internet of Things that were just starting to enter the market. Participants referred that the fact that the car parc that was greater than 13 years old on average meant that many vehicles with older, collision-prone technology would continue to be in circulation. By contrast, this disruption might have a larger impact on car sales, as it may lead to reduced levels of car ownership as a direct result of the highly-automated management of mobility needs. In the same sense, traffic would be considerably reduced, fuel consumption would be optimised, and wear and tear on auto parts would be minimised. As noted by Participant 11 (workshop network, director):

“[The automotive industry disruptions] are going to have a major impact. I won't say right, right, right away, but by the end of this decade, I think it will. ... I read an article of a study done in France that is very interesting on electric mobility and the future of mobility. Let's imagine that in 2022 ... the car becomes autonomous and is therefore shared by a whole family. The car leaves the house and is programmed to go take the husband to the bank, the wife to school and the children to school as well...And the car goes to deliver and then comes back to the house, picks up the maid and goes shopping and then, at a later hour, goes out again and picks up the husband, the wife and the children. What impact does this have on the economy? It impacts on everything. For example, it has an impact on construction: you don't need flats with huge basements where you can fit 500 cars. It has an impact on life itself. The dealer no longer sells three cars to that family, he sells one or two, at most, but not three. Then it impacts fuel consumption. Fossil fuels tend to be consumed much less. It then impacts on the environment. It impacts the distribution of parts, because the whole business of batteries, oils, all those automobile consumables are no longer necessary. ... So, this is a complete revolution that is taking place. It is perhaps a revolution more important than the Industrial Revolution itself. The story of the car being autonomous is a really impressive thing. It's something that will positively affect the planet. As far as parts are concerned, that study says that some people say that there will be a reduction in the consumption of parts because, as the car is guided by remote control, the opposite car is also guided by remote control, so there's no chance of them colliding. I think as long as there's the mix [autonomous and older cars], there's going to be a lot of accidents, there's going to be a lot, a lot of that”.

In summary, while there may be a downward trend in the need for auto parts in the future, participants employed in the automotive repair and parts distribution industries reported that they intended to maintain or increase their business volume by increasing their market share thanks to old car parc. In other words, the pie would be smaller, but they hoped to have the opportunity to take a larger slice.

6.1.2.3. Cultural themes and preferences

One curious and interesting finding was that the Portuguese, unlike other Europeans (including the Spaniards) enjoy owning a car and caring for it. Participant 17 (workshop network, director) noted how he, himself, enjoys driving cars and motorbikes. Participant 20 (insurance company, director) reinforced this idea:

“We mustn't forget that, for many people, the car is still a status, right? So, as Latins, as Portuguese...For us, the car is something that we value in a completely different way, isn't it? You go to Spain, to Madrid, and you see cars all beaten up and punched. When they park, they hit the one behind, the one in front, the one next to them... and here we have this cult of the car”.

Participant 16 (insurance company, director) expressed similar sentiments:

“The Portuguese love their car, we usually say half-jokingly, the Portuguese is that guy who is capable of putting his wife to sleep in the garage and take the car to the bedroom”.

Besides the almost emotional connection of the Portuguese with their cars, there is a series of cultural habits so deeply rooted that the participants claim that it will be one of the causes for the disruptions that are happening in the automotive industry and in the aftermarket to take longer to happen in the market. Several participants referred to the comfort that Portuguese people attribute to travelling in and out of cities in their car, especially when it comes to travelling on weekends and holidays. Participant 09 (independent collision workshop, owner) concurred with this idea:

“...it's going to take people a while to get that change of habit, to stop having their own car and going to rent a car for a week or a weekend and then being without a car, man, I'm not seeing much openness for that”.

These deep-rooted habits lead the participants to state that Portuguese families will have to continue to own at least one car.

6.1.2.4. The shadow economy

The findings indicate that another specificity of the Portuguese market has to do with the shadow economy. These practices include the marketing of individual parts, lubricants, and other products by workshops and retailers without invoicing, as well as the use of counterfeit parts. These practices are harmful not only to the Portuguese in general, but also to individuals and their assets, as well as companies that comply with the legislation and are concerned with social responsibility. Widespread use of these practices will reduce the amount of taxes collected by the State; according to some participants, this has already reached a significant level. These practices are harmful to individuals and their assets because repairs that are potentially poorly performed (for example, due to lack of equipment and training, given the increasing complexity of vehicles) and the use of inferior quality or counterfeit parts will harm individuals and reduce the value of their cars. Parts distributors that comply with current laws and regulations may be unable to compete with these agents which will have a significant

impact on the profitability of their businesses. Legal distributors and independent garages and networks make critical investments needed to comply with current legislation and provide high-quality service to their customers. The actions of shadow market garages and distributors harm industry participants that comply with the legislation and are concerned with social responsibility. As stated by Participant 14 (workshop network, director):

“A smaller workshop has more agility...And it’s not subject to the same rules. This issue of “without VAT”⁵, of whether you're going to invoice or not...so this has a very big impact on the economy. We're talking about practically a quarter, it's twenty-three percent. I have a totally unfair competition... If the invoice is too big, what is the logic of a person paying two hundred and thirty euros more, or one thousand euros to the guy next door? Two hundred and thirty euros is already very appealing, however much doubt there may be about the safety [of the repair]”.

One of the forms of shadow economy has to do with the fact pointed out by some participants who refer that the productive workers - mechanics, bodywork technicians, painters - who work in workshops, in their spare time dedicate themselves to carrying out repairs in their own facilities. According to the participants, these repairs are often carried out on facilities with no technical and safety conditions and no care for the environment, with parts of dubious quality purchased without invoicing the supplier and then without invoicing the customer. This was described by Participant 08 (independent workshop, sales and purchases manager):

“...and we see, after 6 pm, many mechanics who work in other workshops, and then go there [to parts store] to get the parts to do the parallel business at home”.

Participant 19 (retailer network, director) refers to this phenomenon to explain why consolidation in the auto parts market may be difficult to achieve in Portugal:

“Consolidations do not occur more because it is difficult to understand the real value of the companies and what is being bought. This does not happen in other markets, in other sectors, we know the value of the companies, we know the value that is there, those things are all formalised and we know what we are buying. In the aftermarket, if you buy a parts company, you don't know very well, it's only after about a year that you realise what you've really bought, and this makes consolidation [of the market] very difficult”.

⁵Several participants noted that some retailers, workshops, and car owners do business without invoicing, which means they do not pay Value Added Tax (VAT). In Portugal, the VAT is currently 23% over the invoice value.

6.1.2.5. Credit risk

Another feature mentioned by several participants was the high risk involved in extending credit to both retailers and workshops. Unlike the rest of Europe, including Spain, Portugal has a deeply-rooted culture of late payments—or no payment at all—to suppliers in this market. Participant 17 (workshop network, director) thus describes this market practice in terms of customer receivables:

“We don’t have that old Portuguese administrator theory [in the current multinational company]...Like I had in my old company, where one of my friends used to tell me: 'Paying and dying - the later the better'. And I thought that was the *modus operandi* when I joined [the current multinational company]. And I looked at the thirty-day receipt deadlines, and I went knocking on the door [of the CFO] and said: 'what is this? This doesn't work in Portugal’”.

Participant 11 (workshop network, director) expressed it this way:

“I have clients who we see in the market as very serious people, and who are real deadbeats, they pay absolutely nothing to anyone, and have no shame in their faces”.

Participant 03 (retailer, owner) described in this way the importance of proximity and why it is important to know the customers to assess credit risk:

“Investing in partners. Because it is the partners who lead, who know the market. Excuse me for saying so, but how many times did [a national distributor] get bumped off? They didn't know the reality. Even with financial managers, you can fool them. We often say, "Hey, that guy? Forget it! The guy doesn't even have banking incidences, but we know him". If they know how to do it well, and clients are becoming more and more masters at this [laughs], they begin to dominate the gaps in the system, don't they? [laughs] Every now and then they manage to surprise me [laughs] . . . Apparently, everything's OK, they're all five-star guys. Then we'll see the reality, my goodness...! And I think it's all to do with proximity, it's those little tricks, as we know them”.

6.1.1.3. Summary: themes and characteristics that are specific to Portugal

In summary, participants characterised the European Union as a region with many large urban centres and commercial hubs that provide the proper scale for the implementation and development of the disruptive concepts presented, i.e., mobility, electrification, self-driving cars, and telematics. Large commercial hubs facilitate concentration and favour consolidation of the auto parts industry. By contrast, Portugal has few large commercial areas; this has limited the feasibility of market consolidation. Regarding the paradigm shift from the car as property

to the car as service (i.e., mobility), the lack of public infrastructure presents a barrier; and culturally, the feeling among participants is that most people in Portugal will be unwilling to give up their cars. In the same vein, participants consider that the lack of relevant public and private infrastructure has limited the impact of the paradigm shift from combustion to electric engines. Combining the mobility and electrification constraints pointed out, and according to the participants, the Portuguese still need (and like to own) at least one car and that should be with a combustion engine. This need to keep combustion engines was pointed out as one of the reasons why the disruptions that were happening in the market would not have such a negative impact on the parts business in the medium term.

The focus on features and themes that are specific to the Portuguese market demonstrates that, in response to the first research question, which asked to what extent stakeholders in the auto parts market perceived the current paradigm shift in the automotive industry and the auto parts market in particular, it seems that the stakeholders perceive the changes in the market; however, stakeholders seem to downplay the potential impact these disruptions will bring to their businesses. In other words, stakeholders sense the changes, but they are perceived to be of little to no concern.

This leads us to the second research question that intended to identify the key resources and capabilities necessary for a company working in the auto parts market to build sustainable competitive advantage, in such a current context of deep uncertainty. In response to this question two major themes emerged from the findings: *Relational Proximity* and *People*.

6.2. Theme: Relational Proximity

The majority of participants mentioned the geographical proximity of retailers to workshops and their clients as a key factor that enhances the differences between retailers and wholesalers. In opposition to wholesalers, retailers typically work within a limited geographical area, as explained by Participant 02 (retailer, owner):

“We have a regional scope. Which we try to extend and that we will continue to extend, but we remain within the regional scope”. Thus, delivery logistics, as a key factor in the business, are always conditioned by distance. Therefore, geographical proximity makes local retailers unbeatable in relation to wholesalers when it comes to speed and frequency of deliveries. Physical proximity allows a better follow-up of the customer, allowing a better knowledge of their needs, modelling the offer of products and services, making the company more agile and flexible. Local retailers thereby develop competencies in terms of support, quick resolution of technical problems and quick

response to requests. This agility and client-orientation is strongly valued by the workshops. Independent workshops are often described as "very disorganised", lacking in planning, and often not even ordering "everything the first time and then, after a while they are ordering again for the same vehicle".

Workshops also strongly value the service of parts identification as well as the process of procurement, also known as "shopping around". Participant 14 (workshop network, director) summarised this issue as follows:

"Who gets the crappy parts for that car that is not working, but nobody has it? The answer to this question is simple: the local retailer. The local retailer stands out for its speed and precision in responding to requests. Wholesalers simply cannot compete in this respect".

Geographic proximity is an intrinsic and particularly powerful differentiating factor contributing to *relational proximity* between retailers and local workshops. Most of the participants recognised relational proximity as one of the most powerful and most difficult to imitate factors contributing to competition; this concept was also one of the main arguments for the delay in the anticipated consolidation within the industry.

The specific geographical area in which retailers typically work are the ones to which they are native, and in which they belong to the community. They interact with owners and employees (including salespeople) belong to the community and interact with clients on a professional, friendship, and even family basis.

Participant 19 (retailer network, director) explained this phenomenon as follows:

"If we exclude Great Lisbon and some areas in the North, the business is too personalised. I'll never forget when I was at [company name], we had a shop in Évora...I go to visit a client with my salesman, and the salesman tells me 'Sir, I'm sorry, but you don't have a chance. These are our clients, but I can't sell anything more here'. And I said, 'What do you mean you can't sell more? I don't accept any salesman telling me he has the clients and can't sell more. I'll show you!' I go to a client, and the client says 'No, no, ... I buy the batteries from João because I go hunting with him, but I have to buy the lubricants from António because he goes with me to what's-his-name's association' . . . And this was not twenty years ago, it was ten. A city. But people know each other and go shopping, and this is a caricature, but it happened. ... This informality, regarding management, is a very hard thing..."

Relational proximity develops greatly through the degree of trust that is created between customer and supplier. This trust is decisive for the development of the business, keeping

competitors away, even if competitors objectively present better conditions than the current supplier. As noted by Participant 03 (retailer, owner):

“It is a good thing that we have, I think, which are the proximity factors. I think proximity always makes a difference. Because you feel more trust, normally with people, if you know that people, in this case, in our village, in our town, which are small towns, aren't they? And that everyone knows each other. And it goes a lot on the factor of trust, of will. So, I think it is one of the most important things that we have at the moment, I think it is still comfortable in our business”.

In summary, in the context of profound uncertainty in which the parts market finds itself, *relational proximity* was one of the themes that stood out as a necessary capability for companies operating in this market to create sustainable competitive advantage. In addition, another capability emerged as an answer to the same research question: *people*.

6.3. Theme: People

Perhaps the most significant finding was the role participants attributed to *people* as the differentiating resource in the auto parts market, specifically their ability to perceive opportunities and threats in the market and trigger the necessary changes in their companies. Interventions mediated by *people* are considered very important with respect to proximity and relationships with clients. This was mentioned as one of the reasons why the consolidation of the market did not happen as initially predicted. As noted by Participant 14 (workshop network, director):

“Close relationships are created at this level that result in a desire to repeat the experience because I am safe there, there are no mistakes . . . Basically, it's the effect of scale with the effect of personalisation. And it's always a trade-off. I'm never going to get big scale in personalisation”.

People who belong to the same small community, as its often the case with friendships and even family ties, are frequently more isolated and unwilling to work with third parties. This factor is frequently invisible and/or neglected, by more complex organisations with a national scope, i.e., wholesalers. These nationwide organisations tend to be companies with professional managers (whether they are family businesses or not) that aim to supply the workshops directly. These national companies find that they cannot break the strong personal ties that exist between workshops and local retailers. Some participants referred to concrete cases of wholesalers who tried to supply the workshops directly (i.e., forward vertical integration), with adverse results.

Participant 02 (retailer, owner) described the case of an auto parts wholesaler who tried to move forward in the supply chain in this way with very negative results:

“I remember some movements that took place, these ruptures that I was talking about, and there were some companies that tried to anticipate this, mainly outside the large urban areas, and that the market was clearly not yet prepared, and reacted, defended itself in its own way, but boycotted some movements that existed. . . . Sonicel, CS... they suffered a lot with this”.

The companies discussed by this participant eventually went bankrupt.

One component that was frequently highlighted by the study participants was the competence of the employees in parts shops. These individuals can provide rapid resolutions to problems that develop in the workshop and are therefore very valuable to the company. This competence is described as the result of considerable experience; and as a result, these employees are understood to be a relatively scarce resource. As stated by Participant 14, workshop retailer, director):

“And [the parts store] does another thing...which is, in the underworld, if we go down to the field, man, it's very interesting. Because then the guys in the workshops talk to the spare parts dealer, ‘you don't...oh, gee, I think it's this, it's that... but which car do you have there? Well, it's the Peugeot what's-his-name... never mind, that's it [the spare part needed]’. Pure experience effect. A robot dispensing parts for zeros and ones of supply in the rack doesn't do that, does it?”

In summary, *people*, were recognised by all participants as a factor that enhanced differentiation. Many participants echoed the thoughts of Participant 03 (retailer, owner):

“I actually believe that the outreach that is developed on a day-to-day basis, and which is what makes all the difference, is carried out by people. ... We are very parochial, we are very much in touch with people's trust, aren't we? I think we, in our firm, have done an excellent job, I have no doubt, it has been a lot of sacrifice, a huge struggle . . . to have achieved what we have done. Everything was done with our sweat, with our employees. So, we have managed to create something different in the market and you ask me ‘What is the key to success?’ I only have one answer: there are many factors, but the main one is people. Because I believe in that, I believe in people. I think it's the way people are in the market that make all the difference. I'm not saying it's me, it's not, it's my team, it's our DNA our way of being in the market because selling parts, everyone sells, full stop, paragraph”.

The influence of people and their contributions to business success and the capacity to build competitive advantage are manifest in several aspects: in their relationships with clients, suppliers, shareholders, and co-workers, and their contributions to the development of unique differentiation factors.

The roles played by *people* who can sense and eliminate threats as well as seize opportunities may be strongly influenced by the ability of top management to select, train, and motivate them to engage in whatever transformation is necessary to create competitive advantage. Participant 07 (other companies, corporate management) stated the following:

“I think we have fantastic teams and we have fantastic leadership, we have people very close to the business where the organisation knows the strategic objectives of the business for the next four or five years, people know what our challenges are, people know what our motivations are, and it is very important that in the organisation, from the cleaning person to the general manager, everyone knows the strategic objectives of the company and where we want to go. I think this happens at our company, it happens because we have this leadership, because we have a team that is very focused on our client, and these are differentiating factors”.

The same idea was expressed by Participant 06 (other companies, corporate management):

“I think that in a business like parts, where we don't transform anything, we just buy and deliver, the unique resources are people. The rest we are talking about shelves, we are talking about warehouses, and we are talking about computers. I think that even the projects, and we have a very big focus on what are digitalisation and process optimisation, and the movement is very big in that direction...But...it's the people. It's the people at the end of the day that can make things happen or not happen. And even though we are a company that is at the forefront of technology, our processes are still very dependent on people. And it will continue to be so in the coming years”.

Following the same line of thought, Participant 14 (workshop network, director) discussed the importance of empowering people to promote the evolution of companies:

“Organisations and leaders today have to get used to leadership in order to raise the level of people and make them grow. ... And that's the only way he's going to be able to scale growth. Because he alone is not going anywhere. And to win people over, you have to give them that trust and that responsibility, so that people manage it as if it were their own. So that's the concept of ownership, transferring that ownership to the person”.

Amongst the various resources and capabilities that stakeholders considered necessary to build competitive advantage, the ones that stood out were *relational proximity* and *people*. The themes of *relational proximity* and *people* respond to the research question – the key resources and capabilities that were identified by stakeholders as necessary for a company working in the auto parts market to build sustainable competitive advantage in a context of high uncertainty.

However, in addition to resources and capabilities, participants mentioned the crucial importance of the ability to orchestrate them within the organisation. This leads us to the third research question: What role do key stakeholders in the auto parts market attribute to dynamic capabilities in a company's response to the changes occurring in the market? In response to this question another key theme emerged from the findings: *Governance*.

6.4. Theme: Governance

The governance model appears to influence a company's ability to foster sensing, seizing, and transforming capabilities, thereby enhancing its dynamic capabilities. Participant 04 (technology provider, partner) described the power of the governance in sensing, seizing and transforming capabilities in this way:

“The case that I remember most strongly is that of Create Business, which clearly has a very keen vision of what is going to happen from the technology point of view. What does the market have and how do we get there, right? The retail approach model and the intrusion in what is workshop management, is clearly someone who understood and said ‘Look, this is going to happen. I'm going to make that move now.’ It may not be in a perfect way, but in the end, it manages to lock the entrance of competitors”.

As suggested by Participant 05, this company appeared to have sensing and seizing capabilities; however, the capacity for transformation was also needed and enhanced by top management.

One characteristic of the parts market is that the owner is frequently present and participating directly in the business; by contrast, many companies and groups of companies employ managers who do not belong to the major shareholder's family. This finding carries several implications. The study participants as a group recognised that this facilitates a much more rapid response in both commercial and strategic terms. Participant 19 (retailer network, director) provides an example that illustrates this point:

“A salesman to make a special discount on a [lubricant] drum - how many people does he go through? In other words, from the moment a customer asks the salesperson to reduce the price by twenty euros per drum, until he gets those twenty euros off, how

many people will he talk to? He sometimes goes to talk to the shop manager, to the commercial director, the commercial director says twenty euros is not possible...and that it is better to talk to the CEO. When the salesperson gets the answer downstairs [to the client], the client has already bought ten drums from someone else. Why? Because in my competitor, the employee spoke directly to the boss, the boss said 'ok' and the deal was closed”.

Most participants also highlighted that the presence of the owner of the business facilitates more rapid strategic and investment decisions which provide these companies with greater agility. Participant 04 (technology provider, partner) noted the following:

“...the proximity of the business owner has a substantive impact on what are strategic issues. And in the speed of decision-making of these strategic options”.

If top management lacks the ability or will to change and de-emphasise historically successful capabilities that have become obsolete, this can compromise a firm’s competitive advantage. Participant 11 (workshop network, director) mentioned the following:

“Normally, with very, very rare exceptions, what happens is: whoever is clinging to the past is unable to move on to the future because he always carries the past with him and ends up being killed by the weight of the past. And there are going to be players who are going to come along again and who are going to invent the wheel again and do wonderful things”.

According to these data, we can infer that the governance model dictates the agility of a company and thus its capacity to innovate. Most of the participants stated that the presence and involvement of the business owner facilitate significantly greater flexibility. By contrast, corporate groups tend to have a more rigid governance model. Participant 19 (retailer network, director) explained it this way:

“The trend that has been noticed in companies that are markedly group companies is that the CFO has a brutal weight. After the CEO, the CFO is the god, if not the god himself. I think they [CFOs] go too far. Look, I'll give you an example: in the 2011 crisis, what did more family-oriented companies do? They increased stocks, the ones that could, the ones that are still climbing the ladder [growing the business consistently], they increased stocks. How is a company like MCoutinho or Salvador Caetano going to convince the CFO to increase stock at a time when sales are expected to fall? This is a discussion that I wouldn't dare to have with the CFO [of an economic group in the auto parts market]; the CFO would say ‘oh man, you didn't take your pill in the morning. Go and take it, you're wasting my time, go on about your business’, right? The older

[players] or family-owned companies have another way of seeing things, they are much more committed to the business, it is their business, it is their life, and they have the ability to take risks and invest from their company's treasury without giving explanations to anyone”.

The analysis of these results suggests that top management, via its role in governing the company, has a strong influence on its capacity to sense threats and opportunities and thus manage strategic change. In the same way, openness and the capacity for self-cannibalisation seem to play very important roles in the process by which a company adapts to potential changes in the market. This capacity refers to the ability to recognise the changes that need to be implemented, including promoting competition between products and services inside the firm and reducing the emphasis on capabilities that may have historically been (but no longer are) responsible for the company's success. Participant 04 (technology provider, partner) mentions the following:

“The difficulty or the loss that happened with Kodak, with Nokia, with BlackBerry was their inability to cannibalise themselves. What does that mean? It means that, if it's an engineering issue and they firmly believe that their product is better than everybody else's...if it's a commercial issue where they believe that being market leaders, as Nokia was for many years, they're not capable of somebody coming along and stealing that market share. The vision they had was not to cannibalise themselves and therefore to reduce innovation. Consciously or unconsciously that movement eventually happened...Looking now at the specific case of M Coutinho, and AZ Auto, and Sofrapa, I think some of them have made a movement closer to beneficial cannibalisation. I am looking at it from a positive perspective. I remember, in the case of M Coutinho Peças, entering the aftermarket parts business and therefore, from that point of view it is stealing market share and is losing market share in the original parts, so there is a cannibalisation movement that would otherwise be occupied by others”.

Participant 15 (other companies, director) provided an example of a concrete situation that featured the rigidity of corporate groups. Specifically, this participant described the issues he had to deal with when a supplier changed its Enterprise Resource Planning (ERP) system:

“We worked for a long time with [name of distributor]... I made a deal [with that distributor], but... man, they changed their ERP, it completely messed up our logistics here, I had a meeting with the general manager, and the general manager said ‘Man, no, [my company] wants it this way’. I said ‘That's fine, we have to find a solution that

satisfies us...we like you a lot, but let's go our own way' and so we started working with Soulima and Leirilil preferably..."

By contrast, Participant 19 (retailer network, director) provided the following justification for the greater rigidity observed amongst corporate groups:

"A more corporate group, more formalised, has a more short-term vision, unlike a more one-person or family business, which takes a very long-term view of the business, right? And it is natural that companies that belong to business groups with shareholders, that have the immediacy of the annual result, of bank exposure, so there is another set of macro concerns, and then the relevance that the parts business may have in this conglomerate of companies would be another conversation, right? I think that this vision will be decisive when it comes to knowing that the parts business are not even worth one percent of the whole".

Some participants argued that the owners of smaller companies should move away from managing the day-to-day operations and focus on how to obtain a more strategic position. Participant 14 (workshop network, director) summarised the challenges faced by companies whose owners are present and involved in the day-to-day workings of the business:

"And that's the challenge of owner leaders, which is precisely to have ambition, to equip themselves with good people and give them empowerment, confidence, autonomy, and become, I would say chairman. Not executives. That when they come in, it's to invoke the positive aspects. They come in with their vision of what's right or wrong and they introduce the issue. They nurture people. They nurture them and give them confidence, so that...the psychological environment in the structure is clearly contributive, no one is afraid to speak, in a way that they may be censured because they have said some nonsense. No, maybe there is a great idea there. So, and the richness of everyone's contribution. It is indeed difficult to implement, but I believe that prosperous companies in the future will tend to have these policies of resource management and healthy environment within the structure".

Some participants suggested that greater flexibility might be achieved by promoting more autonomy on the part of the business leadership, as reflected here in a comment from Participant 14 (workshop network, director):

"Once this governance model has been defined, which allows management without conflicts of interest and in favour of the structure and the organisation, so this is a topic... I would say that the future trend, and I think that organisations and leaders nowadays have to get used to it, is leadership in the sense of elevating. So, it has to be a

management of raising the level of people, raising the level and making them grow. And at the same time, making them responsible, putting them in, being one of us. This is done with high levels of trust and the ability to delegate and the proximity of management, in the sense of supporting them when there is something that does not go well, making it a problem that is also theirs, and feeling the trust, and the will, and the spirit to create what is also widely used nowadays, psychological safety, in organisations. So that people have psychological safety within organisations. And this is the challenge”.

One of the risks related to ongoing owner presence in the day-to-day management of the business was a generational change. The founder of a business may not have descendants interested in or capable of providing continuity. As explained by Participant 15 (other companies, director):

“...this is a dynamic business. The owner dies, the son remains, the son doesn't understand any of this, he just wants to spend money...hey man, I've seen a lot of these things happen”.

In summary, analysis of the data suggests that both the governance model and the specific roles played by top management will be decisive with respect to their ability to develop competitive advantage and maintain it over the long term.

6.5. Summary: Relational Proximity, People, and Governance

Figure 6.4 shows the degree of importance attributed by each interviewee to each theme and sub-theme. For example, Participant 08 highlighted the importance of *people* in the creation of sustainable competitive advantage, followed by *relational proximity* and *governance*. Participant 11 gave particular emphasis to factors associated with *governance*.

The analysis based on the type of company at which each participant was employed (Figure 6.5) documents the relative importance of this feature to the attributions provided to each theme and sub-theme. For example, participants associated with “independent workshops” attribute particular importance to *people* in the creation of sustainable competitive advantage, while those employed in the “retailer network” emphasise the particular importance of *governance*. This is even more evident on Figure 6.6 (regarding dynamic capabilities). As found from the interviews, “independent workshops” are highly dependent on their supplier (retailer), so that will be the reason for highlighting the role of *people*. On the other hand, of all the typologies, the “retailer network” typology has the most comprehensive view of the market. The retailer

understands which clients (workshops) and suppliers (wholesalers) stand out, which may justify the importance given to *governance*.

An analysis of these findings based on the contributions of each interviewee to their respective companies (Figure 6.7) reveals that directors attach particular importance to *governance*, while corporate managers and owners emphasise the importance of *people*. The reason why directors give greater importance to governance may be related to the fact that, on the one hand, they are the employees who are in the field on a daily basis and understand which suppliers and clients are more adapted to the market. On the other hand, the directors themselves report to someone, so they should be particularly sensitive to the company's governance model.

It is clear that these themes are interrelated to some extent. *Relational proximity* seems to have a strong connection with *people*, but also with top management. *Relational proximity* allows a parts distributor to be very close to its clients (i.e., the workshops). This proximity permits the distributor to be more effective at sensing the client's needs and to be more cognisant of market changes as well as potential threats or opportunities. *Relational proximity* can be developed both by people and by the distributor's owner, especially in family-owned businesses. By contrast, *people* are the ones who seize the opportunities to differentiate the company by anticipating the competition. However, people will only be able to seize opportunities if they can keep the strategic lines of the organisation in mind. These strategic lines are outlined by the top management as guided by the *governance* model. Top management can only respond to information they possess, which is largely transmitted by the *people* of the company. In this sense, the specific nature of the *governance* model may determine whether a company can regenerate itself when confronted with market changes.

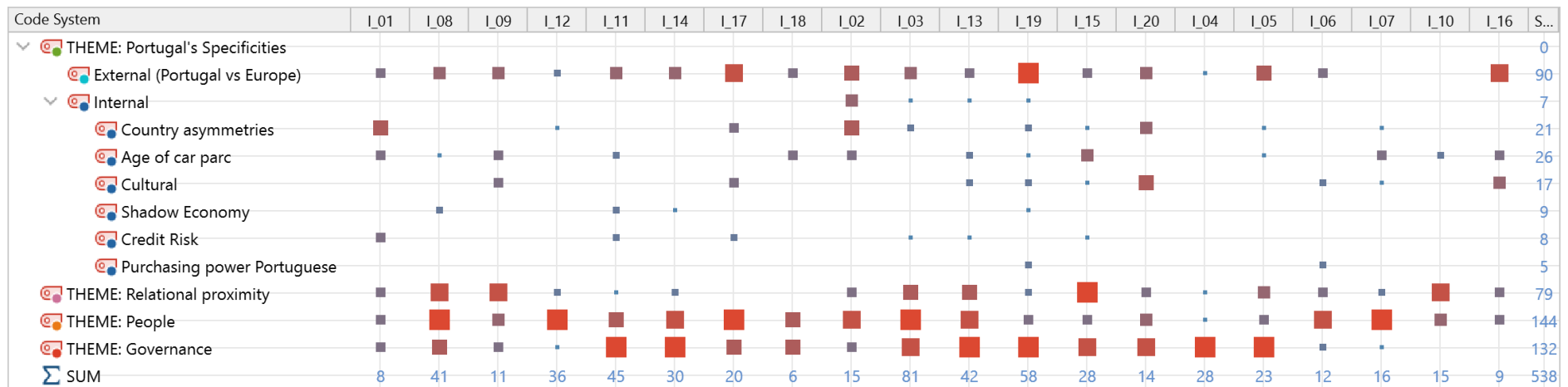


Figure 6.4. Degree of importance of each theme and sub-theme according to each study participant. This figure was created using MAXQDA Code Matrix Browser. (The size of the square (or the colour) represents the relative importance that each respondent attributed to the theme or sub-theme in question).

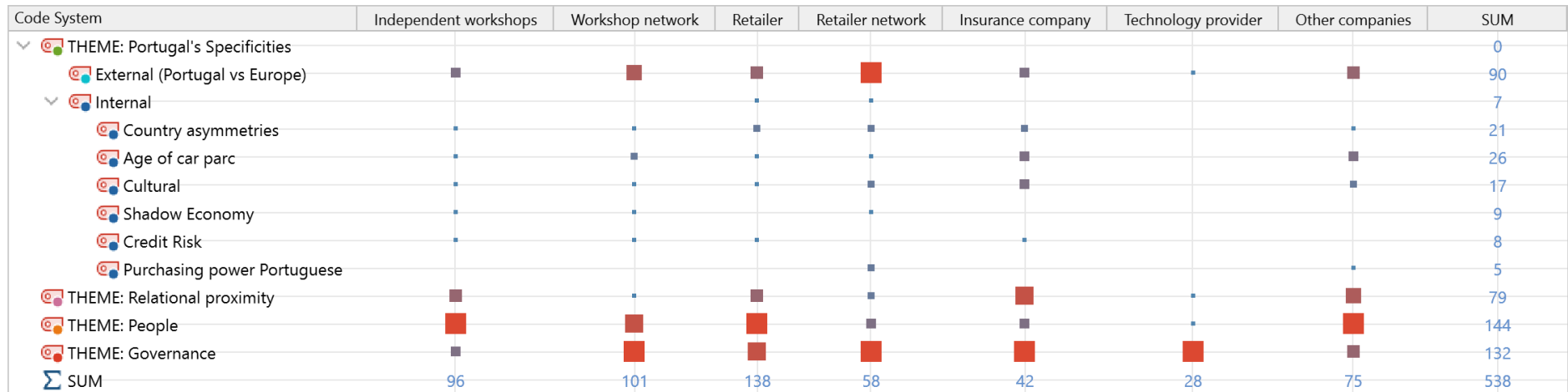


Figure 6.5. Degree of importance of each theme and sub-theme according to each typology of respondent. This figure was created using MAXQDA Code Matrix Browser. (The size of the square (or the colour) represents the relative importance that each typology of respondent attributed to the theme or sub-theme in question).

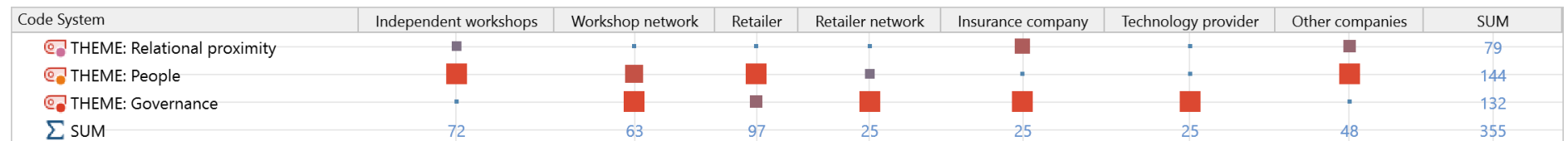


Figure 6.6. Degree of importance of each theme related specifically to dynamic capabilities according to each typology of respondent. This figure was created using MAXQDA Code Matrix Browser. (The size of the square (or the colour) represents the relative importance that each typology of respondent attributed to the theme in question).

Code System	Director	Corporate manager	Owner	S...
THEME: Portugal's Specificities				0
External (Portugal vs Europe)				90
Internal				7
Country asymmetries				21
Age of car parc				26
Cultural				17
Shadow Economy				9
Credit Risk				8
Purchasing power Portuguese				5
THEME: Relational proximity				79
THEME: People				144
THEME: Governance				132
SUM	264	51	223	538

Figure 6.7. Degree of importance of each theme and sub-theme according to participants' positions in their respective companies. This figure was created using MAXQDA Code Matrix Browser. (The size of the square (or the colour) represents the relative importance that each typology of respondent attributed to the theme or sub-theme in question).

Part II: The Portuguese auto parts distribution companies

Part I of this chapter addressed findings that focused on the participants' view of the auto parts market. Analysis of these interviews revealed four major themes: *Portugal's specificities*, *relational proximity*, *people*, and *governance*.

Part II analyses the participants' perspectives and attributes of companies that are currently operating in the auto parts distribution market in Portugal.

6.6. Auto parts distribution companies

When asked to name the Portuguese auto parts distributors that were the most successful, respondents identified Create Business, Auto Delta, Autozitânia, Centrauto, and MCooutinho Peças. In the course of the interviews, names of other companies also emerged, including Sofrapa, Leirilis, Krautli, Salvador Caetano, and NORS.

The participant responses highlighted Create Business as a company with several specific and important differentiating factors. Create Business was built on a central purchasing concept; the company is essentially a wholesaler, and its associates are retailers. This is an example of backward vertical integration. In this case, retailers joined together cooperatively under a forward-thinking leadership and thus moved up in the value chain by becoming both importers and wholesalers while maintaining the advantages of geographical proximity. Create Business was often mentioned for its capacity for innovation based on assessments of its business model, technological development, training, and specialised technical support. Participant 12 (independent workshop, owner) described this type of forward-thinking innovation as follows:

“One day, Carlos Nascimento thought to himself, ‘I'm going to combine the transport company with the delivery of parts and so on, and we're going to start a real business here, and we're going to create a kind of franchise and a network of parts shops’. And that's how it started. And then, due to so many shops to supply, he managed to get a volume of purchases added to their internal distribution network, which was excellent, and created a business mix that had never existed before. All this, together with all the support they give, whether it be call centre lines, diagnostic tools, at this moment they are even selling workshop equipment... Their support line also already does remote support to the workshop... So, they give training, they channel business to us, they sell the parts and... basically, their business is selling parts. So, they create all the conditions so that their partners—in this case, it's us, isn't it? We are their customers—so that they

can continue to sell parts. And all this was a differentiating factor in everything, so at this moment we already have several networks doing that, but until [Create Business was created] there were none. With this whole set there wasn't".

On the technological component and the relationship with innovation, Participant 04 (technology provider, partner) also mentioned the following:

"Create [Business] started approaching the workshops, and we must take our hat off to them for this, much earlier than the others. So, it was and is innovative from this point of view, whether via the ERPs or via the availability of a web tool for workshop management. So, it was ahead of everyone in that respect. On the other hand, upstream it has a complex operating model of dispersed stocks and centralised orders with supplies that are also dispersed. So, it also necessarily has additional complexity in the technology it has set up there".

Participant 05 (other companies, corporate management) reinforced this idea:

"In technological terms of solutions for the market, they are undoubtedly the most advanced because...it doesn't mean that they are the best, but they are the most advanced, that launch the most things, because there is effectively this central team that is solely and exclusively concerned with dealing with the business development component".

Several participants highlighted that Create Business seemed to be always ahead in the market. Participant 12 (independent workshop, owner) stated that this company "...must be ten years or more ahead of the market". Although not stated directly by any of the stakeholders, Create Business seems to use a model that combines some of the themes that emerged from the interviews: *relational proximity*, *people*, and *governance*.

Another company that was highlighted by several of the study participants was Auto Delta. Auto Delta was identified as a wholesaler with a unique combination of the independent aftermarket (IAM) range as well as product and stock management capabilities. This combination makes it seem as though they always have a solution to any parts request, as explained by Participant 13 (retailer, owner):

"The issue that I can consider them as standing out from the others in, that differentiates them, is the availability of stock. From my own experience, but also recognised by other distributors, in Portugal, this must be the company that has a really complete and different stock, because it has an offer in several positions. It has premium brands, it always has two or three options for almost every part. We often tell our customers that it is impossible to have everything, and they [Auto Delta] do not have everything, but they have almost everything. And compared to Autozitânia, compared to Soulima,

compared to... other distributors, the level of stock is very different, much higher. Then they have everything concentrated in one place, the other companies have it in the North, in the South or in the Centre, which makes it difficult to have the same stock everywhere, but that was their [Auto Delta's] strategy. And with their own logistics, they are in the centre of the country, it is strategic for them, no doubt”.

Interestingly, Participant 19 (retailer network, director) noted that Auto Delta appeared to be following a non-mainstream path:

“I have to admit that in the last year Auto Delta has demonstrated that it seems to do everything wrong, but everything goes right. In other words, Auto Delta has been saying for many years that it makes no sense to have so many brands, everyone is consolidated into brands with far fewer offers and Auto Delta has always followed the opposite path, which was more brands, more product lines, more, more, more. When the pandemic came, the circumstances were great for them because they were one of the few not to charge a service fee. They have a financial situation that allows it to stock sooner than others, it took a huge risk and now, with this lack of supply, it has many suppliers, so if it doesn't have one, it has another... And it has a very interesting feature, which is product management, which no one else has”.

Autozitânia was also recognised as an independent dealer in the auto parts market. Participant 05 (other companies, corporate management) offered the following statement:

“Autozitânia is a reference in the independent market. They are a giant company, they have belonged to an international purchasing group for many years...At a certain point, they already had Autozitânia I, which was solely and exclusively a wholesaler that sold to retailers, and they had already had the experience with Autozitânia II, which was a small network of their own shops. So, they already had that experience as a retailer. Recently they bought a very large group of associates, with a lot of experience in direct sales to workshops, which is nothing more and nothing less than a set of shops. In other words, they already have that front, they have position, it seems to me that they have an excellent relationship with suppliers, so I would say that they are an excellent candidate to take over a large slice of the market. They are missing one thing, which is original parts”.

Consolidation was noted as a major trend in the auto parts business. Autozitânia provides a specific example of this trend. In January 2021, Autozitânia acquired Bragalis to increase its presence in the north of Portugal.

Participant 02 (retailer, owner) mentioned the importance he attaches to the fact that wholesalers respect the value chain and therefore supply retailers, such that most do not short-circuit the process by becoming retailers themselves:

“I, for example, relate a lot with a supplier for its portfolio, for its response capacity, and one of the main ones is Autozitânia, it's no secret. This has also been a strategy that some wholesalers highlight, which is how they see the retail business, if they believe in it, and retailers value wholesalers that respect the role of the retailer. For example, I'm thinking of Autozitania, or even Auto Delta, I think they are companies that focused a lot on [respecting the role of retailer] and invested a lot and developed that part of the business a lot. I mean, like others did in other areas, they certainly invested a lot in the stock and the portfolio because they believed it was important for the business, certainly”.

However, Autozitânia recently made a strategic move towards forward vertical integration, (i.e., advancing one link in the value chain) by becoming a presence in the market with a retailer's brand via the acquisition of AD Logistics.

Another company mentioned by some participants was Centrauto. Centrauto is an importer/wholesaler that maintains a franchised network of shops under the same name. Participant 02 (retailer, owner) compares this company with other business models currently in use in the market:

“There were other successful partners. And one of them is older, but whether we identify ourselves with it or not, it's probably the most successful concept in our business, which is Centrauto. It was obviously a different strategy, very focused on price and proximity”.

Centrauto combines two of the features identified as most important by the participants: low price and geographic proximity. Geographic proximity is guaranteed by a franchising model of parts shops. Centrauto is described by participants as placing a near-total focus on price, while forgoing the service component (i.e., training, technical support, and digital solutions). As stated by Participant 11 (workshop network, director):

“A case study worth looking at is the case of Centrauto. Why Centrauto? Because it is also a set of companies that are managed differently. It's based on an opportunistic logic whereby if the company has bought a part for eleven [euros] and another one is found for ten, it will return the eleven...So, Centrauto is a company that is constantly returning items”.

Centrauto thus presents a combination of low-cost IAM (based on strong procurement capability), aggressive pricing, and geographic proximity.

A curious finding in this study was the participants' focus in their responses to questions about the market and the distribution companies operating in this market. When asked what a company operating in this market needed to do to develop sustainable competitive advantage, the study participants tended to focus on *relational proximity*, *people*, and *governance*.

6.7. Characterising MCoutinho Peças

The fourth research question was directly related to MCoutinho Peças, and consisted on how MCoutinho Peças used its resources and dynamic capabilities (if any) to build sustainable competitive advantage.

The parts market in Portugal is traditionally segmented between the original equipment manufacturer (OEM) and the independent aftermarket manufacturing (IAM) parts market. The companies mentioned in the previous section are primarily associated with the IAM parts market. Although MCoutinho Peças started as an OEM business in 1999, in 2009 it entered the IAM market. MCoutinho Peças is the only company in Portugal with a widely-integrated selection of OEM and IAM auto parts. Thus, stakeholders may have different perspectives on this company depending on their position in the value chain.

Stakeholders from retailer networks, workshop networks, wholesalers, retailers, independent workshops (mechanical), and fleet management companies tend to have more comprehensive views of the auto parts market compared to those held by insurance companies, car rental companies, independent collision workshops, and glass repair and substitution networks. While all participants stated their preference for the most economical solutions, their position in the value chain frequently determines their options in terms of parts supply. Participants from companies with a more comprehensive view of the market stated that they use IAM parts whenever possible and resort to OEM parts only when absolutely unavoidable. This was apparent from Participant 14's (workshop network, director) comment:

“It creates a problem for me which is, I'm going to buy much more expensive [OEM parts], with a very low margin, and I can't sell it for more than the origin [OEM parts], it doesn't make sense in my value proposition, right? But the person goes there [OEM parts distributor] because it's a safe purchase and they don't waste time”.

This participant also noted that IAM parts manufacturers, for economic reasons, focus only on the production of high-rotation parts; however, there is sometimes a need for parts with a rotation that is too low to justify their production by IAM parts manufacturers. Thus, one of the differentiating factors between the two is the fact that OEM parts distributors have access to all

the parts that might be needed to repair any car of the brands it represents. Likewise, newer vehicles in need of repair are more likely to require original parts. This is particularly evident for cars owned and maintained by rental companies, and is in line with the opinion of employees of insurance companies and independent collision workshops. Participant 10 (other companies, director) stated:

“In terms of collision, it is impossible to work with aftermarket parts because the models have a very high turnover and it is very difficult to find a mudguard, a fender, a bonnet for recent models in the aftermarket. From my experience, this is easy to do for cars with the average age of the fleet in Portugal, which is maybe ten or eleven years old⁶, and it's easy to find aftermarket parts. And if I worked in another position other than the [company] fleet, I would certainly look for this type of parts because the economic saving that you make by buying an aftermarket part or an original part is really very big”.

In the same vein, Participant 20 (insurance company, director) claimed that collision aftermarket “has not evolved as much as I expected at the beginning of this process when I started working on this subject”. Therefore, the participants tend to segment the auto parts market into OEM and IAM concerns. Although MCoutinho Peças has both OEM and IAM parts available, participants make a point of separating the company’s competitiveness in these two market segments. For example, when questioned as to how they characterise MCoutinho Peças, the stakeholders once again tended to focus their answers on resources and core competencies of the company. With respect to OEM parts specifically, participants noted that MCoutinho Peças went to the market with an innovative approach and that their unique range of OEM parts was inspired by the much-further-developed IAM parts market and was supported by strong logistics. As stated by Participant 02 (retailer, owner):

“At the time [MCoutinho Peças] did a little bit what the aftermarket was already doing, right? They set up the business with a certain logic, which until then did not exist in the supply of OEM parts, and it was innovative, from the perspective of the OEM parts market. And although it was more distant geographically, it ended up having more proximity, with the logistics organisation, and so on.”

Participant 09 (independent collision workshop, owner) agreed that MCoutinho Peças offered a unique service:

⁶The average car parc in Portugal is 13 years old, according to the ACAP (Associação do Comércio Automóvel de Portugal) (*Idade Média Dos Veículos Ligeiros de Passageiros Aumentou Para 13,5 Anos – Observador*, n.d.).

“The parts market is very competitive, and I have always tried with the various suppliers to see which one offers us better conditions. That's my main premise. And... M Coutinho is ahead of the competition in almost everything. It is difficult to find any other supplier that can give us better conditions than M Coutinho at this moment”.

Moreover, participants noted that M Coutinho Peças differentiates itself from the other OEM parts distributors by the availability of stock, logistics, customer service, web portal, and responsiveness. Participant 08 (independent workshop, sales and purchases) described them as being “...light years away from...other original parts distributors”.

In summary, all participants mentioned that M Coutinho Peças was very far ahead of the other OEM parts distributors. Participant 19 (retailer network, director) noted the following:

“It has what no one else can have. They [competitors] can try, they can stay here for another twenty years...at least another ten to achieve the number of original brands that they have, the logistical capacity that they have, and the organisation that they have”.

However, all participants remarked that M Coutinho Peças has not yet reached the same degree of maturity with IAM parts as it has achieved with the OEM parts business:

“If we isolate only the aftermarket business, I think M Coutinho would have difficulties with the portfolio they have at the moment. I don't think the aftermarket aspect alone would be enough to create a good perception in the market and to be a strong partner that could help the business. Because, deep down, that is always what we—unconsciously or consciously—make our decisions based on, whether that partner is going to help our business more than another”. (Participant 02, retailer, owner)

When compared to its competitors, several of the participants identified ease of communication and contact as an important feature that distinguishes M Coutinho Peças from other OEM distributors. Participant 11 (workshop network, director) noted that "M Coutinho has this positive difference compared to others. It is an accessible company that you can talk to". Participant 06 (other companies, corporate management) stated the following:

“The great added value is to focus, to put people and resources into looking at the business, and it may not be the sexiest business in the world, but having competent people looking at it differentiates, generates added value and is clearly a winning bet. Then the focus on processes, the focus on digitalisation and the creation of very specific solutions...”.

Most of the participants emphasised that the owners of M Coutinho Peças most likely had the vision of a new disruptive business model when the company was created in 1999. In some sense, M Coutinho Peças shaped the market, as it was a new entrant that rapidly became a market

leader. MCoutinho Peças reshaped the market again in 2009 when it entered the IAM parts business. While this was a move that might have been perceived to be self-cannibalisation, MCoutinho Peças was the first parts distributor to offer a wide selection of both OEM and IAM parts, a status that the company maintains to this day. This capability seems to be closely associated with the company's *governance*.

CHAPTER 7

Discussion

This chapter includes a discussion of the themes that emerged from the interviews and their relationship with the published literature. An analysis of these results in light of the literature reveals an almost direct relationship between the main emerging themes of *relational proximity*, *people*, and *governance*, and the “three primary clusters” of dynamic capabilities (i.e., sensing, seizing, and transforming) (Teece, 2019, p. 10). These relationships are discussed below.

7.1. Relational Proximity - Sensing

One of the main themes that emerged from the data was *relational proximity*. *Relational proximity* in the auto parts market results from the geographical proximity between regional retailers and their customers which allows them to offer service that is far superior to that provided by wholesalers. This type of proximity permits retailers to sense the needs and expectations of their customers and to be in a position to trigger reactions against potential threats or take action to seize opportunities. Sensing can be described as

“...an inherently entrepreneurial set of capabilities that involves exploring technological opportunities, probing markets and listening to customers, along with scanning the other elements of the business ecosystem. It requires management to build and test hypotheses about market and technological evolution, including the recognition of latent demand”.
(Teece, 2019, p. 20)

This connection between *relational proximity* and sensing capabilities is consistent with literature that posits that people in the company who are in contact with competitors, suppliers, and other stakeholders are in a better position to gain awareness of (i.e., to sense) changes in technology and/or potential threats from the outside (Cyfert et al., 2021; Linde et al., 2021; Millar et al., 2018; Teece, 2019). These social connections (for example, friendship or attending the same club) can be transferred to other domains, including the workplace (Adner & Helfat, 2003). These social connections can facilitate the transfer of information between different areas, including those that are internal and external to the organisation. Threats and opportunities can arise from changes in the balance of power with suppliers, from competitors' movements, the entry of new players into the market, or the advent of products or services with the potential to replace those currently offered by the company (Cyfert et al., 2021).

From our interviews, it was clear that the participants sensed the onset of change and disruptions in real time. *Relational proximity* was thus closely related to sensing, and thus played a very important role in maintaining competitive advantage.

The question then arises: what does a company do with the information it senses? Sensing alone will not provide a company with competitive advantage. There needs to be a sense of urgency with respect to the information that is sensed as well as a willingness to translate information that is sensed into concrete action (i.e., the seizing of opportunities or protecting against threats); thus, it will be critical to understand what allows seizing to take place.

7.2. People - Seizing

The findings in the current study suggest that there is a gap in the auto-parts market between sensing and seizing and that *people* play a fundamental role in bridging that gap. Although the participants sensed market changes, many were not reacting to potential threats that resulted from these changes, nor were they looking to seize potential market opportunities. The attitude appeared to be almost one of denial. Although they recognised the changes that were happening in the auto parts market and, more broadly, the disruptions that were underway in the automotive industry, many participants did not consider them a serious concern for the near future. They justified their inaction based on an understanding of several Portugal-specific characteristics (i.e., *Portugal's specificities*). Amongst these differences are the asymmetries noted between Portugal and the rest of Europe as well as asymmetries within Portugal itself. Taken together, these findings led many participants to believe that they did not need to be concerned with seizing at this time. The risks inherent in taking this position have been noted in the literature, for example, the statement made by Shoemaker et al. (2018, p. 21) who noted that “astutely sensing opportunities and threats is necessary but not sufficient to succeed when surprises occur in a business environment”. It is also necessary to react to these surprises; our findings suggest that by doing so, *people* play a fundamental role in the overall process. Nearly all the participants highlighted the role of *people* in triggering the change needed to react to perceived threats or opportunities and noted this as a highly differentiating element in the marketplace. *People* were ultimately what made things happen, including executing new business strategies, implementing innovation, and responding to customer needs. People ensured that appropriate opportunities were seized by “making the right decisions and executing [them]” (O'Reilly & Tushman, 2008, p. 191). The capacity to seize opportunities implies that one can “decide whether some information is of potential value to transform valuable

information into concrete business opportunities that fits its strengths and weaknesses and to make decisions accordingly" (Kump et al., 2019, p. 1153). *People* are the ones who make this happen.

Seizing requires clear-cut and straightforward strategic definition by top management (Linde et al., 2021; Santoro et al., 2021; Teece, 2019) to avoid falling into success or competency traps (Ferreira et al., 2020; Heracleous et al., 2017; Hernández-Linares et al., 2021; Levitt & March, 1988). If this is not addressed, companies may sense opportunities and threats, while remaining unable to address them promptly (Millar et al., 2018; O'Reilly & Tushman, 2008; Santoro et al., 2021; Vahlne & Jonsson, 2017). The seizing process "needs to be connected to both a guiding policy and coherent action" (Teece, 2019, p. 15).

7.3. Governance - Transforming

Another theme that emerged from the interviews was *governance*. Participants mentioned the role of *governance* in driving the reconfiguration of the organisation to meet customer needs and to incorporate new technologies that will promote innovation and change (i.e., transforming).

Transforming includes "enhancing, combining, protecting, and, when necessary, reconfiguring the business enterprise's intangible and tangible assets" (Teece, 2007, p. 1319). This means "putting decisions for new business models, product or process innovations into practice by implementing the required structures and routines, providing the infrastructure, ensuring that the workforce has the required skills" (Kump et al., 2019, p. 1153). Participants noted that these decisions need to come from the top management. Thus, the capacity to transform will depend on whether top management feels free to act swiftly and possibly even radically. This is consistent with literature that stresses the importance of top management in developing an organisational culture based on dynamic capabilities, one in which "the combined dynamic capabilities of the managers and the organisation enable the enterprise to profitably orchestrate its resources, competences, and other assets" (Teece, 2019, p. 22).

Governance defines the strategic business lines and is the main element responsible for the transformation of a company. This concept also establishes the boundaries of a company by defining its *guiding policy*. The guiding policy defined by top management sets the strategic lines and goals of the company that permit *people* to seize opportunities and nullify potential threats. On the other hand, *governance* is critically needed for radical transformations in the business, notably those that might be needed to survive in highly uncertain environments and

in response to critical market disturbances, for example, similar to those currently experienced in the auto parts business.

Governance also has an important role in promoting sensing capabilities within the organisation. A company's governance model can be a critical element that promotes a culture of permanent sensing in which not only top management, but everyone in the organisation continuously seeks to detect threats and opportunities for improvement to promote both exploring (sensing) and exploiting (seizing) activities (Bocken & Geradts, 2020; Ferreira et al., 2020; Linde et al., 2021; Millar et al., 2018; Santoro et al., 2021; Teece, 2018a). As Felin & Powell (2016) note, "in volatile markets, the key function of senior managers is to create a fertile environment for sensing, shaping, and seizing market opportunities" (p. 79). This statement was clearly reflected by our respondents' description of the current auto parts market in Portugal. Study participants also reported a tangible distinction between companies with compared to those without owner-managers. Companies that had an owner involved in the day-to-day business and who was in close contact with events occurring both inside and outside the organisation appeared to be more willing and able to adjust rapidly to market demands and sustain a customer-oriented culture across the organisation. By contrast, corporate groups tended to be more rigid and had greater difficulty in reacting to changes in the business environment. Part of this rigidity was attributed to the fact that, in contrast to smaller companies, corporate groups tend to focus on shorter-term interests, for example, quick profitability, that may ultimately compromise their long-term strategic vision. This is consistent with literature that highlights how corporate management focuses on maximising shareholder value in the short term and typically shifts attention away from dealing with uncertainty. These attributes ultimately create institutional barriers that threaten the firm's sensing, seizing, and transforming capabilities and inhibit its ability to adapt and innovate (Bocken & Geradts, 2020; Teece, 2019; L. Wang et al., 2018).

The impact of governance was also felt when considering the importance of a specific business unit (in this case, the auto parts industry) in the corporate group as a whole. When the auto-parts unit represents only a small fraction of the entire business, the attention, urgency, and willingness to invest in new models will naturally be smaller. Participants noted that this issue may limit these companies' competitive advantage. To address this concern, the participants suggested both management decentralisation and increased autonomy for the leadership of each business. This suggestion parallels those published by several authors who also suggested that high levels of decentralisation may permit a company to remain flexible and

develop dynamic capabilities (Chen et al., 2020; Cyfert et al., 2021; Song et al., 2016; Teece, 2007; Teece et al., 2016; Teece, 2018b; Vahlne & Jonsson, 2017; L. Wang et al., 2018).

7.4. Sensing, Seizing, and Transforming

Although our findings suggest that *relational proximity* is more closely linked with sensing, and highlighted the links between *people* and seizing, and *governance* with transforming, there are strong interrelationships among all three themes as well as amongst these themes and the clusters of dynamic capabilities. Thus, although *people* may be linked closely with seizing capabilities, they also facilitate sensing. *Governance*, in turn, is most closely linked to the concept of transforming, but also to both sensing and seizing. One can argue that *governance* thus emerges as the most important element for the development of dynamic capabilities.

The findings of this study draw our attention to the importance of top management and their contributions to the development of transforming capabilities and thus, in an interconnected manner, to the development of seizing and sensing capabilities. The study exploited each of the three clusters of dynamic capabilities individually and also evaluated several specific combinations. The crucial role of top management, which in this study was represented by the concept of *governance*, was also discussed in a study conducted by Helfat & Peteraf (2015) that referred specifically to the role of top management in each of the three clusters of the dynamic capabilities framework and highlighted its special relevance when there are changes in the market.

The findings from this study demonstrate that companies with a more agile top management tend to have more developed processes of sensing, seizing, and transforming and, therefore, have a greater capacity to build dynamic capabilities. These results are consistent with those reported in the literature, particularly those that highlight how firms reconcile exploring and exploiting capabilities (Ferreira et al., 2020; Heracleous et al., 2017; Linde et al., 2021; Millar et al., 2018; Santoro et al., 2021; Teece, 2018a; Teece et al., 2016). By contrast, organisations with rigid top management models tend to be less agile at adapting to the market. Instead of developing dynamic capabilities, these companies find themselves stuck with core rigidities. Some companies (mainly those integrated into economic groups and those in which the owner is not present in the business) were identified as having developed sensing and seizing capabilities albeit with more limited transforming capabilities. These companies were also limited by their more rigid governance model. A rigid governance model typically reflects the contrasting interests of the different stakeholders within *governance*; in other words, the CEO's

interests are not necessarily the same as those of the Executive Committee, the Executive Committee's interests are not necessarily the same as those of the Board of Directors, and the Board of Directors' interests are not necessarily the same as the shareholders. In this regard, Teece (2019) denounces “the ‘solutions’ [to issues arising between management, board of directors and shareholders] that have been adopted constrain the scope of management to fully leverage the capabilities of the firm, risking long-run growth in employment and output” (Teece, 2019, p. 25). The current literature includes many publications that highlight the need for an understanding between shareholders and executives that focuses on reconciling the need to exploit the company's successful business while maintaining the agility needed to seize market opportunities and/or nullify external threats (Bocken & Geradts, 2020; Chen et al., 2020; Teece, 2019).

Most of the participants considered the presence of the business owner in a positive light as this arrangement typically facilitates more rapid responses to commercial and strategic concerns; in these cases, the owner develops *relational proximity* and fosters this capability throughout the company by promoting abilities needed to sense threats and opportunities. The owner can also enhance processes in the organisation that will nullify or dampen threats and promote the seizing of opportunities. This culture of proximity which combines both sensing and seizing facilitates the development of the dynamic capability of corporate agility (Katkalo et al., 2010; O'Reilly & Tushman, 2008; Teece, 2019) and promotes innovation by reconfiguring resources and capabilities. These findings are consistent with those reported by Hadjielias et al. (2022) that identify "business agility" as a small business resilience functionality that develops in a context of high uncertainty, as was the case during the COVID-19 pandemic. Business agility might be defined as the company's capacity to seize opportunities, adjust rapidly, change direction, and organise itself to respond quickly to changes in this context. Hadjielias et al. (2022) noted that “owner-managers may possess the relevant dynamic managerial capabilities (Helfat & Martin, 2015) that make them flexible enough to sense and seize any ongoing growth opportunities and/or facilitate the organisational changes relevant to exogenous shocks” (p. 1372).

Overall, the findings presented in this study suggest that a company with high sensing but no seizing capabilities will be unable to undergo transformation. Likewise, a company with high sensing and seizing capabilities but no transforming capabilities does not actually possess dynamic capabilities and is thus unlikely to develop sustainable competitive advantage. These results corroborate the ideas of Teece (2007) who notes that “in the dynamic capabilities framework, enterprises must employ sensing, seizing, and reconfiguring mechanism to direct

their financial resources consistent with marketplace needs and imperatives” (Teece, 2007, p. 1343). Managers, as agents of the owners, play critical roles in the company, particularly in fast-moving environments (Augier & Teece, 2009; Felin & Powell, 2016). Teece identifies three roles for managers: operational, entrepreneurial, and leadership roles (Teece, 2016).

7.5. Sustained and Sustainable competitive advantage

Another critical finding from the interviews focused on the underlying distinction between participants’ perceptions of *sustained* and *sustainable* competitive advantage. Although these terms are frequently used interchangeably in the literature as competitive advantage that persists over time, the respondents in our study did not consider past success to be a guarantee of future success. The participants identified companies that had previously held sustained competitive advantage (i.e., ones that had specific advantages over their competitors in the past and through the present moment) but noted that a different set of skills might be needed to maintain those advantages in the future. Business history is filled with examples that support these perceptions, including Smith Corona (Danneels, 2010) as well as Kodak and Polaroid (Anthony, 2016; Lucas & Goh, 2009; O’Reilly & Tushman, 2008; Tripsas & Gavetti, 2000), or Nokia (Giachetti & Marchi, 2017; Vuori & Huy, 2016), amongst others.

Collectively, these findings suggest that, rather than using these terms interchangeably, we might consider *sustained* and *sustainable* competitive advantage as distinct concepts. In this case, *sustained* advantage pertains to superior performance in the past, while *sustainable* competitive advantage (i.e., the ability to maintain that dominance into the future) may be more of a mirage, or at best, an attribute that may have a limited lifespan. The dynamic capabilities framework was developed to understand how companies can create *sustainable* competitive advantage under conditions of high uncertainty (Heracleous et al., 2017; Schoemaker et al., 2018; Teece, 2019; Teece et al., 1997, 2016; Teece & Leih, 2016). In this sense, companies that have demonstrated *sustained* competitive advantage might be challenged to adapt and transform themselves systematically to create a model that sustains ongoing competitive advantage, i.e., to ensure *sustainable* competitive advantage.

In the auto parts market, companies must be prepared to survive and even thrive in a VUCA context; the capacity to build *sustainable* competitive advantage will enable them to achieve this goal. The findings presented in the current study suggest that *relational proximity* and *people* are the themes primarily associated with *sustained* competitive advantage. Likewise, *governance* also contributes to *sustainable* competitive advantage, via its impact on

transforming capabilities. Sensing and seizing capabilities are and have always been fundamental for building *sustained* competitive advantage. However, a company needs to have transforming capabilities to ensure *sustainable* competitive advantage. These findings are consistent with the findings from the analysis presented by Katkalo et al. (2010):

“Dynamic capabilities can be classified according to whether they support sensing, seizing, or transforming. Sensing and seizing refer to the mobilisation of requisite resources and organisational infrastructure and strategy to address an opportunity, namely to capture value from so doing. Transforming refers to continuous renewal, aimed at maintaining SCA [sustainable competitive advantage]” (Katkalo et al., 2010).

A comparison of the findings with the literature that focus on the role of the dynamic capabilities framework and its relationship with resource-based and industry-based views (RBV and IBV, respectively) on building *sustainable* competitive advantage is summarised below in Figure 7.1.

Although the IBV has made important contributions to our understanding of strategic management, it provides an industry focus and minimises the impact of individual company performance. The RBV was introduced by Barney (1991) to complement the IBV and included several more pragmatic elements and facilitated the evaluation of companies based on VRIO analyses. Nonetheless, limitations to this new framework emerged when businesses needed to respond to highly uncertain and rapidly changing markets. Thus, the VRIO framework facilitated the creation of competitive advantage, but not in a sustainable manner.

Companies need to maintain a constant connection with the outside world to detect and adapt to threats and opportunities, particularly when confronted with the need for rapid change. Sensing is, by definition, the capacity to detect changes (or potential changes) in the outside world. In the auto parts industry, this may mean changes in suppliers, customers, and/or current competition, potential new entrants, and substitute products or services. Collectively, these factors constitute the Five Forces proposed by Porter. In this way, sensing becomes the connection that links the IBV to the RBV.

However, even if a company has VRIO resources and high sensing capabilities, competitive advantage is not guaranteed. Therefore, a company must be able to incorporate this information and trigger the internal reaction processes, i.e., the seizing capability, which corresponds to *people* in this research.

A company that possesses VRIO resources as well as sensing and seizing capabilities may have achieved sustained competitive advantage in the past; however, it may not be prepared to do so in response to future market changes. To build *sustainable* competitive advantage, the

company should ensure a strong transforming capability, which in this study was identified as *governance*. The findings presented in this research project reveal that the choice of governance model will ultimately dictate the future of the company and its ability to build *sustainable* competitive advantage.

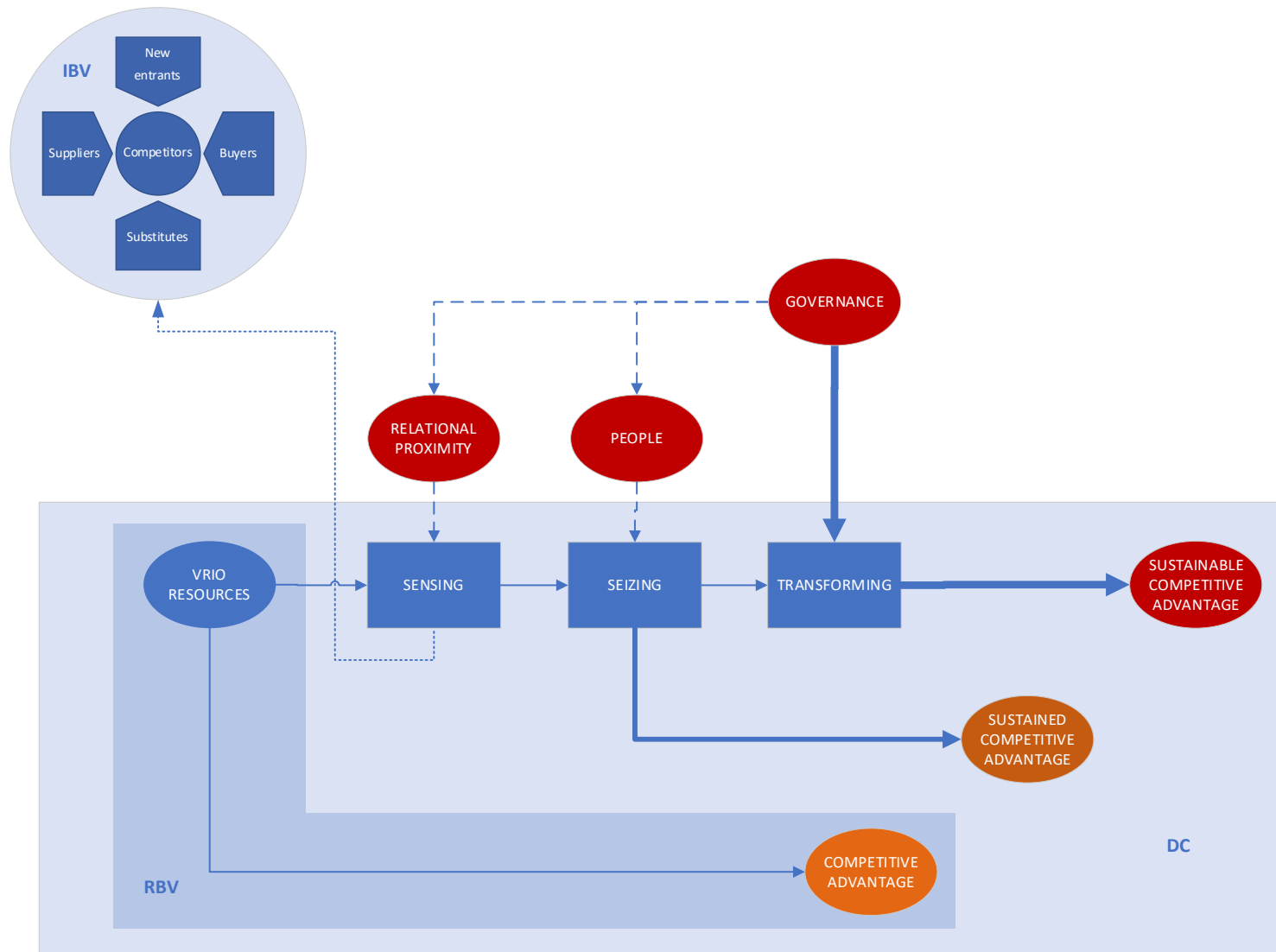


Figure 7.1. The relationship between the industry-based view (IBV), the resource-based view (RBV), and the dynamic capabilities (DC) framework and their contributions to the process of building sustainable competitive advantage.

7.6. Dynamic Capabilities and MCoutinho Peças

In addition to questions that addressed the auto parts market as a whole, participants were also asked to provide specific examples of successful companies, with a specific focus on MCoutinho Peças. MCoutinho Peças is currently the leader in the original parts market (OEM) in Portugal and the second-largest company in terms of turnover.

A related pattern that emerged from the interviews was that the participants had largely different focuses when asked about the industry in general *versus* the attributes of specific companies within it. When asked to describe the industry and factors that might be needed to build competitive advantage, the results largely focused on the theoretical properties of sensing, seizing, and transforming. This led to the relationships that were defined between *relational proximity/sensing*, *people/seizing*, and *governance/transforming*. However, when asked to describe individual companies and identify ones that are currently most prominent in the auto parts market, participants leaned towards the identification of specific resources. In this sense, there seems to be a distinction between what one might term the “visible” and the “invisible” factors necessary to create competitive advantage. The participants largely focused on visible factors, including those that were directly related to company resources when discussing competitive advantage at the company level. By contrast, the invisible factors (i.e., those related to the mechanisms required to create sustainable competitive advantage) became the focus when asked to consider competitive advantage at the industry level. The tendency to focus on what is visible (i.e., resources) when analysing individual companies may come at the cost of neglecting the more invisible strategic components (i.e., sensing, seizing, and transforming capabilities).

When participants were asked to document the strengths and weaknesses of MCoutinho Peças, they tended to focus on visible factors, including its resources and competencies. The participants began by distinguishing MCoutinho Peças as a market leader in original (OEM) parts and independent aftermarket (IAM) parts and stated that there was a big difference between these two markets. The participants agreed that MCoutinho Peças was “light years” ahead of the competition in the OEM parts market. On the other hand, they thought MCoutinho Peças still had a long way to go with respect to IAM parts.

When considering OEM parts, participants mentioned numerous relevant resources, including the comprehensive range, focus, and competence of the company call centre, as well as the logistics model and the orientation and capacity for technological developments. Each one of these resources could be classified by the VRIO model (Barney, 1995, 2015) as valuable,

rare, inimitable, and having the organisation to support its exploitation. These VRIO resources have permitted MCoutinho to create the competitive advantage that the company has sustained over time. As noted above, however, these attributes do not guarantee its ability to create *sustainable* competitive advantage as they move forward.

Most of the participants stated that integration of OEM and IAM parts is highly differentiating, indeed a unique feature of MCoutinho that provides high added value (i.e., a VRIO resource). MCoutinho Peças' entry into the IAM parts business provides evidence of their high sensing, seizing, and transforming capabilities. Their transforming capability is particularly notable given that their entry into the IAM parts market will lead to the self-cannibalisation of their OEM parts business (Danneels, 2008, 2010; Schoemaker et al., 2018; Teece, 2007, 2018b; Vuori & Huy, 2016). Self-cannibalisation refers to the ability to promote internal competition by getting ahead of competitors (Song et al., 2016). MCoutinho's movement toward self-cannibalisation suggests a certain level of ambidexterity, which is in itself a dynamic capability (O'Reilly & Tushman, 2008; Teece, 2019).

Additional sensing, seizing, and transforming capabilities highlighted by the participants include those already noted as relevant for the industry as a whole, including *relational proximity*, which is fundamental for sensing and *people*, i.e., the human resources that not only facilitate relational proximity and associated sensing but the ones who are tasked with acting on (seizing) the relevant information thus obtained. Several participants referred to *people* as the critical factor that differentiated MCoutinho Peças from its competitors. Among these features, they highlighted the ease of contact and availability of employees; this also leads to *relational proximity*. The seizing capability of *people* seems to be reflected throughout the company. While all departments at MCoutinho have undergone personnel changes, even at the middle management level, this does not seem to have compromised their ability to create and reformulate resources and capabilities. There have also been several changes at the management level; the company has appointed new heads of marketing, head sales, and logistics, as well as new warehouse managers. There were also several new appointees at the operational and commercial levels, including brand managers, product managers, and salespeople. As one example, the call centre has had several different coordinators and has undergone several operator substitutions without losing the capacity to sense and seize. Consistency of knowledge and development of each function via a process of systematic improvement has been associated with intrinsic knowledge management and learning processes (Cyfert et al., 2021; Santoro et al., 2021; Zollo & Winter, 2002).

MCoutinho Peças appears to possess dynamic capabilities which have led to its past success. However, there now appears to be a deadlock of sorts; several participants noted that the company should be further ahead by now. Although they have maintained critical sensing and seizing capabilities, sustainable competitive advantage requires the capacity for transformation; this depends directly on governance. Although MCoutinho Peças is an autonomous company, the parts business corresponds to a business unit that is not within the traditional core business of the group. The overall success experienced by MCoutinho Peças may ultimately inhibit them from venturing forward and executing the changes necessary to respond in the current context of deep uncertainty.

Conclusions, Limitations and Further Research

The search for frameworks that can help companies to adapt and prosper has been a major focus of scholars and managers over the past few decades. Several approaches, for example, the industry-based view (IBV) and the resource-based view (RBV), proved to be effective at the time and in the contexts in which they were developed; but seem insufficient in an increasingly volatile, complex and ambiguous world, where deep uncertainty prevails. Businesses need approaches that permit them to survive and ultimately thrive in these demanding contexts; and finding them has become a determining task for managers and academics alike.

The IBV and the RBV, while initially helpful, were later criticised as too static for the current context. The dynamic capabilities framework emerged as a response to the need for rapid adaptation to potential disruptions, both those that might be anticipated and those that are impossible to predict (i.e., the “unknown unknowns” (Teece, 2019; Teece et al., 2016), also known as “black swan effects” (Taleb, 2008)); but understanding how to develop and apply these dynamic capabilities, and how these diverse perspectives can complement each other for greater company success, is still something of a “black box” .

Indeed, the literature on the dynamic capabilities framework contains several descriptions of companies that were once leaders in their industry and lost these market positions; but these descriptions and analyses tend to be what one might call a virtual autopsy, i.e., *post-mortem* assessments of companies that succumbed to market forces. In fact, it is also of interest to analyse a dynamic market in full operation and undergoing changes, in order to identify factors that can enhance the achievement of sustainable competitive advantages in such contexts. In other words, rather than focusing on the past, it can be arguably more important to understand the factors that can lead a company to create sustainable competitive advantage in the present and for the long term.

As such, this study sought to understand the role of resources, as well as sensing, seizing, and transforming (i.e. dynamic) capabilities, and their contributions to the auto parts distribution sector in Portugal, as the sector is undergoing significant disruptive changes. To this end, semi-structured interviews were conducted with various stakeholders from different areas of this market. The results revealed that the stakeholders in this market are sensing the disruptions that are currently taking place in the automotive industry in general, and recognise

consolidation as a current trend in the auto parts market in particular. Interestingly, however, most of the stakeholders indicated they see no need and feel no pressure to react against these threats or seize potential emerging opportunities at this time. In some cases, there appears to be even a certain degree of denial regarding the impact that these changes may eventually bring to the market. Although they justify this denial based on conditions that are specific to the Portuguese market, including critical external and internal asymmetries, one cannot overlook the similarity of such postures to others which led to the demise of market leaders in other industries in the past. In several of these empirical cases, although individuals and companies had sensed relevant changes in the environment, they were unable to seize the resulting opportunities and nullify significant threats.

Regarding the resources and capabilities needed by a company in this market to generate sustainable competitive advantage, while stakeholders identified several foundational elements, two specific themes stood out. The first of these themes was *relational proximity*, i.e., the close relationships developed between retailers and workshops. This was based greatly on these players' geographical proximity, which facilitates the personal and professional ties that assist retailers and block the entry of wholesalers. *Relational proximity* was found to be strongly associated with sensing capabilities, as it permits companies to sense potential threats and detect business opportunities. This sensing ability to "read" the outside world, detect threats and opportunities, follow the movements of competitors, and anticipate the entry of new competitors and/or substitute products thus serves as a bridge between the IBV (i.e., Porter's Five Forces framework) and the RBV and dynamic capabilities.

Another theme that emerged from the research was the role of *people* in the development of a sustainable competitive advantage. The importance of human resources in companies has been addressed repeatedly in the literature; thus, the emergence of this topic was not entirely surprising. However, in this study, the topic identified as *people* emerged as a highly strategic, that contributes to the creation of value and differentiation among companies. The role of *people* was found to be closely related to what the literature refers to as seizing capabilities. In the final analysis, *people* are the ones who, after market disturbances have been sensed, can choose to seize opportunities and develop rapid market responses that can be used to gain competitive advantage.

Another objective of the research was to understand the roles key stakeholders attributed to dynamic capabilities in navigating market disruptions. Here, the stakeholders highlighted the key role of *governance*. This is consistent with findings previously reported in the literature (Heracleous et al., 2017; Millar et al., 2018; Teece, 2019) that present *governance* as a source

and enabler of corporate transforming capabilities. *Governance* can also, however, be responsible for companies' inertia, frequently the result of competency traps, i.e., reluctance to sacrifice successful core competencies as needed, to reconfigure the company and adapt to changes in the marketplace. Our findings suggest that while sensing and seizing can potentially occur without major interventions from the top (although greatly facilitated by top management involvement), governance is the actual determining factor in adapting (or not) to market disruptions. The governance structure is the ultimate "make-or-break" element, which either facilitates firm reconfiguration and likely success, or inhibits the required change.

8.1. Theoretical contributions

In theoretical terms, this research aimed to analyse an industry in transformation and to understand how the RBV and the dynamic capabilities framework can contribute to the survival and even the prosperity of companies in an increasingly VUCA world. The study demonstrated the relevance of both resources and dynamic capabilities to the creation of sustainable competitive advantages in an adverse competitive context. It also confirmed the importance of each of the three clusters of dynamic capabilities (i.e., sensing, seizing, and transforming), in VUCA contexts; and the crucial role of transforming capabilities in particular, in building a sustainable advantage. Because an almost direct relationship between *relational proximity* and sensing, between *people* and seizing, and between *governance* and transforming was found, this suggests that governance structures, and the level of autonomy afforded top management in particular, need to be deeply examined and continuously checked, for companies to survive.

An additional contribution was to highlight the results for companies that simultaneously possess all three clusters of dynamic capabilities. In other words, while the presence of only one, or even two clusters may be necessary, this will not be sufficient to build a sustainable competitive advantage. Although the theory mentions the importance of the three clusters of dynamic capabilities, there is little empirical research available that focuses on demonstrating this principle.

Furthermore, this study has shown the focus may be different depending on whether a company is being examined or the entire industry as a whole. At the company level, the focus tends to be on resources; by contrast, at the industry level, the focus tends to be on sensing, seizing, and transforming capabilities. This might explain apparent discrepancies in previous research: when a study was conducted at company level, i.e., a micro level analysis, the results pointed essentially to the role of resources in the creation of competitive advantage, but did not

explain how to build sustainable competitive advantage. When the study focused on the market level, i.e., a macro level analysis, the results would point to the role of sensing, seizing and transforming capabilities, but potentially neglecting the role of resources, and, therefore, compromising the creation of sustainable competitive advantage.

This study also provides important insight into the long-standing debate between the IBV, the RBV, and dynamic capabilities. While most authors recognise that all these approaches are necessary, this study highlights the role of the sensing capability as an intersection and a means to bridge these theories.

Another fundamental contribution of this research relates to the concepts of *sustained* and *sustainable* competitive advantage. Although in the literature both terms are used interchangeably, the findings suggest that perhaps we should consider *sustained* and *sustainable* competitive advantage as distinct concepts, where *sustained* advantage pertains to superior performance in the past, and *sustainable* competitive advantage as the ability of a company to transform itself to seek to maintain that dominance into the future.

Finally, this research has highlighted the role of the governance model of a company and its critical contributions to the creation of sustainable competitive advantage. The governance model will dictate the power of transforming, which will also determine the capacity to sense and seize within the company. By dictating the power of transforming, the governance model may also shape a company's ultimate fate.

8.2. Managerial contributions

Companies in almost all industries are faced with growing uncertainty. Even if they are not facing market consolidation movements or paradigm shifts, each company will need to respond to specific stresses and “unknowns”; and the results obtained in this research can potentially be of great use in doing so. The findings suggest that companies will need to consider their resources and capabilities not only in terms of VRIN/O, but also in terms of sensing, seizing, and transforming skills, if they hope to be able to generate sustainable competitive advantage. That is, firms have to understand which resources and capabilities will allow them to sense market changes and seize opportunities. The current study suggests that relational proximity and people, respectively, can be of crucial importance in achieving these capabilities.

Transforming was identified as the critical determinant in the construction of a sustainable competitive advantage. Even if a company possesses both sensing and seizing capabilities, there

is no guarantee that it has transforming capability, and thus no guarantee that it will succeed. The current study suggests that the key to achieving this transforming capability is governance.

Governance often gets put to the test in context of disruptive change, as leadership is forced to question the value of core capabilities that historically contributed to the company's bottom line and decide on leaps toward new directions. In extreme situations, it might be necessary to allow—or even boost—cannibalisation through the development and commercialisation of new products or services that are competing with pre-existing ones; and it is ultimately up to the company's *governance* whether that will happen or not.

In this sense, and in contexts of growing uncertainty, *governance* has revealed itself to be of crucial importance, and responsible for the dynamization (or, by contrast, the inertia) associated with the reconfiguration of resources and capabilities necessary to build sustainable competitive advantage. In other words, the governance model will determine the destiny of the company: either it enables the company to regenerate itself successively, maintaining the cycle of *sustainable* competitive advantage; or it will doom the company to a fatal destiny.

8.3. Limitations and further research

As with any research, this project is not without limitations. First, this study was designed to focus on a specific sector of an industry in a specific country. Although the results appear to have a surprisingly ubiquitous application, it would be critical to extend the study and to interview participants employed in the same industry in other countries in Europe, or in other potentially allied industries within the same country or across borders.

Another limitation was the sample size. Although a logic of saturation was followed and reached (N=20), this is still a relatively low number of participants. It might be helpful and interesting to interview additional stakeholders from each group as well as to include other stakeholder groups. However, it is important to bear in mind interviewees' level of knowledge and that it may sometimes be more relevant to obtain information from one stakeholder with a comprehensive knowledge of the market rather than from many stakeholders who might ultimately introduce more fragmented information. The respondents in the current study, although few, were all experienced and well informed.

In terms of directions for future research, this study leverages several suggestions. As dynamic capabilities deal specifically with change, it would be interesting to extend this cross-sectional study to include a longitudinal approach. To this end, a longitudinal case study, or

even a more comprehensive multi-case study, might be performed to study this topic in-depth and over time in one or even several companies.

Given the crucial role of *governance* in transforming capability, research aimed at identifying and detailing the corporate governance models that are most capable of promoting the development of sensing and seizing capabilities might be considered. This would provide significant insight into the creation of sustainable competitive advantage, particularly in an era of deep uncertainty. In the specific case of the Portuguese auto parts market, which is currently responding to a consolidation trend, it would be interesting to determine which governance models are currently in use by companies leading in the market, as well as the competencies needed by wholesalers to continue developing their core competences (exploiting) and simultaneously approach the market as retailers (exploring).

Another interesting point for further research would be to develop an understanding of the role of path dependency and its contributions to dynamic capabilities in companies operating in this sector. Furthermore, given the role of *people* in the creation of sustainable competitive advantage, a more in-depth study of the role of knowledge management and its relationship to seizing capacity might elucidate some interesting directions.

The present study might also benefit from a mixed-method approach. Given that the current study followed a qualitative approach, it would be of interest to complement the current findings with quantitative studies. Given the multidimensional nature of the dynamic capabilities framework, greater recourse to triangulation would certainly strengthen the results of the study. The results of this study might be used as part of an ongoing discussion with planners and consultants from the auto parts sector in Portugal.

References

- Aberbach, J. D., & Rockman, B. A. (2002). Conducting and Coding Elite Interviews. In *Politics* (Vol. 35, Issue 4).
- Adner, R., & Helfat, C. E. (2003). Corporate Effects and Dynamic Managerial Capabilities. *Strategic Management Journal*, 1025, 1011–1025.
- Ambrosini, V., & Bowman, C. (2009). What are dynamic capabilities and are they a useful construct in strategic management? *International Journal of Management Reviews*, 11(1), 29–49.
- Amit, R., & Schoemaker, P. J. H. (1993). Strategic Assets and Organizational Rent. *Strategic Management Journal*, 14(1), 33–46.
- Anthony, S. D. (2016). Kodak's Downfall Wasn't About Technology. *Harvard Business Review*, July, 1–4.
- Augier, M., & Teece, D. J. (2009). Dynamic Capabilities and the Role of Managers in Business Strategy and Economic Performance. *Organization Science*, 20(2), 410–421.
- Auto environmental guide 2022. (n.d.). Retrieved November 5, 2022, from <https://trid.trb.org/view/2035871>
- Automotive Disruption | Roland Berger. (n.d.). Retrieved November 5, 2022, from <https://www.rolandberger.com/en/Insights/Global-Topics/Automotive-Disruption/>
- Banco de Portugal. (2019). *Nota de Informação Estatística - Análise do setor automóvel 2017*. <https://www.bportugal.pt/comunicado/nota-de-informacao-estatistica-analise-do-setor-automovel-2017>
- Barney, J. B. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 17(1), 99–120.
- Barney, J. B. (2015). *Strategic Management and Competitive Advantage* (5th ed.). Pearson Education Limited.
- Beßlich, S. (2020). *How Black Swan Events Reveal Known and Unknown Unknowns: The Case of COVID-19*. Católica Lisbon.
- Bocken, N. M. P., & Geradts, T. H. J. (2020). Barriers and drivers to sustainable business model innovation: Organization design and dynamic capabilities. *Long Range Planning*, 53(4), 101950.
- Braun, V., & Clarke, V. (2006). Qualitative Research in Psychology Using thematic analysis in

- psychology Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101.
- Braun, V., & Clarke, V. (2022). *Thematic Analysis: a Practical Guide*. SAGE Publications Ltd.
- Breitschwerdt, D., Cornet, A., Kempf, S., Michor, L., & Schmidt, M. (2017). *The changing aftermarket game – and how automotive suppliers can benefit from arising opportunities* (Issue June). https://www.mckinsey.de/files/170610_supplier_aftermarket.pdf
- Brenner, A., Heinemann, P., Thiele, J., & Bagbasi, J.-K. (2018). *Survival of the Fittest: M&A intensifies the cut-throat competition in the European automotive aftermarket*.
- Capgemini. (2017). *Beyond the Car: What are Consumers Thinking*. https://www.capgemini.com/consulting/wp-content/uploads/sites/30/2017/07/cars-online-2017_report_cc.pdf
- Capgemini. (2022). *Techno Vision for Automotive*. <https://prod.ucwe.capgemini.com/wp-content/uploads/2022/04/TechnoVision-for-Automotive.pdf>
- Cardeal, N., & António, N. (2012). Valuable, rare, inimitable resources and organization (VRIO) resources or valuable, rare, inimitable resources (VRI) capabilities: What leads to competitive advantage? *African Journal of Business Management*, 6(37), 10159–10170.
- Chen, R. R., Wang, L., Li, E. P. H., & Hu, G. (2020). Microdivisionalization as a way toward dynamic capability. *Management Decision*, 59(3), 506–523.
- Cohen, M. A., Agrawal, N., & Agrawal, V. (2006). Winning in the Aftermarket. *Harvard Business Review*, 84(5), 129–138.
- Collis, D. J., & Montgomery, C. A. (2008). Competing on Resources - HBR.org. *Harvard Business Review*, 86(7/8), 140.
- Conner, K. R. (1991). A Historical Comparison of Resource-Based Theory and Five Schools of Thought Within Industrial Organization Economics: Do We Have a New Theory of the Firm? In *Journal of Management* (Vol. 17, Issue 1, pp. 121–154).
- Consolidation in the European automotive aftermarket* | Roland Berger. (n.d.). Retrieved November 5, 2022, from <https://www.rolandberger.com/en/Insights/Publications/Consolidation-in-the-European-automotive-aftermarket.html>
- Contractor, F. J. (2022). The world economy will need even more globalization in the post-pandemic 2021 decade. *Journal of International Business Studies*, 53(1), 156–171.
- Coppola, R., Morisio, M., & Torino, P. (2016). Connected Car: Technologies, Issues, Future Trends. *ACM COMPUTING SURVEYS*, 49(3), 1–36.
- Cyfert, S., Chwiłkowska-Kubala, A., Szumowski, W., & Miśkiewicz, R. (2021). The process

- of developing dynamic capabilities: The conceptualization attempt and the results of empirical studies. *PLoS ONE*, 16(4 April), 1–24.
- Danneels, E. (2008). Organizational Antecedents of Second-Order Competencies. *Strategic Management Journal*, 29, 519–543.
- Danneels, E. (2010). Trying to Become a Different Type of Company: Dynamic Capability at Smith Corona. *Strategic Management Journal*, 32, 1–31.
- Danneels, E. (2016). Survey Measures of First- and Second-Order Competences. *Strategic Management Journal*, 37, 2174–2188.
- Di Stefano, G., Peteraf, M., & Verona, G. (2014). The Organizational Drivetrain: A Road To Integration of Dynamic Capabilities Research. *Academy of Management Perspectives*, 28(4), 307–327.
- Dias, Á. L., Manuel, E. C., Dutschke, G., Pereira, R., & Pereira, L. (2021). Economic crisis effects on SME dynamic capabilities. *International Journal of Learning and Change*, 13(1), 63–80.
- Dias, Á. L., & Pereira, R. (2017). Dynamic capabilities and marketing capabilities in Portugal. *Academia Revista Latinoamericana de Administracion*, 30(3), 417–430.
- DPAI/ACAP. (2022). *Observatório do Pós-Venda Automóvel Independente - Principais indicadores económicos e tendências do sector (Edição 2021)*.
- Easterby-Smith, M., Lyles, M. A., & Peteraf, M. A. (2009). Dynamic capabilities: Current debates and future directions. *British Journal of Management*, 20, S1–S8.
- Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic capabilities: what are they? *Strategic Management Journal*, 21(10–11), 1105–1121.
- EU approves effective ban on new fossil fuel cars from 2035 | Reuters. (n.d.). Retrieved November 5, 2022, from <https://www.reuters.com/markets/europe/eu-approves-effective-ban-new-fossil-fuel-cars-2035-2022-10-27/>
- Felin, T., & Powell, T. C. (2016). Designing Organizations for Dynamic Capabilities. *California Management Review*, 58(4), 78–96.
- Felin, T., & Zenger, T. R. (2014). Closed or open innovation? Problem solving and the governance choice. *Research Policy*, 43(5), 914–925.
- Ferreira, J., Coelho, A., & Moutinho, L. (2020). Dynamic capabilities, creativity and innovation capability and their impact on competitive advantage and firm performance: The moderating role of entrepreneurial orientation. *Technovation*, 92, 102061.
- Foss, N. J., & Knudsen, T. (2003). The resource-based tangle: Towards a sustainable explanation of competitive advantage. *Managerial and Decision Economics*, 24(4), 291–

- Giachetti, C., & Marchi, G. (2017). Successive changes in leadership in the worldwide mobile phone industry: The role of windows of opportunity and firms' competitive action. *Research Policy*, 46(2), 352–364.
- Gutierrez-Gutierrez, L., & Antony, J. (2020). Continuous improvement initiatives for dynamic capabilities development: A systematic literature review. *International Journal of Lean Six Sigma*, 11(1), 125–149.
- Hadjielias, E., Christofi, M., & Tarba, S. (2022). Contextualizing small business resilience during the COVID-19 pandemic: evidence from small business owner-managers. *Small Business Economics*, 1351–1380.
- Hansen, D., & Møller, N. (2016). Conceptualizing Dynamic Capabilities in Lean Production: What are They and How Do They Develop? *EMJ - Engineering Management Journal*, 28(4), 194–208.
- Harreld, J. B., O'Reilly, C. A., & Tushman, M. L. (2007). Dynamic Capabilities at IBM: Driving Strategy into Action. *California Management Review*, 49(4), 21–43.
- Heid, B., Huth, C., Wu, G., & Kempf, S. (2018). Ready for inspection: The automotive aftermarket in 2030. In *McKinsey Insights* (Issue June). <http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=133513620&site=ehost-live>
- Helfat, C. E., Finkelstein, S., Mitchell, W., Peteraf, M. A., Singh, H., Teece, D. J., & Winter, S. G. (2009). *Dynamic Capabilities: Understanding Strategic Change in Organizations*. John Wiley & Sons.
- Helfat, C. E., & Peteraf, M. A. (2009). Understanding dynamic capabilities: Progress along a developmental path. *Strategic Organization*, 7(1), 91–102.
- Helfat, C. E., & Peteraf, M. A. (2015). Managerial Cognitive Capabilities and the Microfoundations of Dynamic Capabilities. *Strategic Management Journal*, 36, 831–850.
- Heracleous, L., Papachroni, A., Andriopoulos, C., & Gotsi, M. (2017). Structural ambidexterity and competency traps: Insights from Xerox PARC. *Technological Forecasting and Social Change*, 117, 327–338.
- Hernández-Linares, R., Kellermanns, F. W., & López-Fernández, M. C. (2021). Dynamic capabilities and SME performance: The moderating effect of market orientation. *Journal of Small Business Management*, 59(1), 162–195.
- Hofstätter, T., Krawina, M., Mühlreiter, B., Pöhler, S., & Tschiesner, A. (2020). Reimagining the auto industry's future: It's now or never. *McKinsey & Company*, October.

- Idade média dos veículos ligeiros de passageiros aumentou para 13,5 anos – Observador.* (n.d.). Retrieved September 2, 2022, from <https://observador.pt/2022/05/31/idade-media-dos-veiculos-ligeiros-de-passageiros-aumentou-para-135-anos/>
- Johnson, R. (2003). The Top 10 Sales and Customer Service Investments for Manufacturers. In *AMR Research, Inc.* (Issue May).
- Jornal das Oficinas. (2022). Top 100 - Edição 2022 Os Maiores Distribuidores do Aftermarket em Portugal. *Jornal Das Oficinas*.
- Kapoor, M., & Aggarwal, V. (2020). Tracing the economics behind dynamic capabilities theory. *International Journal of Innovation Science*, 12(2), 187–201.
- Katkalo, V. S., Pitelis, C. N., & Teece, D. J. (2010). Introduction: On the nature and scope of dynamic capabilities. *Industrial and Corporate Change*, 19(4), 1175–1186.
- Kempf, S., Christof, D., Hörner, D., & Hofmann, J. (2021). *Making every part count. A component view on disruptions in the automotive aftermarket for light vehicles until 2030.*
- Khurana, I., Dutta, D. K., & Singh Ghura, A. (2022). SMEs and digital transformation during a crisis: The emergence of resilience as a second-order dynamic capability in an entrepreneurial ecosystem. *Journal of Business Research*, 150, 623–641.
- Klink, G., Mathur, M., Kidambi, R., & Sen, K. (2013). Contribution of The Automobile Industry to Technology and Value Creation. In *Auto Tech Review*.
- KPMG International. (2018). *KPMG's Global Automotive Executive Survey 2018.* <https://assets.kpmg.com/content/dam/kpmg/tr/pdf/2018/03/global-automotive-executive-survey-2018.pdf>
- KPMG International. (2021). *Place your billion-dollar bets wisely: Powertrain strategies for the post-ICE automotive industry.* <https://assets.kpmg.com/content/dam/kpmg/xx/pdf/2021/08/place-your-billion-dollar-bets-wisely.pdf>
- Kraaijenbrink, J., Spender, J. C., & Groen, A. J. (2010). The Resource-Based View: A Review and Assessment of Its Critiques. *Journal of Management*, 36(1), 349–372.
- Kump, B., Engelmann, A., Kessler, A., & Schweiger, C. (2019). Toward a dynamic capabilities scale: Measuring organizational sensing, seizing, and transforming capacities. *Industrial and Corporate Change*, 28(5), 1149–1172.
- Laborda, J., & Moral, M. J. (2020). Automotive aftermarket forecast in a changing world: The stakeholders' perceptions boost! *Sustainability (Switzerland)*, 12(18).
- Leonard-Barton, D. (1992). Core capabilities and core rigidities: A paradox in managing new product development. *Strategic Management Journal*, 13(S1), 111–125.

- Levitt, B., & March, J. G. (1988). On organizational learning. *Annual Review of Sociology*, 14, 319–340.
- Lieberman, M. B., & Montgomery, D. B. (1988). First-Mover Advantages. *Strategic Management Journal*, 9, 41–58.
- Linde, L., Sjödin, D., Parida, V., & Wincent, J. (2021). Dynamic capabilities for ecosystem orchestration A capability-based framework for smart city innovation initiatives. *Technological Forecasting and Social Change*, 166.
- Löffler, M., Mokwa, C., Münstermann, B., & Wojciak, J. (2016). Shifting gears: Insurers adjust for connected-car ecosystems. In *McKinsey & Company*. <http://www.mckinsey.com/business-functions/digital-mckinsey/our-insights/shifting-gears-insurers-adjust-for-connected-car-ecosystems>
- Lucas, H. C., & Goh, J. M. (2009). Disruptive technology: How Kodak missed the digital photography revolution. *Journal of Strategic Information Systems*, 18(1), 46–55.
- Lyons, S. T., Schweitzer, L., & Ng, E. S. W. (2015). How have careers changed? An investigation of changing career patterns across four generations. *Journal of Managerial Psychology*, 30(1), 8–21.
- Markwalter, B. (2017). The Path to Driverless Cars [CTA Insights]. *IEEE Consumer Electronics Magazine*, 6(2), 125–126.
- Mason, J. (2002). *Qualitative Researching* (2nd ed.). SAGE Publications Ltd.
- McDonald, R. M., & Eisenhardt, K. M. (2020). Parallel Play: Startups, Nascent Markets, and Effective Business-model Design. *Administrative Science Quarterly*, 65(2), 483–523.
- McKinsey & Company. (2016). *Automotive Revolution - Perspective Towards 2030*. [https://www.mckinsey.com/~media/McKinsey/Industries/High Tech/Our Insights/Disruptive trends that will transform the auto industry/Auto 2030 report Jan 2016.ashx](https://www.mckinsey.com/~media/McKinsey/Industries/High_Tech/Our_Insights/Disruptive_trends_that_will_transform_the_auto_industry/Auto_2030_report_Jan_2016.ashx)
- McWilliams, A., & Smart, D. L. (1995). The Resource-Based View of the Firm: Does It Go Far Enough in Shedding the Assumptions of the S-C-P Paradigm? *Journal of Management Inquiry*, 4(4), 309–316.
- Millar, C. C. J. M., Groth, O., & Mahon, J. F. (2018). Management innovation in a VUCA world: Challenges and recommendations. *California Management Review*, 61(1), 5–14.
- Moon, K., & Blackman, D. (2014). A Guide to Understanding Social Science Research for Natural Scientists. *Conservation Biology*, 28(5), 1167–1177.
- Morris, D. Z. (2016). *Today's Cars Are Parked 95% of the Time* | *Fortune.com*. <http://fortune.com/2016/03/13/cars-parked-95-percent-of-time/>

- Motor Factor. (n.d.). *The Consolidation Movement and the IAM: An Opportunity or Threat*.
Motor Factor. Retrieved December 22, 2022, from <https://pmfmag.co.uk/market-trends-analysis/consolidation-movement-iam-opportunity-threat/>
- Nelson, R. R. (1991). Why do firms differ, and how does it matter? *Strategic Management Journal*, 12(2 S), 61–74.
- Nonaka, I., Toyama, R., & Nagata, A. (2000). A Firm as a Knowledge-creating Entity: A New Perspective on the Theory of the Firm. *Industrial and Corporate Change*, 9(1), 1–20.
- O'Reilly, C. A., & Tushman, M. L. (2004). The Ambidextrous Organization. *Harvard Business Review*, 82(4).
- O'Reilly, C. A., & Tushman, M. L. (2008). Ambidexterity as a dynamic capability: Resolving the innovator's dilemma. *Research in Organizational Behavior*, 28, 185–206.
- Ondruš, J., Kolla, E., Vertaľ, P., & Šarić, Ž. (2020). How Do Autonomous Cars Work? *Transportation Research Procedia*, 44, 226–233.
- Parida, V., Sjödin, D., & Reim, W. (2019). Reviewing literature on digitalization, business model innovation, and sustainable industry: Past achievements and future promises. *Sustainability (Switzerland)*, 11(2).
- Pellizzoni, E., Trabucchi, D., Frattini, F., Bughanza, T., & Di Benedetto, A. (2020). Leveraging stakeholders' knowledge in new service development: a dynamic approach. *Journal of Knowledge Management*, 24(2), 415–438.
- Penrose, E. T. (1959). *The Theory of the Growth of the Firm*. John Wiley & Sons.
- Peteraf, M. A. (1993). The cornerstones of competitive advantage: A resource-based view. *Strategic Management Journal*, 14(3), 179–191.
- Peteraf, M. A., Stefano, G. di, & Verona, G. (2013). The Elephant in the Room of Dynamic Capabilities: Bringing Two Diverging Conversations Together. *Strategic Management Journal*, 34, 1389–1410.
- Pisano, G. P. (2017). Toward a prescriptive theory of dynamic capabilities: Connecting strategic choice, learning, and competition. *Industrial and Corporate Change*, 26(5), 747–762.
- PORDATA - Ambiente de Consulta. (n.d.). Retrieved November 6, 2022, from <https://www.pordata.pt/db/portugal/ambiente+de+consulta/grafico>
- Porter, M. E. (1979). How Competitive Forces Shape Strategy. *Harvard Business Review*, 57(2), 137–145.
- Porter, M. E. (1980). Competitive Strategy. In *The Free Press*. The Free Press.
- Porter, M. E. (1981). The Contributions of Industrial Organization to Strategic Management.

- The Academy of Management Review*, 6(4), 609–620.
- Porter, M. E. (2008). The Five Competitive Forces That Shape Strategy. *Harvard Business Review*, 86(1), 25–40.
- Priem, R. L., & Butler, J. E. (2001). *Is the resource-based “view” a useful perspective for strategic management research ?* 26.
- Quem somos | MCoutinho. (n.d.). Retrieved December 26, 2022, from <https://www.mcoutinho.pt/quem-somos>
- Roland Berger GmbH and Lazard & Co. GmbH. (2017). *Global Automotive Supplier Study 2018* (Issue December). https://www.rolandberger.com/en/Publications/pub_global_automotive_supplier_study_2018.html?country=null
- Rumelt, R. P. (2005). Theory, strategy, and entrepreneurship. *Handbook of Entrepreneurship Research*, 11–32.
- Saldaña, J. (2013). The Coding Manual for Qualitative Researchers. In *Qualitative Research in Organizations and Management: An International Journal* (2nd ed., Vol. 12, Issue 2). SAGE Publications Ltd.
- Santoro, G., Thrassou, A., Bresciani, S., & Giudice, M. Del. (2021). Do Knowledge Management and Dynamic Capabilities Affect Ambidextrous Entrepreneurial Intensity and Firms’ Performance? *IEEE Transactions on Engineering Management*, 68(2), 378–386.
- Saunders, M., Lewis, P., & Thornhill, A. (2019). *Research Methods For Business Students* (8th ed.). Pearson Education Limited.
- Schilke, O., Hu, S., & Helfat, C. E. (2018). Quo vadis, dynamic capabilities? A content-analytic review of the current state of knowledge and recommendations for future research. *Academy of Management Annals*, 12(1), 390–439.
- Schoemaker, P. J. H. (1990). Strategy, Complexity, and Economic Rent. *Management Science*, 36(1969), 1178–1192.
- Schoemaker, P. J. H., Heaton, S., & Teece, D. (2018). Innovation, dynamic capabilities, and leadership. *California Management Review*, 61(1), 15–42.
- Schulman, P. R. (2022). Reliability, uncertainty and the management of errors: New perspectives in the COVID-19 era. *Contingencies and Crisis Management*, 30, 92–101.
- Shapiro, C. (1989). The theory of business strategy. *RAND Journal Economics*, 20(1), 125–137.
- Silverman, D. (2017). *Doing Qualitative Research* (5th ed.). SAGE Publications Ltd.

- Smith, G., Sochor, J., & Karlsson, I. C. M. A. (2022). Adopting Mobility-as-a-Service: An empirical analysis of end-users' experiences. *Travel Behaviour and Society*, 28, 237–248.
- Song, J., Lee, K., & Khanna, T. (2016). Dynamic Capabilities at Samsung: Optimizing Internal Co-Opetition. *California Management Review*, 58(4), 118–140.
- Statista. (2022). *Automotive industry worldwide*.
- Suddaby, R., Coraiola, D., Harvey, C., & Foster, W. (2020). History and the micro-foundations of dynamic capabilities. *Strategic Management Journal*, 41(3), 530–556.
- Taleb, N. N. (2008). *O Cisne Negro* (10th ed.). D. Quixote.
- Teece, D. J. (1984). Economic Analysis and Strategic Management. *California Management Review*, 26(3), 87–110.
- Teece, D. J. (2007). Explicating Dynamic Capabilities: The Nature and Microfoundations of (Sustainable) Enterprise Performance. *Strategic Management Journal*, August, 1319–1350.
- Teece, D. J. (2016). Dynamic capabilities and entrepreneurial management in large organizations: Toward a theory of the (entrepreneurial) firm. *European Economic Review*, 86, 202–216.
- Teece, D. J. (2018a). Business models and dynamic capabilities. *Long Range Planning*, 51(1), 40–49.
- Teece, D. J. (2018b). Dynamic capabilities as (workable) management systems theory. *Journal of Management & Organization*, 1–10.
- Teece, D. J. (2019). A capability theory of the firm: an economics and (Strategic) management perspective. *New Zealand Economic Papers*, 53(1), 1–43.
- Teece, D. J., & Leih, S. (2016). Uncertainty, Innovation, and Dynamic Capabilities: An Introduction. *California Management Review*, 58(4), 5–12.
- Teece, D. J., Peteraf, M. A., & Leih, S. (2016). Dynamic Capabilities and Organizational Agility: Risk, Uncertainty, and Strategy in the Innovation Economy. *California Management Review*, 58(4), 13–35.
- Teece, D. J., & Pisano, G. P. (1994). The Dynamic Capabilities of the Firm. *Industrial and Corporate Change*, 3, 538–556.
- Teece, D. J., Pisano, G. P., & Shuen, A. (1997). Dynamic Capabilities and Strategic Management. *Strategic Management Journal*, 18(7), 509–533.
- Tripsas, M., & Gavetti, G. (2000). Capabilities, cognition, and inertia: evidence from digital imaging. *Strategic Management Journal*, 21(1011), 1147–1161.
- Vahlne, J. E., & Jonsson, A. (2017). Ambidexterity as a dynamic capability in the globalization

- of the multinational business enterprise (MBE): Case studies of AB Volvo and IKEA. *International Business Review*, 26(1), 57–70.
- Vuori, T. O., & Huy, Q. N. (2016). Distributed Attention and Shared Emotions in the Innovation Process: How Nokia Lost the Smartphone Battle. *Administrative Science Quarterly*, 61(1), 9–51.
- Wang, J., Hedman, J., & Tuunainen, V. K. (2016). Path creation, path dependence and breaking away from the path: Re-examining the case of Nokia. *Journal of Theoretical and Applied Electronic Commerce Research*, 11(2), 16–27.
- Wang, L., Li, E. P. H., & Ding, X. (Sara). (2018). Does deliberate learning lead to dynamic capability? The role of organizational schema for Kodak, 1993-2011. *Journal of Strategy and Management*, 11(1), 52–80.
- Wernerfelt, B. (1984). A Resource-Based View of the Firm. *Strategic Management Journal*.
- Wernerfelt, B. (1995). The Resource-Based View of the Firm: Ten Years Later. *Strategic Management Journal*, 16(3), 171–174.
- Williamson, O. E. (1999). Strategy research: Governance and competence perspectives. *Strategic Management Journal*, 20(12), 1087–1108.
- Winter, S. G. (2003). Understanding Dynamic Capabilities. *Strategic Management Journal*, 24(10), 991–995.
- Yin, R. K. (2018). *Case Study Research and Applications: Design and Methods* (6th ed.). SAGE Publications, Inc.
- Zahra, S. A., Sapienza, H. J., & Davidsson, P. (2006). Entrepreneurship and Dynamic Capabilities: A Review, Model and Research Agenda Shaker. *Journal of Management Studies*, 43(4), 917–955.
- Zapata-Cantu, L., Delgado, J. H. C., & Gonzalez, F. R. (2016). Resource and dynamic capabilities in business excellence models to enhance competitiveness. *TQM Journal*, 28(6), 847–868.
- Zollo, M., & Winter, S. G. (2002). Deliberate Learning and the Evolution of Dynamic Capabilities. *Organization Studies*, 13(3), 339–351.
- Zuzul, T., & Tripsas, M. (2020). Start-up Inertia versus Flexibility: The Role of Founder Identity in a Nascent Industry. *Administrative Science Quarterly*, 65(2), 395–433.

Appendices

APPENDIX A

Informed Consent Sheet

CONSENTIMENTO INFORMADO

O presente estudo surge no âmbito de um projeto de investigação a decorrer no **ISCTE – Instituto Universitário de Lisboa**, integrado no desenvolvimento de tese de doutoramento em Gestão Empresarial Aplicada. O estudo tem por objetivo entender a função dos recursos e das capacidades das empresas na criação de vantagem competitiva no mercado de distribuição de peças auto em Portugal.

O estudo é realizado por Miguel Carneiro de Melo Pereira de Magalhães (mcmpm@iscte-iul.pt; telemóvel: +351 935380029), que poderá contactar caso pretenda esclarecer uma dúvida ou partilhar algum comentário.

A sua participação no estudo, que será muito valorizada pois irá contribuir para o avanço do conhecimento neste domínio da ciência, consiste em, através de uma entrevista, partilhar o seu conhecimento, experiência e visão deste mercado. A entrevista deverá tomar entre 1 a 1h30. Não existem riscos significativos expectáveis associados à participação no estudo.

A participação no estudo é estritamente **voluntária**: pode escolher livremente participar ou não participar. Se tiver escolhido participar, tem o direito de se recusar a responder a qualquer questão e pode interromper a participação em qualquer momento sem ter de prestar qualquer justificação. O teor desta entrevista será usado exclusivamente para efeitos de investigação académica e as respostas serão analisadas em agregado. Para além de voluntária, a participação é também **anónima e confidencial**.

Esta entrevista pretende recolher a sua opinião sobre o mercado de peças auto com base na sua experiência. As suas respostas permanecerão anónimas (os participantes em nenhum momento são identificados pelo nome, embora possam ser referidas as suas funções no mercado de peças auto). Depois da entrevista, ser-lhe-á facultada a transcrição da mesma para sua confirmação e eventuais clarificações.

Os seus dados pessoais são armazenados e protegidos e serão eliminados imediatamente após a cessação da sua necessidade, no âmbito desta investigação, e de acordo com o Código de Conduta do ISCTE e do Regulamento Geral de Proteção de Dados (RGPD).

Todos os dados pessoais serão eliminados de todos os arquivos físicos ou virtuais, incluindo backups e serviços de armazenamento em rede, sob controlo direto do investigador ou terceiros, cumprindo com o previsto no RGPD.

DISCLAIMER/INFORMAÇÃO IMPORTANTE

O Doutorando pertence à Comissão Executiva e ao Conselho de Administração da MCoelho SGPS, exercendo também funções como Administrador Executivo da MCoelho Peças, SA.

É na qualidade de Investigador que o Autor promove esta entrevista, integrada no programa para a obtenção do grau de Doutor em Gestão Empresarial Aplicada.

Declaro ter compreendido os objetivos de quanto me foi proposto e explicado pelo/a investigador/a, ter-me sido dada oportunidade de fazer todas as perguntas sobre o presente estudo e para todas elas ter obtido resposta esclarecedora, autorizando a gravação da entrevista por meios eletrónicos, pelo que **aceito** nele participar.

_____, ____/____/____

Nome e assinatura entrevistado:

Nome: _____

Assinatura: _____

Nome e assinatura entrevistador:

Nome: Miguel Carneiro de Melo Pereira de Magalhães

Assinatura: _____

APPENDIX B

Debriefing Information

DEBRIEFING/EXPLICAÇÃO DA INVESTIGAÇÃO

Caro XXXXXX,

Muito obrigado por ter participado neste estudo. Conforme adiantado no início da sua participação, o estudo tem por objetivo entender a função dos recursos e capacidades das empresas na criação de vantagem competitiva no mercado de distribuição de peças auto em Portugal.

A sua participação no estudo foi muito relevante, pois irá contribuir para o avanço do conhecimento neste domínio da ciência, através da partilha do seu conhecimento, experiência e visão deste mercado.

Esta entrevista tinha como objetivo recolher a sua opinião sobre o mercado de peças auto com base na sua experiência. As suas respostas permanecerão anónimas (os participantes em nenhum momento são identificados pelo nome, embora possam ser referidas as suas funções no mercado de peças auto). A transcrição da entrevista ser-lhe-á facultada para sua confirmação e eventuais clarificações.

Os seus dados pessoais são armazenados e protegidos e serão eliminados imediatamente após a cessação da sua necessidade, no âmbito desta investigação, e de acordo com o Código de Conduta do ISCTE e do Regulamento Geral de Proteção de Dados (RGPD).

Todos os dados pessoais serão eliminados de todos os arquivos físicos ou virtuais, incluindo *backups* e serviços de armazenamento em rede, sob controlo direto do investigador ou terceiros, cumprindo com o previsto no RGPD.

Reforçamos os dados de contacto que pode utilizar caso deseje colocar uma dúvida, partilhar algum comentário, ou assinalar a sua intenção de receber informação sobre os principais resultados e conclusões do estudo:

Miguel Carneiro de Melo Pereira de Magalhães
(mcmpm@iscte-iul.pt; telemóvel: +351 935380029)

Mais uma vez, obrigado pela sua participação.

Local, DD de MMMM de AAAA

Nome: Miguel Carneiro de Melo Pereira de Magalhães

Assinatura: _____