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Francisco Guilherme Baptista Marques da Fonseca

Doutoramento em Gestão Empresarial Aplicada

Orientador:
Prof. Dr. Álvaro Rosa, Professor Associado c/ Agregação
ISCTE – Instituto Universitário de Lisboa

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Júri:

Prof. Dr. Duarte Pitta Ferraz, Professor Associado c/ Agregação, Universidade Nova de Lisboa | ISCSP
Prof.ª Dra. Maria Margarida Saraiva, Professora Auxiliar c/ Agregação, Universidade de Évora
Prof. Dr. Renato Costa, Professor Auxiliar c/ Agregação, ISCTE – Instituto Universitário de Lisboa
Prof. Dr. Álvaro Rosa, Professor Associado c/ Agregação, ISCTE – Instituto Universitário de Lisboa
Prof. Dr. Henrique O'Neill, Professor Associado c/ Agregação, ISCTE – Instituto Universitário de Lisboa (Presidente do Júri)

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Resumo

Este é um estudo sobre as razões que motivam os decisores a escolher o modo de crescimento das suas empresas (ou seja, orgânico ou inorgânico), que também tenta descobrir se existe alguma relação entre a escolha do modo de crescimento e a digitalização, a pandemia COVID-19 e a tentativa de alcançar a ambidestria organizacional.

Este estudo utiliza uma estrutura de pesquisa exploratória qualitativa baseada em entrevistas semi-estruturadas, de oito estudos de caso de médias empresas portuguesas tecnológicas.

Este estudo acrescenta novo conhecimento à literatura, ao identificar a escassez de alvos adequados como uma das motivações para crescer organicamente. Esta pesquisa confirma as descobertas da literatura sobre a importância da complementaridade dos alvos de aquisição na escolha pelo crescimento inorgânico, bem como a preferência dos decisores pela certeza adjacente ao modo de crescimento oferecida pelo crescimento orgânico. Finalmente, não permite concluir sobre a relação entre a escolha do modo de crescimento com a digitalização, a pandemia, ou a ambidestria – ainda que aponte a pandemia como catalisador da digitalização.

Esta pesquisa foi realizada via estudos de caso dentro de um contexto específico. Os resultados não podem ser generalizados, mas oferecem orientação útil para futuras pesquisas.

Este trabalho impulsiona o estudo sobre a decisão do modo de crescimento, destacando a importância de analisar as motivações que estimulam o crescimento orgânico/inorgânico e oferece evidências exploratórias para o papel desempenhado pelo modo de crescimento no processo de desenvolvimento da tomada de decisão organizacional.

Palavras-chave: Estratégia, Crescimento, Modo, Digitalização, COVID-19, Ambidestria.

Códigos de Classificação *JEL*: M10, M19.

Abstract

This study tries to uncover the reasons that motivate decision-makers to choose their companies' growth mode (*i.e.*, organic, or inorganic). It also tries to answer the questions of if there is any relationship between growth mode's choice and: digitalization, COVID-19 pandemic, and the attempt of reaching organizational ambidexterity.

It uses a qualitative exploratory research design which draws on data from semi-structured interviews, across eight case study midsize ICT organizations in Portugal.

This study adds newfound knowledge to the literature by identifying the lack of suitable targets as a key motivation behind the decision of growing organically. It confirms the literature's findings regarding the importance of targets' complementarity in justifying the choice for inorganic growth, as well as the decision makers' preference towards the growth mode's certainty offered by organic growth. Although this research does not allow to conclude about the relationship between the choice of companies' growth mode with digitalization, the pandemic, and ambidexterity, it suggests the pandemic as a catalyst for digitalization.

The study was performed as case studies within a specific context. Findings cannot be generalized but offer useful guidance for upcoming research.

The research advances the study of the growth mode's decision by highlighting the importance of analyzing the motivations that drive organic/inorganic growth and offering exploratory evidence for the role of growth mode in the organizational decision-making development process.

Keywords: Strategy, Growth mode, Digitalization, COVID-19, Ambidexterity.

JEL Classification Codes: M10, M19

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Acronyms and Abbreviations

Acronym/Abbreviation	**Definition**
BCBS	Basel Committee on Banking Supervision
BIS	Bank for International Settlements
CEO	Chief executive officer
CMMI	Capability Maturity Model Integration
CRM	Customer relationship management
ED	Executive director
EU	European Union
EBA	European Banking Authority
EBITDA	Earnings before interest, taxes, depreciation, and amortization
FRC	Financial Reporting Council
GDP	Gross domestic product
GDPR	General Data Protection Regulation
HGC	High growth companies
ICT	Information and communications technology
ISO	International Organization for Standardization
IT	Information technology
LATM	Latin America
MES	Manufacturing Execution System
MBO (1)	Management Buyout
MBO (2)	Management by objectives
M&A	Mergers and acquisitions
NED	Non-executive director
OECD	Organization for Economic Co-operation and Development
PR	Press release
RQ1	Research question #1

RQ2	Research question #2
RQ3	Research question #3
RQ4	Research question #4
RRP	Recovery and Resilience Plan
SaaS	Software as a service
SME	Small and medium-sized enterprises
SWOT	Strengths, weaknesses, opportunities, and threats
TMT	Technology, media, telecommunications
USA	United States of America
ViSTO	Vision, strategy, tactics, and operational

1. Chapter 1

1.1. Introduction

1.1.1. Research background

SMEs are the heart of innovation and job creation in Europe. At the European Union (EU) level, micro, small and medium-sized enterprises (SME) add ups to 99% of enterprises in the EU. These organizations are an indispensable part of the “non-financial business sector”, as they are accountable for two out of three jobs in the private sector, contributing to more than half of the total added value created by enterprises. Also in Portugal, SMEs are an essential part of the economy, representing 99,9% of all existing businesses. The contribution of Portuguese SMEs to the country’s total added value is around 67,4%, representing around 76,2% of total national employment. Such percentages are above the corresponding EU averages of around 53% and 65,2%, respectively (DGAE, 2022).

From all the three size-types of SMEs(namely micro, small, and medium), Portuguese medium-sized companies are the ones responsible for the biggest parcel of the country’s SME annual sales turnover (PORDATA, 2022), as shown in the graph below.

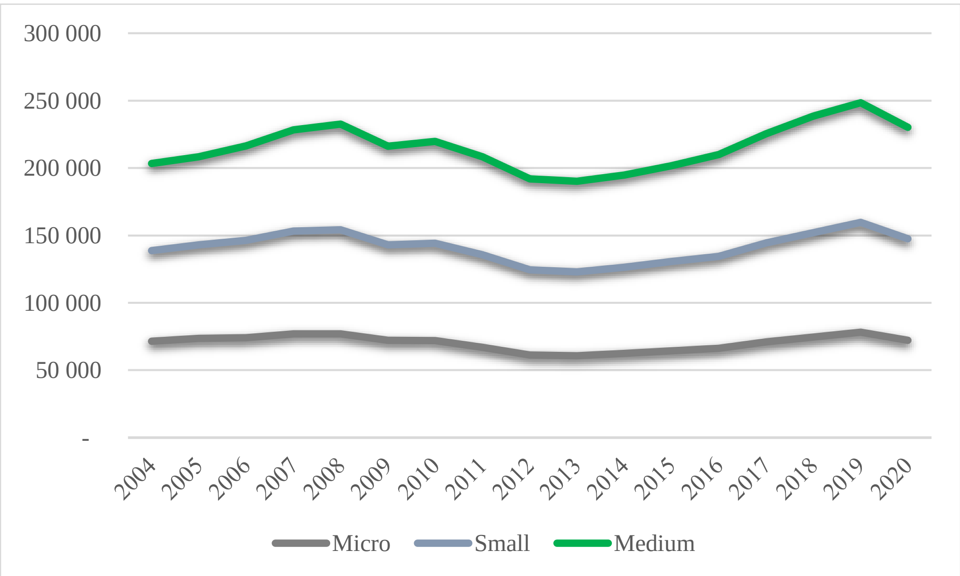

Figure 1.1 - Turnover in small and medium-sized enterprises: by size (Euros - Millions). Source: PORDATA, 2022.

The ICT sector has been one of the main Portuguese champions. According to Dun & Bradstreet's sectorial barometer, in January 2022, this sector was the only one in which the number of new companies increased compared to the values of January 2020, before the COVID-19 pandemic. In comparison with January 2020, unlike all other sectors, the Portuguese ICT sector grew 4,3% in January 2022, corresponding to the creation of 291 new companies. In 2021, ICT had already been the second sector with the highest growth of new companies compared to the previous year, denoting an increase of 20% and being one of the only three sectors that managed to surpass the year 2019, with a difference of 3,4%. This sector – and, in particular, the IT subsector - is assuming an "important role in the digital transition" and has reportedly "benefited from an acceleration of technological processes induced by the pandemic", such as the distance communication platforms or the online commerce (Informa D&B, 2022).

Also according to Dun & Bradstreet 's sectorial barometer (2022), in June 2022 there was a total of 20.577 ICT firms in Portugal (3,8% of the country's companies). At the end of the first half of 2022, ICT was the third fastest-growing sector in terms of company births, with a 32,9% company births' growth rate, when compared with the first semester of 2021 – only surpassed by transports (120,1%) and general services (33,1%). This means that 1.721 new ICT companies were created during the first semester of 2022, thus clearly demonstrating the sector's dynamic attractiveness. Also, ICT companies only registered a total of 19 pending insolvency proceedings during such period, making it the second less-negatively impacted one for the first half of 2022 - only topped by Energy & Environment, which only registered 3 pending insolvency proceedings – showing the vitality of the country's ICT sector (Dun & Bradstreet, 2022b).

Portugal has 1.565 High Growth Companies (HGC) which, although representing only 0,4% of Portuguese companies, were responsible for more than 10% of the jobs created during the growth period of 2017-2020. HGC are firms with a minimum of 10 employees and an average annual (organic) growth of employees over 20%, for three consecutive years. Such companies stand out from other Portuguese firms due to the fact that they grow at a very fast pace, due to its great capacity for innovation and identification of new business opportunities (Dun & Bradstreet, 2022b). In the period between 2017 and 2020, HGC generated 87 thousand new job positions. Altogether, they consist of 135 thousand employees, which corresponds to a 150%

growth since 2017. Nearly half of HGC (48%) are exporters, having achieved sales of 2,8 billion euros for external markets. Their joint turnover reached, in 2020, 12,9 billion euros, which means a very significant growth of 56% since the beginning of the period (Dun & Bradstreet, 2022b).

Although there are HGCs in all sectors of activity, the ones of Industrials, Construction and Business Services have the highest number of HGC. However, when compared with the "Equivalent Portuguese Businesses" (*i.e.*, companies with 10 or more employees at the beginning of the period under review and who are therefore comparable to HGC), the highest percentage of HGC occurs in the ICT sector (9,8%). Still regarding the capacity to create jobs, there is one subsector that stand out within ICT: the Computer's subsector, with more than 9 thousand jobs created during 2017-2020 (Dun & Bradstreet, 2022b).

Due to the COVID-19 pandemic, exporting companies were significantly affected in 2020, with more than half experiencing a drop in business with other countries. The aggregate sales of these companies in foreign markets decreased by 14.5%, with exports of goods being more penalized than services. That said, in 2020, ICT was the only single sector in which the aggregate exports of its companies grew – namely, by 2,1% (Dun & Bradstreet, 2021). Also, and when comparing the post-pandemic with the pre-pandemic period, the ICT sector was one of the only four sectors that didn't have its sales decreasing (they actually increased by 0,7% during the pandemic).

In line with the exports' variation, ICT registered an incredible (and second highest, countrywide) job variation rate from 2019 to 2020, with a 3,8% jobs' increase in its sector – only topped by the 5,9% growth of the Energy & Environment sector (Dun & Bradstreet, 2021).

Also, Portugal is strongly positioned in terms of digital resources and technological capabilities (a key aspect for boosting the proliferation and growth of ICT companies), within the European Union (EU). The country has been ranked 16^{th} of the 27 EU Member States in the 2021's edition of the Digital Economy and Society Index (European Commission, 2021). Considering human resources, Portugal considerably improved the percentage of ICT experts, getting the number near to the EU average. Portugal outperforms the EU average on skills above the basic digital skillset level, with the country's share of women ICT professionals surpassing the EU average as well. Regarding connectivity, the country's leap from 56% to 63% (between 2020 and 2021) in at least 100 Mbps fixed broadband take-up places it way ahead of the EU's average (34%). Portugal beats the EU on the average usage of ICT for environmental sustainability, AI utilization, and SMEs e-commerce. Also, recent figures show that the number of enterprises using cloud services has increased from 16% in 2018, to 21% in 2020 (European Commission, 2021).

Another important issue is the one concerning the access to e-government solutions made simpler to firms, including the ICT ones. Portugal is currently amongst the EU leaders in digital public services, with e-government users increasing from 54% in 2019, to 57% in 2020. The country is performing better than the EU average in pre-filled online forms and digital public services for the public and businesses. Enhancing digital capabilities keep on being one of the country's main goals as suggested in its recovery and resilience plan (RRP). By 2020, the parliament passed the nation's action plan for a transition towards digitalization, highlighting digital inclusion and training in sync with business digitalization, public administration's digitalization, and the digitalization of education. Such goals are consistent with the digital transition's component of the Portuguese RRP, that will have its focus on education and public administration's business digitalization and digital know-how (European Commission, 2021).

During the first semester of 2021, Portugal adjusted its national digital skills initiative via "INCoDe.2030". Also, the country's new strategy for digital public services contains relevant EU procedures, including the single digital gateway, the eGov action plan, the interoperability framework, open data, and web accessibility. Regarding the use of digital tools, Portugal has been fostering the development of digital tech hubs and the rehabilitation of ICT professionals, and its considerable RRP investments is expected to boost its ICT SMEs' capacity to digitalize their operations (European Commission, 2021).

Regarding the importance of inorganic growth for Portugal (namely M&A activity), and by looking at the available period of analysis – namely, the period between April 2020 and March 2021 - we can see that there was a 15% increase in the value of transactions carried out (even with the total number of deals down 21%, due to the Pandemic). These numbers show the country's vivid acquisition's dynamics, as well as the adaptability and resilience of specific sectors such as the ICT, which saw an incredible 40% increase in the value of M&A operations during the first year of the pandemic (Abreu Advogados, 2021).

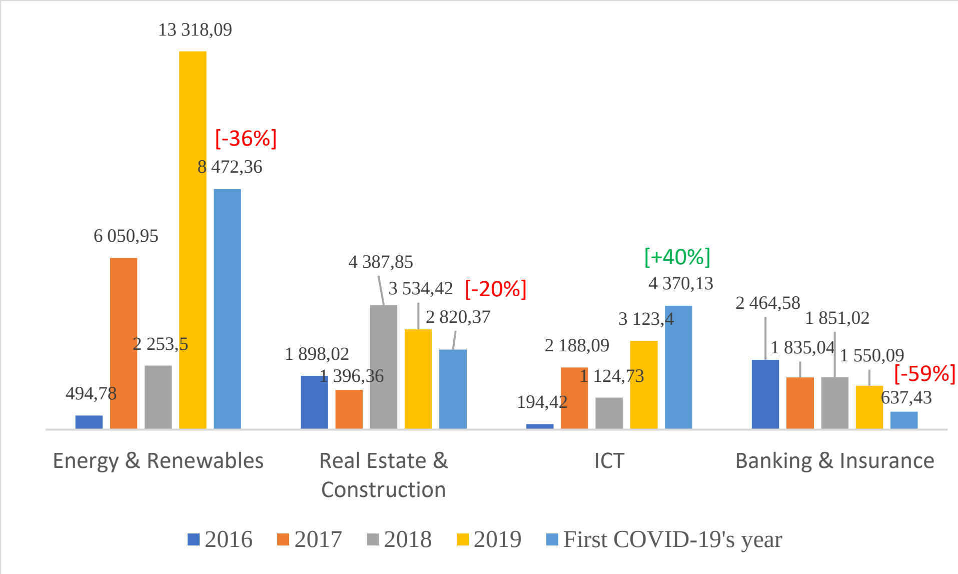

Figure 1.2 - Most active sectors in M&A activity: by total value (Euros - Millions). Source: Abreu Advogados, 2021.

Indeed, and despite the COVID-19 limits put in place globally, ICT sector continued to demonstrate high levels of deal activity (Abreu Mota, Oliveira Festas and Gonçalo Galvão, 2021). There is no denying that the IT industry has shown its resilience, as seen by the 24 operations registered abroad, just one fewer than in the year 2019. The ICT sector's activity was primarily characterized by a rebound based on the workplace digital revolution, the rise of e-commerce, and media conglomerates into streaming platforms. US businesses were the primary investors. Many of the activities that have been noticed recently center on software or technologies that integrate software, frequently propelled by the most recent developments in AI, analytics, and deep tech. Additionally, there was a move to cloud or SaaS models and a rise in the usage of procedural automation. ICT firms have three fundamental options when releasing these fresh ideas to the market: i) advance technologies ii) buy the technology through M&A deals or licenses obtained from third parties, or iii) work with them in the context of joint ventures or partnerships. Additionally, the General Data Protection Regulation (GDPR) continued to set the agenda at the level of the European Union with the development of new strategies for monetizing the use of data and enhancing user experience - with the appropriate legal framework (Abreu Advogados, 2021).

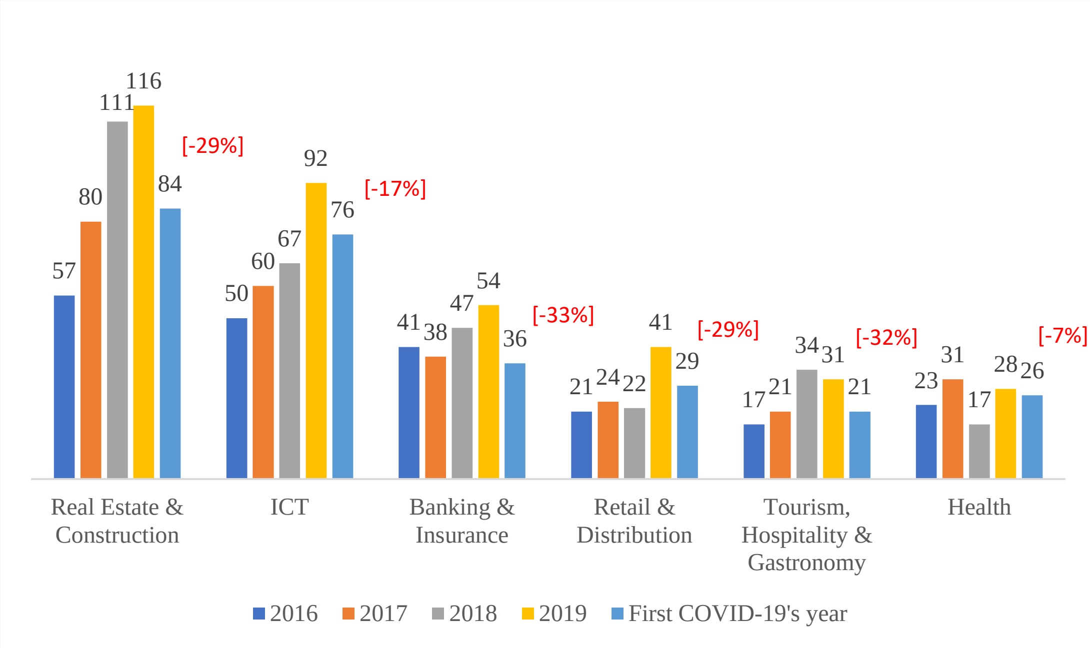

Figure 1.3 - Most active sectors in M&A activity: by total of acquisitions. Source: Abreu Advogados, 2021.

In terms of the Portuguese scale-up ecosystem, in the last month of 2021, Portugal saw its seventh ICT startup-born firm achieving unicorn status (a term that was first introduced by a famous Venture Capitalist, Aileen Lee, in 2013, in order to describe a startup company with a valuation of over one billion dollars), in response to pressing market digitalization needs. Belonging to the fintech's industry, Anchorage Digital received a 350 million dollars' investment, increasing its valuation to three billion dollars (around 2,7 billion euros) and joining the other six existing Portuguese unicorns, namely: Farfetch (2015), OutSystems and TalkDesk (2018), and Feedzai, Remote and Sword Health (2021). This number looks even more remarkable if one takes into consideration that these seven Portuguese unicorns' combined valuation is estimated to account for about 15% of the country's GDP (Pimenta, 2021). Moreover, the recently unveiled European Agency for Entrepreneurship (Europe Startup Nations Alliance) - a Portuguese initiative aimed at luring businesses and talent - will assist 26 EU countries and Iceland in fostering an environment that will enable startups to thrive and ensure greater access to capital. Altogether, these ecosystem's dynamics highlight both Portugal's capacity to foster an environment that encourages the retention of talent and the country's ongoing economical digitalization, thus fostering the nation's status as the *European Silicon Valley* (Abreu Advogados, 2021; Pimenta, 2021; Startup Portugal, 2022).

All in all, the deals that are centered on technology show to be far more resilient than those in other sectors - this is partially because the pandemic has sped up the adoption of technology in all aspects of society, including telemedicine, internet banking, and online shopping. In the years following the pandemic, firms are expected to pay close attention to connectivity as they try to launch ever-more-powerful services onto the market, like office collaboration tools. More precisely, technologies and software as a service (SaaS) will change banking and financial services, influence the direction of financial institutions and services in terms of payments and services, or allow for the international expansion of financial institutions. It is anticipated that several software development companies will be bought, forcing businesses to innovate. In fact, it is anticipated that existing company structures and processes would soon undergo a revolution. It is also crucial to keep in mind that, despite the delays linked to the pandemic's repeated postponements of auctions, 5G technology can attract the interest of foreign investors in similar operators, like Nowo and Dixarobil, at the time of its launch (Abreu Advogados, 2021).

McKelvie and Wiklund (2010) suggested that growth research should advance by focusing on growth mode (*i.e.*, "how to grow") as the new main research priority for the field, treating growth quantification (*i.e.*, "how much growth") as a secondary question. On a global scale, the M&A approach to growth (*i.e.*, inorganic growth) is increasing at a record pace, with a total of $1.47 trillion being announced and completed by mid-2015 - as for the ICT sector, in particular, it is predicted to reach 505 billion dollars worldwide by the end of 2022 (Baker McKenzie, 2019). Plus, and as a matter of fact, 29% of all the 2,500 executives (both in corporations and private equity firms) interviewed for Deloitte's second annual *M&A Trends Report* have predicted that technology will be the most active sector in terms of deal activity for the second successive year (Delloite, 2015).

1.1.2. Objectives

The ICT sector is growing massively around the globe, and Portugal appears to be an epitome of such an increase, as, by 2020, around 40% of Portugal's GDP was expected to be generated by ICT firms - representing an astonishing record of 8.6 billion euros for the sector (IDC, 2019). Taking this forthcoming reality as given, and as the economy becomes more and more competitive, Portuguese IT managers are expected to face the dilemma of what may the best growth route for their companies be – with the magnitude of such question being even bigger for SMEs, as they represent more than 99,9% of Portugal's enterprises (INE, 2019). Thus, there is a need to explain if there is a commendable growth mode – between organic and inorganic growth - for the Portuguese medium-sized ICT companies – as there is a big gap in the literature regarding studies covering the reasons that motivate firms and their decision makers to opt for either organic or inorganic growth modes.

Also, there are no studies exploring the possible relationship between the choice of growth mode with the phenomenon or digitalization, nor with the COVID-19 pandemic.

Finally, there is no literature relating the growth mode's choice with the reach for organizational ambidexterity in firms.

All in all, in this study, we explore the reasons that drive midsize Portuguese ICT firms' decision makers to choose their companies' growth mode, as well as the possible relation between choosing a firm's growth mode (i.e., organic, or inorganic growth) with:

- The phenomenon of digitalization;
- The COVID-19 pandemic and its impact on growth;
- The reaching for managerial ambidexterity.

1.1.3. Methodology and methods

Methodologically, this study follows the pragmatic realistic approach. Its applied method is the multiple case study approach, using semi-structured interviews with top decision makers from eight innovative midsize Portuguese ICT companies.

1.1.4. Motivation

As a practitioner, when I was the Chief Strategy Officer of a Portuguese industrial award-winning software company - I was faced, before 2019, with the dilemma of whether my company should continue its line of organic growth, or alternatively try to grow inorganically. Later, in 2020, when consulting several Portuguese and foreign companies in the acquisition process via M&A, I was often faced with last minute doubts, on the part of the founders, about whether that first foray into M&A was the best decision to make. Thus, I soon realized that the decision-makers' dilemma regarding the mode of growth was something real, very important, and increasingly relevant for the strategic decision-making process of technology companies. This motivated me to want to know more about the subject, focusing on this research study.

1.1.5. Structure

The structure of this thesis begins with the abstract, followed by the introduction. In the second chapter we cover the literature review and then explain the four research questions of this study. In the third chapter, we handle Methodology and Methods as two separate topics, and add a subsection related to reflections and ethical considerations of the thesis. In the fourth chapter, we begin by offering a comprehensive historical framework of each of the eight companies we interviewed, followed by the results obtained and a discussion of these results, divided into each of the four research questions. In chapter 5 we approach the conclusions, the limitations that we found in this research, and the perspectives that we leave available for future research work. Finally, we end with the bibliographical references of the sixth chapter, followed by the appendices of the thesis - namely, appendix A, B, C, and D.

2. *Chapter 2*

2.1. Literature review

2.1.1. The evolution of Strategy

Considering that the word "strategy" has its origin in the Classic and Byzantine Greek term *"strategos"*, meaning "general" (Garrido, 2016), it is not a surprise that the first treatise on strategy ever written has been considered to be *The Art of War* of the Chinese general, military strategist, writer, and philosopher Sun Tzu (circa 500BC). Indeed, armies and enterprises share common reasons for needing strategy, as they both need to provide guidance and goals, as well as to apply resources effectively and to conciliate the decisions of many individual agents.

According to Sun Tzu (circa 500BC), in "situations of life or death", strategy is "the Tao of survival or extinction" of any organization. Indeed, cases such as Kodak or Nokia confirm that inadequate strategic approaches may cost organizations much more than their leadership: it might possibly cost their own survival (da Fonseca, 2019). In fact, in an atmosphere of unpredictability, strong focus and sharp sight are essential for a company to achieve its own goals; as Michael Porter (1996) highlighted, the essence of strategy and strategic management resides in making (good) decisions.

Still, the final goals of military and enterprise strategy are categorically different, as companies don't have to actually eliminate their rivals to be successful – in fact, the majority of firms coexist with their competitors, limiting their own competitive ambitions and, sometimes, even cooperating with their rivals in order to achieve mutual benefits. Nevertheless, there are some ideas and values shared by enterprise strategy and military strategy, the most essential of them being common to the differentiation between the concepts of *strategy* and *tactics*; Grant (2010) bases this distinction on the extent and goals of both concepts – as a strategy is a general plan for employing resources, in a given environment, to achieve a favorable position (*i.e.*, to win "the war"), a tactic is a maneuver or a scheme aimed for an exact deed (*i.e*, to win "a battle"); for Burgelman (2016) the difference between strategy and tactics relates to the consequences of both strategic and tactical action: if an action taken by a decision maker strongly affects and limits the subsequential degrees of freedom to decide, we are in the realm of *strategy*, but if such action is not consequential (*i.e.*, if it does not pledge the company to any direction), then we are talking about *tactics*.

All in all, both military and business-related strategic decisions have three characteristics in common: they are meaningful for the organization; they imply a large commitment of resources; and they are hard to reverse (Grant, 2010). A variety of military strategy's concepts have been applied to business settings – like the advantages of outflanking against frontal assault, the effect of surprise, the pros of offensive and defensive strategies, the pluses of deception, envelopment, escalation and attrition, or the functions of graduated response to aggressive endeavors (Evered, 1983; Clemons and Santamaria, 2002). But, and despite all these similarities, a general theory of strategy has actually never existed, which is reflected by the fact that the norms of military and business-related strategy have been developing along independent paths. The first game theorists (von Neumann and Morgenstern, 1944), however, hoped that a wide theory of competitive behavior would surge from their work.

Despite the fact that Game Theory ended up revolutionizing the study of competitive interaction, it has merely reached a partial level of triumph as a realistic and general applicable general strategy theory (Fisher, 1989; Camerer, 1991; Saloner, 1991, 1994). This is mainly because the *games of strategy* have the assumption of rationality (which has been disapproved by empirical research) and are well-*structured situations* with well-defined probabilistic payoffs (which doesn't apply in real-life, complex, business situations). On the opposite, the topics of management and strategy research analyze complex situations of the real world - *i.e.*, un*structured situations* - in which complex organizations face other complex organizations, thus not being possible to predict, with even a minimum of exactness, the outcomes or probabilities of any action (Burgelman, 2016).

Chester Barnard's *The Functions of The Executive*, a book of 1938, made recognized contributions to the field of strategic management by presenting a theory about *"cooperation and organization"* as well as *"a study of the functions and of the methods (…) of executives in formal organizations"* (Barnard, 1938). Still, it is von Neumann and Morgenstern's *Theory of Games and Economic Behavior* (1944) that is considered to be the first writing to ever relate the concept of strategy with concepts of business (Bracker, 1980). For von Neumann (1944), strategy could be viewed as a series of actions conducted by companies according to a given specific setting.

Peter Drucker's *The Practice of Management* (1954) highlights the importance of demand for firms, as well as the importance of firms to adjust to such demand, and associates the role of strategic decision making with the analysis of the present situation faced by a firm, and changing the management's deeds according to the variations of its given situation. So, Drucker alerts us to the importance of discovering what a firm's resources are and what they should be. Also, Drucker suggests "what is our business?" as the single most important question that successful firm managers have to constantly answer – a major contribution that has become the foundation of business analysis and of mission statements creation. For Drucker, the manager is the vital and dynamic element in every firm, thus being responsible for outlining the company's mission, developing/retaining productive workers, directing different activities, establishing goals, and getting things done. Drucker's work outspread the notion of management by objectives (MBO) as a way to successfully execute an organization's strategic plan, with the MBO method guaranteeing the definition of main objectives, cautious allocation of resources, commitment of effort on fundamental goals, utilization of real-time feedback, and efficient communication.

By underscoring the importance of firms' customer orientation, Drucker (1954) was the first author to provide a distinctive view of marketing, considering to be the most strategically essential subject associated with management. Drucker ends up answering his own question of "what is our business?" by observing that "it is the customer who determines what a business is", and, though his answer may seem like a cliché, truth is that customers' needs and requests vary so quickly that companies frequently have to anticipate their own clients' necessities – and, if they didn't take that foretelling effort, they would be risking to miss valuable opportunities, as asking customers what they wish for would only be helpful in conducting changes to already existent products or services; if a manager wants to address *client acquisition*, then he/she won't be knowing exactly who his/her target is (considering that they are not yet his/her clients), and he/she might not have any product or service that fits them (otherwise they would probably already be his/her customers).

In 1957, H. Igor Ansoff developed a strategy grid that compared market penetration strategies, product development strategies, market development strategies and diversification strategies - including horizontal and vertical integration (Ansoff, 1957). He offered a definition for product-market strategy as *"a joint statement of a product line and the corresponding set of missions* *which the products are designed to fulfil"* (Ansoff, 1957). He describes four growth alternatives for growing an organization in existing or new markets, with existing or new products. He believed that management could take advantage of these strategies (Figure 4) to be consistently prepared for coming opportunities and issues. Each of the four alternatives represents different risk levels for the company.

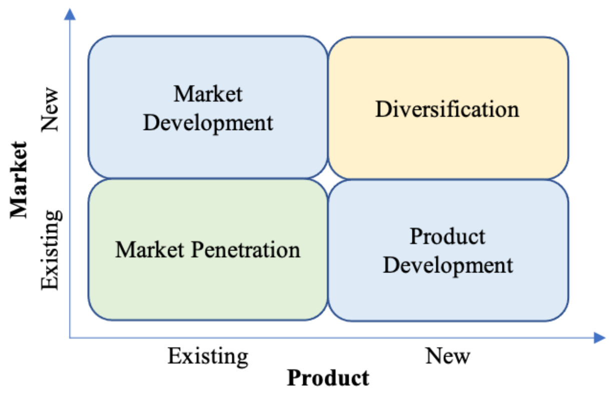

Figure 2.1 - Ansoff Growth Matrix (Ansoff, 1957)

Regarding *market penetration* strategy, Ansoff suggests that firms try to grow and increase their share in the existing market(s) (segments) in which they currently operate. Such is possible by increasing the sales of products/services to existing clients or by growing a firm's customer base in existing markets (via more aggressive communication and distribution). For Ansoff, market penetration could be achieved through price decrease, by acquiring a rival in the same market, as well as via an increase in promotion and distribution support, and through improvements of the company's product/service. According to the author, *market penetration* is the growth option in the Ansoff Matrix that involves less risk for the firm undertaking it (Ansoff, 1957).

In the *market development* option, Ansoff states that firms try to expand into new geographies and locations using their existing products/services and, also, with a minimum level of product development. Such a type of strategy can be achieved by investing time and resources in different customer segments, new areas of the firm's home country, and foreign markets. According to Ansoff, the option of *market development* is more probable to thrive where the firm has a unique product technology it can take advantage of in a new market, as well as in the cases of potential economies of scale (*i.e.*, by increasing output), the situations in which the new market is not that different from the firm's home market, and in the cases of markets in which the customers are indeed profitable for the given firm. Still, Ansoff alerts for the fact that this additional quadrant movement increases uncertainty and thus rises the associated level of risk (Ansoff, 1957).

Concerning the strategy of *product development*, organizations try to generate new products and services in their existing markets in order to growth. It involves extending the products/services available to the company's current markets, as such strategy can be achieved by investing in the research and development of additional products/services, by acquiring the rights to produce a third party's product, through Buying in a product and labeling it as one's own trademark, and via joint development. This is also one quadrant move, so it involves bigger risk than *market penetration* and an identical risk to *market development* (Ansoff, 1957).

In *diversification*, a firm intends to grow its market share via the introduction of new products/services in new markets. As *diversification* consists of two quadrant moves, it is the riskiest strategy, with both product and market development being required to achieve it. Ansoff (1957) separates between related and unrelated diversification. Related diversification there is a certain relationship and, therefore, potential synergy, between the firm in current business and the new product/market segment. Unrelated diversification is also called *conglomerate growth* as the resulting company is a conglomerate - *i.e.*, a group of firms with no relationship between each other (Ansoff, 1957).

Contemporaneously, Edith Penrose's *The Theory of the Growth of the Firm* (Penrose, 1959) - often considered as a *"classic"* with recognized impact on strategic management's academia [*e.g.*, (Nair, Trendowski and Judge, 2008)] - was a key contribution to the field of management, as Penrose's intention was to create a growth theory that was both empirically testable and logically consistent (Buckley and Casson, 2007), having also ended up generating the cornerstone for a framework used to determine the resources a firm should exploit in order to gain competitive advantage - which was later introduced and is today known as the *resource-based view of the firm* (Barney, 1991). Penrose's book expresses the author's frustration regarding the neoclassical economists' excessive concern for elements such as price, demand, or output, and their assessment of the firm as a mere production function. For Penrose (1959), *"firms are institutions that are created by people to serve the purposes of people"*. Instead of participating in the mainstream evergoing quest for identifying the optimum firm's size and adding up to the general wisdom of her time - which suggested firms lost their efficiencies once they reached a given size (Kor *et al.*, 2006) - Penrose defended that *"growth is a process; size is a state"* (1959), thus finding the growth process way more interesting to be investigated.

Without asking what makes a company to be able to grow or not, Penrose wanted to discover three things for the cases of firms that can indeed grow, namely: 1) which principles will dictate their growth; 2) how fast can they grow (*i.e.*, how high can their growth rates be); 3) and for how long can they grow (*i.e.*, how long can their growth rates remain that high) (Penrose, 1959). Indeed, and contrarily to Drucker (1954) - who emphasized the importance of customer-orientation and of paying attention to the demand side - Penrose placed a greater focus on the firm's resources rather than on the demand, as she stated that *"'Demand' is no more important, and is perhaps less important, than the existing resources of the firm"* (Penrose, 1959). According to Penrose (1959), the key for firms' (profitable) growth, learning, and innovation resides in company's *excess, unused* or *underutilized* productive services of resources. Penrose defends that an "equilibrium position" of firm growth as well as a "state of rest" (in which the firm has no internal incentives to continue growing) are unlikely to happen, considering that: (1) indivisibility makes a firm's resources to be hardly fully used, (2) the same resource can be used in a different way under different situations, and (3) everyday operations are continually creating *"new productive services"*.

Besides describing the firm as an *"administrative organization"*, Penrose defended that while resources are key for production, they are merely the "raw materials" in the sense that it is the company's ability in making an efficient and innovative use of resources that generates each individual firm's uniqueness. For Penrose, the inputs in a production process are not the recourses themselves, but the services generated by such resources (Penrose, 1959). Thus, services of resources are fundamental for firms' heterogeneity, and a correct distinction between *resources* and *services of resources* highlights the core idea that firms achieve key outcomes (*e.g.*, new product, new service) not just by owning resources, but due to an effective management of resources. In Penrosean theory, managers assume the vital and catalyst role in the resource-service conversion process by enacting the services of resources, with firms' managers offering both entrepreneurial and managerial services. The versatility of managers' entrepreneurial services is crucial for shaping their creative imagination and vision for the company. Also, firm-specific managers with firm-specific knowledge/experience are crucial for the process of identifying growth opportunities as well as for the execution of growth projects withing the firm. Managers' experiential knowledge of the firm's resources, as well as managers' entrepreneurial vision, together, impacts how the firm analyzes the demand and which growth opportunities it will possibly chase (Penrose, 1959).

Penrose also suggests that, for a company to be successful in a given new venture, it should possess a considerable pool of developed productive services in its existing productive activities that are valuable for its new activity. The author highlights that it is the specialized use of the resources that leads to emergence of excess productive services, that can therefore generate a "virtuous circle". She adds that the specialized resources and the specialized utilization of resources take to a company's *diversification* of products and services (one of the four strategies suggested by Ansoff, 1957) , as a firm can attain greater economies when such specialized resources are inputs in various operations or value chain functions - which offer the base for firms to attain profitable growth and to survive in the long-run in unstructured situations of everchanging environments (Penrose, 1959).

Alfred D. Chandler's groundbreaking historic study *Strategy and structure: Chapters in the history of the American industrial enterprise* (1962) suggested "strategy" as the all-comprehensive theory for studying the executive actions that steer a company's development. It viewed strategy as the definition of a company's main long-term goals and purpose, as well as choosing courses of action and allocating resources needed for achieving the firm's goals (Chandler, 1962). Chandler developed on the process through which companies generate internal competencies and capabilities for responding to external growth opportunities. He stated that companies try to exploit such growth opportunities further, via diversification (a view shared with Penrose, 1959), and that they create new structural and administrative systems/arrangements to effectively support and implement such diversification strategies. Chandler's historical research on a group of important American companies originated a number of empirical projects in a variety of developed countries - starting by Rumelt (1974) - with the intent of testing Chandler's central idea that "structure follows strategy" (and not the other way around). For Chandler, structure is the organization's design via which the firm is managed.

Chandler (1962) realized that each group in his research had collected resources from workers and from growth (both organic and inorganic), started new structures to boost efficiency, adopted growth strategies involving diversification (of both product and industry) in order to surpass initial market's limits, and generated a (at that point innovative) form of management design called the M-Form, in order to manage the new big diversified firms in a way that was more efficient than a usual holding company. In a way of supporting his *structure follows strategy* statement, he maintained that the forms of managerial organization were a result of a specific strategic context of management. Though, his author was apparently unaware of Penrose's work, in his endnotes, Chandler (1962) recognizes that his and her work clearly complement each other in a significant way.

H. Igor Ansoff's *Corporate Strategy* was responsible for establishing *strategic planning* as a management activity itself (Ansoff, 1965), being the first author to concentrate entirely on strategy and occupying the first place of citation index in the strategic planning field during the 1960s and 1970s (Martinet, 2010). He developed on Chandler's groundbreaking study of 1962 in order to differentiate *strategic* decisions from both *administrative* and *operating* ones. He viewed strategic decisions as primarily focused on how the firm positions itself in the external environment and as different from administrative and operating decisions. He considered Chandler's study to be particularly relevant for *administrative decisions* and Richard Cyert and James G. March's *A Behavioral Theory of the Firm* (1963) for *operational decisions*.

For Ansoff (1965), strategy was a directive for making decisions determined by product/market scope, growth vector, competitive advantage, and synergy. By developing on a number of earlier, more fragmented contributions, Ansoff (1965) constructed the first comprehensive normative analytical framework for strategically managing a company within its own environment. Ansoff's work include a number of notions - like "objectives", "strategy" (including product-market scope, growth vector, synergy, and competitive advantage), "capabilities", "strengths and weaknesses" and "gap analysis" - that continue to be very relevant in today's business practice, research, and teaching.

Between early 1950s and the 1960s, US-based corporations' managers were struggling to keep control and organize decision making processes in their fast-growing complex organizations, as the methods of financial budgeting at the time - namely annual operating budgets and investment appraisal techniques (like, the Discounted Cash Flow model) – had a short-term horizon, thus not being able to provide guidance for the companies' long-term development. To solve these issues, *corporate planning practices* were introduced in businesses in the late 1950s, typically including a five-year corporate planning document to define objectives and goals, as well as the forecasting of major economic trends (e.g., market demand, the firm's market share) and main financials (i.e., revenue, costs and margins), while establishing priorities for different products and business areas of the organization (Grant, 2010). Though the introduction of corporate planning was driven by the practical necessities of business, its dissemination was speeded by an emerging plethora of writings focused on this new subject (*e.g.*, Ewing, 1956; Payne, 1957). Such new procedures of corporate planning were indeed useful for establishing and steering the diversification strategies pursued by many large firms in the 1960s. By the mid-1960s, the majority of the large European and U.S. firms had already established corporate planning departments (Grant, 2010).

Also, during the 1960s, the SWOT analysis (*Strengths, Weaknesses, Opportunities and Threats*) stood out as a tool for supporting the preparation of business-related strategy. Although it presented some limitations (a good summary was provided by Grant, 2010), it is still widely used today - even by large companies - for its simplicity and for simultaneously combining an analysis of the external environment (the opportunities and the threats) and the internal environment (the strengths and the weaknesses). According with Stanford Research Institute, in 1963, virtually all large American companies had a department (or division) dedicated to business planning (Ghemawat, 2000).

Henry Mintzberg's *The Science of Strategy-making* (1967) portrays the firm's managers as "strategy-makers", offering "strategy" as the sum of the *"important organizational decisions"* - either evolving independently over time (*"adaptative"*) or resulting from the process of integrated decision plans (*"integrative"*) - undertaken by a firm in all its aspects, with the given strategy developing in line with its manager's learning process. Mintzberg (1967) criticized planning by realizing that corporate/strategy planners played a relatively minor role in strategy-making, because the most important strategy-related tasks are left to the company's manager, with the information that is necessary for strategy-making flowing to the manager him or herself, while remaining unavailable to the planner(s). Thus, and based on the apparent fragilities of planning, as well as on the fact that managers dynamically respond to stimuli, he concludes that a Darwinist evolutionary theory for strategy is far more representative than a Biblical "grand plan" theory (Mintzberg, 1967).

In 1968, J. Thomas Cannon published *Business Strategy and Policy*, which consisted in an important extensive analysis of the development and implementation of business-related strategies and offered "strategy" as the directional action decisions that are competitively necessary to fulfil the firm's purposes. By using over 100 real-life cases of contemporary U.S. firms, Cannon ends up providing a deep analysis of the different available strategies and their application, by introducing an organized framework via which both scholars and practitioners could perform predictive generalizations (Cannon, 1968).

Learned, Christensen, Andrews, and Guth (1969) published their famous book *Business policy: Text and cases*, which defined "strategy" as the pattern of objectives, purposes or goals, and the main policies and plans to reach those same objectives - which are defined as a way of determining which businesses the firm is or should be in, and the type of company it is or should be. According to these authors, "business policy" should be seen as the study of the functions and of the responsibility of general management, as well as the problems that affect both the nature and success of the company as a whole (Learned *et al.,* 1969). They also stated that the CEO/general manager's main responsibility should be supervising/managing the company as a whole.

Learned *et al.* (1969) suggested that strategy applied to business consists of two interrelated (though separate) aspects, namely strategic implementation, and strategic formulation. Regarding the latter, they suggested that formulation should be focused on potential market opportunities, resources and capabilities of the firm, and with the personal aspirations of the firm's managers, as well as their obligations towards the company's stakeholders – which is certainly the reason why so many scholars have given wrong credits for the creation of the SWOT analysis to Learned, Christensen, Andrews, and Guth (Morrison, 2015). Despite the fact that the framework suggested by these authors is indeed similar to the nowadays' SWOT analysis (*i.e.,* "Strength, Weaknesses, Opportunities, and Threats"), truth is that they actually used the terms "Strengths, Weaknesses, Opportunities, *risks, environment and problems of other industries*". In fact, it was Albert Humphrey who - when leading a research project at Stanford University, during the 1960s and 1970s, with the aim of identifying why corporate planning started to fail in the U.S. – actually invented the *SOFT* analysis, by stating *that "What is good in the present is Satisfactory; good in the future is an Opportunity; bad in the present is a Fault, and bad in the future is a Threat")*. In the year 1964, during a conference in Zurich, Urick and Orr changed the "F" for a "W", switching the "F" (of *Fault*) for a "W" (of *Weaknesses*) – and has actually stayed that way ever since.

Kenneth R. Andrews's *The Concept of Corporate Strategy* (1971) summarized the differences of what is still known as the three levels of business-related strategy, namely: *functional strategy*, *business strategy*, and *corporate strategy*. Functional strategy's objective is adjacent to a given function - *e.g.:* market share for marketing, investment return for finance, efficiency for manufacturing. Thus, functional-level strategy is the set of policies and purpose that control a function's conduct. Business strategy alludes to the product-market decisions made by division or product-line management (in a diversified company), involves the combining of appropriate functional strategies, and its choice is usually made after analyzing the competitors' profile/behavior, the market's opportunities and threats, the company's resources, and the established capacity of a given division. It is usually expressed in economic and competitive terms primarily and presupposes no discontinuity in the prospects or characteristics of the product concerned. Still, business strategy's time frame is relatively short (Andrews, 1971). As *business strategy* concerns *how* an organization competes within a certain part of business, *corporate strategy*, on the other hand, deals with the key decisions regarding the *scope* of the organization's activities (Piskorski, 2005) – in other words, *where* to compete in terms of product sector, geographical location, and related corporate structure's issues.

Andrews (1971) defines corporate strategy as the pattern of decisions that defines and uncovers a company's objectives, purposes, or goals, creates the main policies, and plans for attaining such goals, and dictates the type of business the firm will seek, the kind of organization it is or aims to be, and the type of output it intends to provide to its stakeholders. Despite a certain organization's size or diversity, "corporate strategy" addresses the entire firm, whilst "business strategy" is a narrower term that relates to the selection of the product/service/market of separate businesses inside the company. Business strategy involves the decision of how a firm is going to compete in a certain business, as well as its positioning within the competitive landscape. Corporate strategy designates the businesses in which a given enterprise will compete, ideally by focusing resources on the transformation of unique competence into competitive advantage. Still, both corporate and business strategies are a result of the endless process of strategic management (Andrews, 1971).

Andrews' vast interest in the role of practicing managers/executives was due to the fact that, in his perspective, such managers/executives are responsible for directing the companies that deliver the vital wealth to the economy and therefore sustain society as we know it. Because these executives hold such a crucial duty in our world, Andrews considered they could "need whatever help we can provide.” The author’s approach for providing help to these executives was to give them a theoretical basis for mulling over the issues that are faced by the decision maker, structuring his/her concerns into “more manageable units”, and suggesting the order in which they may be realistically categorized and examined. The widely known S.W.O.T. analysis is actually based on two of these “more manageable units”. The first phase in Andrews’ conceptual structure is the consideration of the external environment to detect a company’s market opportunities and deal with its threats (“O.T.”); the second phase consists in seeing the inside of the organization to determine its strengths and weaknesses (“S.W.”). By following this procedure, the company’s executive tries to find strategic options that are economically advantageous – but, still, such is not enough, because, for Andrews, the SWOT analysis is not *strategy itself*. Instead, a firm’s strategic decision maker has to understand what his company represents and what its management cherishes, since a victorious strategy must be aligned with the leadership’s principles – partially, due to the fact the triumph of the given strategy is subordinated to the executives own individual dedication and commitment (Andrews, 1971).

Andrews also believed that, before concerning strategy formulation, decision makers must question what society merits from their organizations. Contrarily to the Nobel laureate economist Milton Friedman (1970) who notoriously wrote that the single social responsibility of enterprises was to maximize profit, Andrews believed that obeying the law is insufficient as regulators will never be able to keep up with our quickly changing civilization. According to him, the best thing our society can do is to have scrupulous managers who evaluate the accomplishments of their organizations in regard to economic profit but also in respect to the common good (Andrews, 1971).

In the 1970s and early 1980s, the belief in corporate planning and the fascination with scientific management methods were badly damaged. Along with the failure of diversification to produce the promised synergies, the oil crises of 1974 and 1979 also brought in a period of heightened macroeconomic volatility and global competition from resurgent Japanese, European, and Southeast Asian businesses. Due to their inability to anticipate that far into the future when faced with a more volatile business environment, companies were no longer able to plan their investments, new product debuts, and staffing needs three to five years in advance. The end consequence was a shift in the emphasis from planning to strategy creation, where the emphasis was less on the specific management of companies' growth routes and more on placing the company in markets and in relation to rivals to maximize the potential for profit. This shift from "corporate planning" to "strategic management," as it later came to be known, was accompanied by an increased emphasis on competition as the key element of the business environment and competitive advantage as the main objective of Strategy (Grant, 2010).

In 1971, Newman and Logan published *Strategy, Policy, and Central Management* - an important book that stated that a company's concepts or mission are interwoven into its strategies, which are forward-looking plans that foresee change and take action to seize possibilities (Newman and Logan, 1971). One year later, Schendel and Hatten (1972) defended that Business (and Strategy) Policy was usually seen as a course, instead of a study field, and that such reasoning was a restraint to its development – thus suggesting that a broader view of Business (and Strategy) Policy is needed. According to these authors, a company's basic organizational goals and objectives, its significant programs of action selected to achieve such goals and objectives, and its significant patterns of resource allocation utilized to connect the organization to its environment are all part of what the managers should call "strategy" (Schendel and Hatten, 1972).

In 1973, Uyterhoeven, Ackerman and Rosenblum described Strategy as a provider of both cohesion and direction to the company, and well as being made of a variety of key stages, namely: strategic forecast, resource audit, exploration of strategic alternatives, consistency checks, and, finally, strategic decision (Uyterhoeven, Ackerman and Rosenblum, 1973).

Russel Lincoln Ackoff's book of 1974 - *Redesigning the Future: A Systems Approach to Societal Problems* - offered the basics of a "systems approach" to solving social problems, suggesting the idea that no problem may exist in isolation, and that no solution is without impact beyond its intended consequence. According to this author Strategy should focus on long-term goals and methods for achieving them, in a way to have an impact on the organization (or "system") as a whole (Ackoff, 1974).

Ackoff's vision was actually somehow in line with Paine and Naumes's vision (1975) of Strategy as a large-scale action plan or long-term action pattern used to achieve a company's goals. However, the definition that the McCarthy, Minichiello and Curran (1975) came up with has been widely embraced by academics in the literature on Strategy and Management:

> *"Strategy is an analysis of the environment where the organization is located and the selection of alternatives that will direct the resources and objectives of the organization,*

*taking into consideration the risk and potential profits, and the feasibility that each alternative offers." (*McCarthy, Minichiello and Curran, 1975).

Gluek (1976) defined strategy as a cohesive, all-encompassing, and integrated plan utilized by a corporation to accomplish its fundamental goals. In the same year, K. Michel (1976) also defended that strategy is the method by which a company chooses which resources to buy and use in order to take advantage of possibilities already present and overcome obstacles that might stand in the way of achieving its goals.

In 1977, T. J. McNichols's *Policy Making and Executive Action* associated Strategy with policy-making, by comprising a set of choices that reveal the essential goals of the company's business, and the way of using the capacities and inner resources in order to accomplish such goals (McNichols, 1977). Still during 1977, Steiner and Miner's *Management Policy and Strategy: Text, Readings, and Cases* suggested that the creation of organizational missions, purposes, and fundamental goals, as well as the corresponding policies, plans, and implementation procedures, constitutes Strategy itself (Steiner and Miner, 1977).

In 1979, H. Igor Ansoff identified Strategy as being a set of guidelines for making decisions when faced with incomplete information. According to the author, strategy decision-making affects how the company interacts with its ecosystem (Ansoff, 1979). In the same year, Henry Mintzberg's book *The Structuring of Organizations* (also) offered Strategy as a reconciling power sandwiched between the organization's environment and the organization itself, suggesting the use of solid patterns in streams of organizational decisions in order to handle one's environment (Mintzberg, 1979). Again, in 1979 as well, and also referring to the companies' environment, Schendel and Hofer said that Strategy may offer recommendations for the organization's course of action, enabling the business to accomplish its goals and react to challenges and opportunities in the external environment (Schendel and Hofer, 1979).

Such focus on strategy as an effort to achieve performance focused attention on the sources of profitability. The late 1970s and early 1980s saw an emphasis on ways to make profit within the context of the industry. The use of industrial organization economics to evaluate industry profitability was invented by Harvard Business School's professor Michael Porter in 1980. Earlier, in other research studies, the distribution of earnings among the many companies in an industry was the main topic - particularly, how market share and experience affected costs and profits (Boston Consulting Group, 1978). Years later, in the PIMS (Profit Impact of Market

Strategy) initiative of the Strategic Planning Institute, these two research areas - interindustry and interfirm variations in profitability - were integrated (Buzzell and Gale, 1987).

In 1980, Porter introduced Strategy as the company's choice considering strategic decision variables such as price, discount, amount, or quality. For Porter, and in order to register a positive performance, the firm has to be wisely placed inside its industry (Porter, 1980). Also putting great emphasis on performance and environment, Hambrick explained Strategy as the pattern of choices an organization makes that affects its internal structures, procedures, and performance - such choices also shape how the organization interacts with its environment (Hambrick, 1980). Bracker's *The Historical Development of the Strategic Management Concept* also focuses on the performance/environment importance, stating that Strategy has two features, specifically situational and environmental analysis, that determine the firm's market position and the adequate use of firm's resources to attain its goals (Bracker, 1980).

In 1985, Mintzberg and McHugh's *Strategy Formation in an Adhocracy* criticized the highly accepted vision of their time, that stated that companies' strategies are formulated prior to their actual implementation, demonstrating that strategies may be materialized in diverse forms - specifically, from the precedents established by individual operators, from sporadic convergence in the conduct of various individuals, and from thin streams of activity that gradually permeate an organization, among others. These two authors understood Strategy as a pattern in a sequence of deeds or selections, disregarding the potential for various strategies under various environment situations. (Mintzberg and McHugh, 1985). In the same year, Michael Porter's book *Competitive Advantage: Creating and Sustaining Competitive Performance* explained how a company can pick and use a general strategy to gain and maintain competitive advantage, and discussed the interaction between the range of a firm's activities and the types of competitive advantage - cost and differentiation (Porter, 1985).

The focus on generating competitive advantage in the pursuit of strategic goals was again highlighted by Henderson, in 1989, which stated that, by allocating resources, strategy aims to fundamentally alter the dynamics of competition. Its revolutionary nature is only moderated by two essential restraints. One is failure, which can have just as many negative effects as success. And the other is the additional benefit that a vigilant defense has over an attacker is a natural one. Success typically depends on competitors' cultures, perceptions, attitudes, and defining behaviors as well as on how well they are aware of one another - thus there is high importance of one achieving competitive advantage over the others (Henderson, 1989). For Henderson, Strategy was the targeted application of creativity and reason to react to the environment in a way that gives the business a competitive edge – a vision that is somehow shared with Fahey (1989), for whom Strategy explains how the company will use its resources and capabilities to build and sustain the competitive advantages that favorably influence customer purchasing decisions (Fahey, 1989).

Then, the emphasis of strategy analysis unquestionably switched during the 1990s, from sources of profit in the outside environment, to opportunities inside the organization.

Resources and capabilities of the company were increasingly seen as the key basis of competitive advantage and the foundation for developing strategy (Andrews, 1991; Grant, 1991; Henderson, 1991). Such orientation towards the *resource-based view of the firm* marked a significant change in how people thought about strategy, as the focus on the internal resources and capabilities pushed organizations to recognize how they differ from their competition and develop strategies that take use of such distinctions, as opposed to all firms following identical strategic action, such as finding appealing markets and advantageous competitive positions. In other orders, Strategy was seen as the set of means to reach one of both: either doing something different from our competitors, or doing the same thing as them but in a different way (Porter, 1996). According to Michael Porter, "*competitive strategy"* was all about standing out from the competition. It entails purposefully selecting a new group of actions in order *"to deliver a unique mix of value"* (Porter, 1996).

Yet, the importance top management's decisions and plans have for the achievement of the company's goals and objectives was also highlighted during the decade, by authors as Miller and Dess (1996), or Wright, Kroll and Parnell (1997). In 1998, Mintzberg, Ahlstrand and Lampel described Strategy as the "*mediating force"* between the firm and the external environment, centering on decisions and deeds that happen in a natural way. Strategy developing is not constrained to intentional activities and may arise as an action pattern - formalized or non-formalized (Mintzberg, Ahlstrand and Lampel, 1998).

Throughout the first ten years of the 21st century, the exceptionally demanding conditions of the modern age shaped the standards and exercise of Strategy, as thoroughly explained by Grant (2010). The technological component was a strong phenomenon during the decade (Christensen, 1997) – and it continues to be. The TMT (technology, media, telecommunications) bubble burst at the start of this decade, and it was seen that the "new knowledge economy" and the new internet-based business models did not need to rewrite the fundamentals of Strategy. The advent of "winner-take-all" markets (Frank and Cook, 1997), standards' wars (Shapiro and Varian, 1998), and the opportunity for strategic innovation as companies search for "Blue Oceans" of uncontested space in the market (Kim and Mauborgne, 1999), are examples of how technology has changed many sectors. In the face of constant change and unrelenting competition, strategy was less about the establishing positions of long-term competitiveness and more about improving one's ability to respond quickly and adapt to changing circumstances to gain consecutive transitory advantages. In order to reconfigure resources and capacities to attain such responsiveness, businesses often worked together inside networks of strategic partnerships. The ongoing tragedies of the twenty-first century, such as the 2008 financial crisis, inspired fresh ideas about the goals of business. A rising interest in corporate social responsibility, ethics, the preservation of the environment, and the importance of social credibility in long-term company performance were matched with growing disappointment with shareholder value capitalism (Grant, 2010). To answer such critical topics, the recent field of Corporate Governance[1] (or "Good Governance") – which was being continuously developed since the 1990s -became even more important, as executives were increasingly having power over corporate decisions. According to the Chartered Governance Institute of UK & Ireland, Corporate Governance consists in "*the system of rules, practices and processes by which a company is directed and controlled"*. That entity also offers a comprehensive definition:

> *"Corporate Governance refers to the way in which companies are governed and to what purpose. It identifies who has power and accountability, and who makes decisions. It is, in essence, a toolkit that enables management and the board to deal more effectively with the challenges of running a company. Corporate governance ensures that businesses have appropriate decision-making processes and controls in place so that the interests of all stakeholders (shareholders, employees, suppliers, customers and the community) are balanced. Governance at a corporate level includes the processes through which a company's objectives*

[1] Introduced in the United Kingdom in 1992, the Cadbury Code (latter, in 2002, reviewed by Sir Derek Higgins, named "Combined Code") is considered to be the first discretionary code of Corporate Governance. It surged as a consequence of growing investor distrust regarding executives' integrity and the accountability of publicly listed firms, mainly because of the abrupt fall of two British corporations, namely Coloroll and Polly Peck. The Code defined Corporate Governance as being *"the system by which companies are directed and controlled"* (Cadbury, 1992).

> *are set and pursued in the context of the social, regulatory and market environment. It is concerned with practices and procedures for trying to make sure that a company is run in such a way that it achieves its objectives, while ensuring that stakeholders can have confidence that their trust in that company is well founded."* (Chartered Governance Institute of UK & Ireland).

Indeed, and as an aftermath of the 2008's financial crisis, the second decade of the 21st century saw the fields of Management and Strategy being impacted by the rising importance of Corporate Governance. In 2010, the UK's Financial Services Act amended a variety of lines of the 2000's Financial Services and Markets Act, giving the UK Financial Services Authority increased abilities and duties (Proskauer, 2010). A year later, the UK and Ireland's Financial Reporting Council (FRC) released what was called *Guidance on Board Effectiveness*, which summarized the role of the board and its directors, the structure of the board, risk management, and compensation (FRC, 2011). In 2014, the Bank for International Settlements (BIS) issued the *Fit and Proper Principles* (for the financial sector) – the evaluation of the suitability of directors, functional managers, and shareholders with equity ownership over specified limits (BIS, 2014). Later in 2014, the EU pushed a directive called *Disclosure of Non-Financial and Diversity Information*, with the aim of allowing stakeholders (from investors to policy makers) to access the non-financial performance of large public-interest companies and stimulating such firms to become true examples of positive corporate social behavior, by building a responsible approach for the companies (European Commission, 2014). In 2015, the Basel Committee on Banking Supervision (BCBS) issued the *Corporate Governance Principles for Banks* - in line with the guidelines released earlier by FCR in the UK and Ireland (BCBS, 2015). Also in 2015, the Organization for Economic and Co-operation and Development (OECD) released the improved *G20/OECD Principles of Corporate Governance*, summarizing Corporate Governance most recommended procedures with the aim of supporting policy makers in the assessment and enhancement of the administrative, juridical, and institutional framework structure for Corporate Governance (OECD, 2015). In 2017, in order to strengthen the harmonization of the banking systems' organizational internal governance mechanisms, practices, and measures within the EU, the European Banking Authority (EBA) released what was named *Guidelines on Internal Governance* (EBA, 2017).

The year of 2020 brought the devastating COVID-19 pandemic, which was responsible for the biggest economic crisis generated since the Great Depression, killing millions of people, and destroying thousands of businesses. The pandemic called attention for a variety of challenges to the business world, which Corporate Governance assessment strategically helped to address, namely: the increased structured attention to stakeholders, a more complete attitude to remuneration, a more contemplative and agile decision-making, and an increased need to pay attention to the boards' diversity (Paine, 2020; Jebran and Chen, 2021; Koutoupis *et al.*, 2021). The concept of diversity includes several different components, namely, genre, professional and academic background, ethnicity, age, geographical region.

A proof that Corporate Governance is indeed a very recent field of study - with major current implications and future key impacts for Management and Strategy - is the fact that its first comprehensive manual was only released in 2022 – by the authors Duarte Pitta Ferraz and Manish Adhikari. The textbook, which also serves as a state-of-the-art's compass to fully understand the implications of Corporate Governance for the future of business in the rest of the 21st century, offers, in its 4th chapter (*Strategy, Business Model, and Sustainable Growth*), a specially refreshing view in terms of linking Corporate Governance with Strategy itself – by defining Strategy, explaining how it can be developed, as well as the way it impacts the board (notably non-executive directors), and in what manner it relates to business sustainability. The authors state that, frequently, non-executive directors (NED) do not totally comprehend their own responsibilities – namely the ones of strategic development, governance activity, and supervision of executive directors – and that executive board directors (ED) do not realize they are (or should be) overseen by non-executive directors. The non-executives should therefore monitor and control the governance structure of the organization, while the executive ones should arrange and provide the board with full, broad, and crystal-clear data and information (Pitta Ferraz and Manish, 2022). The authors suggest that a method to encase this separation of roles and its drive to divide responsibilities and tasks may well be to assign the main areas of duty – comprised in the governance structure – to the various levels of hierarchy of a company, namely: Vision, Strategy, Tactics, and Operational (ViSTO).

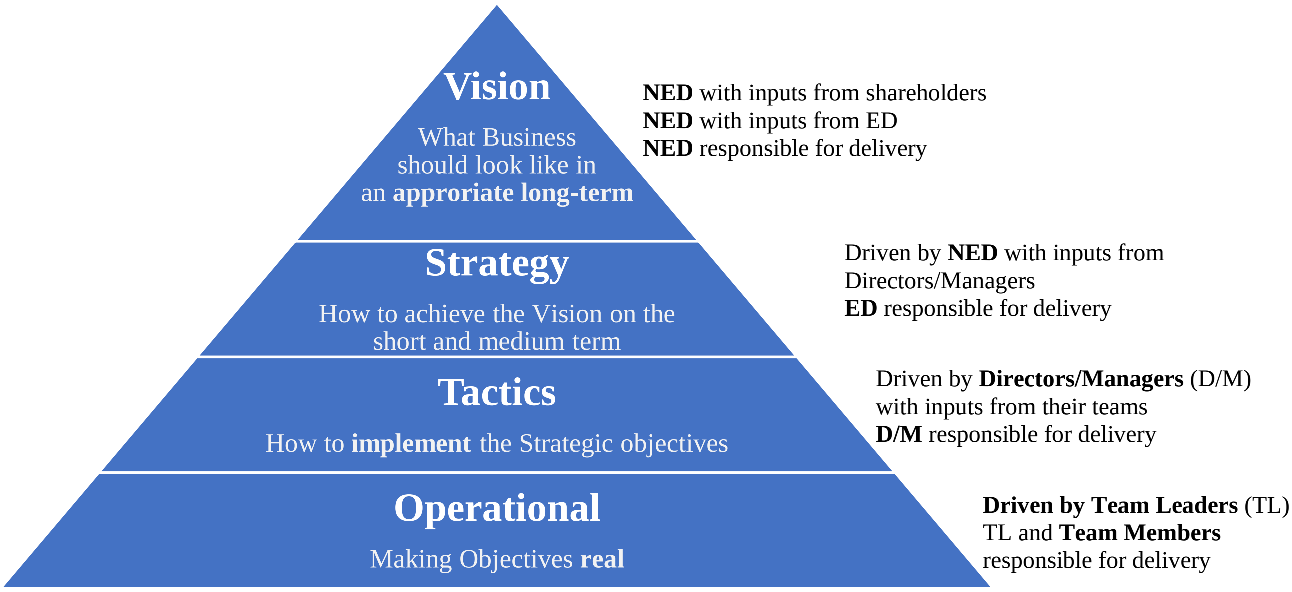

Figure 2.2 – IVENS ViSTO Framework. Source: IVENS Governance Advisors, 2022.

As a conceptual framework involving the subtitles of the positions and duties of board directors in managing their firms, as well as the lower levels of the company, the "IVENS ViSTO framework" is oriented towards the distinct decision-making stages of the pyramid, being an element of such framework the existing corporate governance structure: either under a monist (one-tier model – only one single board, which includes both executive and non-executive directors; common in Anglo-Saxon countries) or a dualist system (two-tier model – includes a management board and a supervisory board; usually seen in large or public companies in Continental Europe), or even under a mixed system (a mixture between the monist and the dualist models). The IVENS ViSTO aims to provide a transparent distribution of duties and responsibilities down the pyramid, to ensure that all the company's different governing bodies and management structures do not interfere into others' functions, as well as to guarantee that all the parts of the firm's business model are covered by a segment of the pyramid – according to the authors, this type of negative phenomenon happens quite regularly, particularly with SMEs (Pitta Ferraz and Manish, 2022). This framework - which may be utilized to develop a company's strategic plan and its execution - promotes a global arrangement across both executive and non-executive board members, as well as the firm's staff, taking into consideration the way that the different levels of the organization play a role in establishing and attaining the direction of an organization. The authors consider the pyramid's layer of Strategy as one connected to the definition of the goals to be attained, in order to access and reach the company's Vision. Such stage ought to start materializing milestones and illuminating challenges, that must be tackled in order to attain the Vision, particularly the distribution of scarce resources – *i.e.*, human recourses and capital – and if the company may be able to provide them organically or if it should instead seek M&A activity and capital markets. According to the authors, the full board / supervisory board must be involved in the process of strategy development, in an "end-to-end approach", differing from the old practice of approving the plans provided by the executive board, instead of carefully considering and analyzing all the involved variables and information. The authors believe that Strategy applied to business can be connected to the science of Economics, and analyzed under the light of the Corporate Governance Framework, as stated by the G20/OECD's *Principles of Corporate Governance* (OECD, 2015), which should encourage open, transparent markets and an effective distribution of limited resources - particularly skill and capital – and it ought to facilitate efficient monitoring and enforcement while also being compatible with the rule of law. For this to happen, both board members and managers must also work on how to incorporate societal purpose as a key component of their strategic approach. Boards, especially non-executive directors in charge of overseeing the executive board, frequently neglect to set aside enough time for discussion and reflection on this subject. However, the topic should be on the board's global agenda and reviewed on a regular basis to make sure the business model is still sound and sustainable (Pitta Ferraz and Manish, 2022).

2.1.2. Growth mode: a strategic decision

Edith Penrose (1959) believed that the taste for growth is embedded in most firms' nature, in the sense that both entrepreneurs and managers are ultimately propelled to generate new and meaningful products/services, as well as to work diligently to grow the firm into the next big (set of) goal(s) – e.g., geographic expansion, product market conquests (Penrose, 1959). Also, Penrose viewed profits as necessary for firms' survival, and therefore, for firms' growth as well – thus highlighting the importance of firms' managers to pursue profitable growth. Indeed, companies (including technology firms) seek growth (Mouritsen, 1998; Goold, 1999), and the vast majority of them sees it as a path to success and competitiveness (Goold, 1999) [2].

[2] Growth also provides financing for social policies, thus being commendable from a national economy's viewpoint (Straubhaar, 2003).

It is the role of decision makers in charge for corporate strategic decisions to decide about foremost subjects as the ones regarding growth mode. Organic and inorganic growth are two different strategic options faced by the firm, which have different impact on its future growth (Lockett *et al.*, 2011). Thus, the ways by which companies grow can be broadly classified under two wide categories: *organic* (or non-acquisitive/internal) growth and *inorganic* (or acquisitive/external) growth. Generally expressed in terms of sales and employment growth (Davidsson, Delmar and Wiklund, 2003), organic growth is the rate at which a firm grows by increasing output and enhancing sales internally, without acquiring other companies, while inorganic growth is originated by M&A, rather than by the increasing of a company's internal business activity (Hess and Kazanjian, 2006).

Although the acronym M&A does stand for *Mergers and Acquisitions*, this commonly used expression involves three natures of different, yet somehow related, phenomena: mergers, acquisitions, and takeovers (Machiraju, 2003). A merger is a voluntary strategic agreement via which two or more existing firms are united into one new legal entity, on a relatively coequal basis and similar terms (*e.g.*, the merger between AOL and Time Warner that created AOL Time Warner; Grocer, 2018). An acquisition occurs when a firm acquires a controlling equity stake in another company, thus making the acquired firm a subsidiary enterprise within its own corporate portfolio (*e.g.*, J&J's acquisition of Crucell; Ritter, 2011). Finally, a takeover is a unique form of acquisition in which the acquired company does not want to receive the acquiring firm's acquisition proposal – thus making such bid an unfriendly/hostile one (*e.g.*, Kraft Food's takeover of Cadbury; Jones and Dorfman, 2010).

Hitt, Ireland and Hoskisson (2016) insightfully classified M&A into three different types: horizontal, vertical, and related. Horizontal M&A are consolidation operations that take place between companies that sell similar products within the same industry – *e.g.*, the integration of the two US oil giants Exxon and Mobil (CNN, 1998). Vertical M&A occur between two or more firms that provide different supply chain functions for the same product, thus extending control over additional phases of the value chain (Chou, 2014) – *e.g.*, Walt Disney's acquisition of Pixar Studios (Catmull, 2008). Related M&A take place between companies from distinct yet highly related industries, thus becoming able to compete in other product markets – *e.g.*, Cisco's experience in related M&A operations (Burrows, 2015; Talbot, 2015).

Evidence shows that the main reason why companies perform M&A is to grow output by increasing their market power (Hitt *et al.*, 2012; Huschelrath and Muller, 2015), while other important and frequent reasons for M&A to happen are: to overcome entry barriers in new markets (Beilfuss, 2015; Scripps, 2015), to sidetrack the heavy costs associated with new product development and increase speed to market (Hitt *et al.*, 1996; Ellonen, Wilstrom and Jantunen, 2009; Makri, Hitt and Lane, 2010; Evanschitzky *et al.*, 2012; Berends *et al.*, 2014), to evade the high risks associated with developing new products (Ahuja and Katila, 2001; Wan and Yiu, 2009; Grimpe and Hussinger, 2014), to achieve or to increase corporate diversification (Penrose, 1959; Hitt *et al.*, 1991; Zhou and Delios, 2012; Koryak *et al.*, 2015), to revamp companies' competitive scope (Sirmon, Gove and Hitt, 2008; Hannigan, Hamilton and Mudambi, 2015), to take advantage of tax considerations (Penrose, 1959) as well as to learn and/or to develop new organizational capabilities (Gantumur and Stephan, 2012; Kaul, 2012; Hajro, 2015).

Also, The Behavioral Theory of Firm (Cyert and March, 1963) explained that performance below certain level will trigger the company for acquisitions. Gamache et al. (2015) asserts that top management *"regulatory focus impacts the proclivity of firms to undertake acquisitions, and also influences the magnitude of their investments into such initiatives"*. On the other hand, Zhang & Greve (2019) have found that the top management's experience to predict results on team base decisions may better trigger coalitions for acquisitions.

On one hand, there is a vast and rapidly increasing literature covering inorganic growth (eg. Harrison *et al.*, 2001; Luypaert and Huyghebaert, 2011; Hammer *et al.*, 2013). Growing inorganically is a key area of strategic management, because, and if the primary focus of corporate strategy is to manage the scope of the organization, then M&A are major mechanisms of corporate strategy as they are the prime means via which companies achieve main extensions in the scope of their operations. Also, for a company to thrive (or even to survive) in the long-run, it must upgrade its pool of resources and capabilities, and, thus, the critical management challenges are in developing existing resources and capabilities and/or acquiring or creating new ones – and here is where M&A sometimes comes to action, especially for firms where organic growth has been exhaustively explored, thus making internal development of sales no longer an option to attain company growth (Grant, 2010). Indeed, revenue growth has been identified as one of the main indicators that firms use to effectively track their M&A deal success, and the single most important revenue-related deal performance indicator in companies' integration methodology (Nahass and Suidan, 2017).

Penrose (1959) dedicated a full chapter of her classic book to address the *Penrose Effect* on M&A and International Expansion. For her, the fundamental limit of the rate of growth of a company that opts for the inorganic growth mode, is the entrepreneurial and managerial capacity to explore, negotiate, organize, and implement an M&A approach. Also, Penrose highlights the difference in the growth speed of the two growth modes, claiming that the inorganic mode is actually faster than the organic one. Finally, and despite the fact that Penrose believes in the availability of management capability as a limitation of the inorganic international growth of a firm, in some cases, she believes that acquisitions of subsidiaries in other countries can assist in the decrease of the need for direct administrative co-ordination, and thus, the firm can indeed grow at a greater rate than what is possible via organic international growth – the "greenfield entry form". (Penrose, 1959).

On the other hand, most of the research on organic growth per se is focused on sub-topics related to product/service innovation (Kazanjian, Drazin and Glynn, 2002) or geographic market expansion (Zook and Allen, 2003). Fortunately, besides Penrose's huge contributes to the field of strategy, the deliberate focus of her work was on the growth of enterprises, as she intended to understand what are the limitations of the firm's growth rate. She ends up solving such dilemma by arguing that managerial capabilities are the true irrevocable restraints in limiting the maximum rate at which a firm can grow. The previously described phenom is called the Penrose Effect (Hay and Morris, 1991) - or Penrose Theorem (Marris, 1964) – and it happens when a growing firm encounters various managerial problems that constrain its growth in future time periods. Such Effect is based in the fact that, in the short-run, the availability of firm-specific managerial talent is, in fact, inelastic. Such inelasticity is due to the fact that newly hired managers don't have the necessary firm- nor team-specific experience/knowledge - which takes time to acquire (Penrose, 1959). Penrose also argues that if a firm grows quicker than the rate at which its managers and employees can gain (with each other and with the firm itself) the necessary experience that really matters to the firm's activity, the efficiency of the company will decrease.

Having postulated that organic (internal/non-acquisitive) growth and inorganic (external/acquisitive) growth are two different and alternative growth modes (options/routes), and therefore need distinct types of *"productive services"*, Penrose (1959) explained organic growth strategies require *"existing plant, equipment, types of raw materials, skills, knowledge, and original ideas (...)"*, while inorganic growth demands *"entrepreneurial ability to discover* *an appropriate firm to negotiate the acquisition, and (…) the managerial resources required to effect the necessary integration"* (Penrose, 1959).There is an increasing literature that indeed views acquisition performance as an *organizational capability*, pointing the necessity for acquisition capability to be advanced through both experiential learning (Finkelstein and Haleblian, 2002) and explicit learning (Zollo and Singh, 2004). Nevertheless, one may argue that a lot of attention has been given to Penrose's unplanned contribution to the resource-based view (eg. Kor and Mahoney, 2004) rather than to her groundbreaking theory of company growth. Acknowledging such fact, Lockett *et al.* (2011) effectively separated organic growth and inorganic growth – both conceptually and empirically - when revising Penrose's Growth Theory, having then elaborated an econometric model to understand the effect of previous inorganic growth on firms' future growth rate. Still, real-case comparisons between organic and inorganic growth routes fail for both their scarcity and in terms of scope - *i.e.*, they focus mostly on large firms (McGrath, 2006).

Surprisingly, and by studying the importance of organizational learning for firms pursuing inorganic growth paths, Salvato, Lassini and Wiklund (2007) were the first authors to ever develop a longitudinal comparative study of small and medium-sized firms (SMEs) that also took into consideration the previous growth paths chosen by the analyzed companies. By doing so - and though they did it for different sectors *("food, apparel, mechanical, chemical and pharmaceutical products"),* with different firm sizes *("small, medium and large"),* as well as not accounting for firms' age - they actually opened the door for others to further develop and explore the topic of organic and inorganic growth, particularly in the context of managerial decision-making.

There are no consistent academic studies regarding the "pros and cons" of the organic/inorganic growth dilemma. Still, one may find a few fragmentary articles that smoothly address the issue without presenting consistent evidence for their claims – for example, Campbell, Stonehouse and Houston (2002) briefly suggest that organic growth is allegedly less risky than inorganic growth, but only for the cases to take place within a given company's area of expertise (thus avoiding high pressure to costs of the inorganic mode – *e.g.*, acquisition costs in orthodox acquisitions, or even debt servicing in Leverage Buy Outs - offering lower risk and lower costs). On the other hand, these same authors also state that the inorganic growth mode is (allegedly) faster than the organic mode, as it supposedly presents more scope for diversification, thus not necessarily relying upon the skills of existing management in the company (offering more flexibility in the process of growth).

More recently, there have been some scarce publications approaching the *organic or inorganic growth* debate. For instance, and regarding the consulting industry, Herbers (2019) argues that growing organically is normally less costly and less risky, thus considering it the commendable solution for the majority of advisory firms. Financial Express (2017) considers inorganic growth to be inevitable for the Indian chemical companies, because of the general limitations related to organic growth, thus viewing M&A as a viable alternative for achieving sustained high corporate valuations. In terms of the Family Office industry, Sean Keenan, director at BNY Mellon's Pershing, states the necessity of achieving a winning organic growth strategy first, before even thinking about switching to an inorganic one (Britton, 2019). Regarding the media industry, Medina, Sánchez-Tabernero and Larrainzar (2020) state that inorganic growth allows for a quicker sales increase though involving higher levels of indebtedness than organic growth, highlighting both the uncertainty and the cost of capital faced by decision makers as two main criteria when choosing the growth mode for their firms. In relation to the Brazilian industrial sector, Morozini and Martin (2013) argue that firms with financial slack and companies with an high level of sales are more prone to grow inorganically, while the ones showing higher profitability usually opt for growing organically.

Also, the COVID-19 pandemic held a great impact on the Portuguese and worldwide M&A markets during 2020: many transactions were immediately called off, while others were suspended and resumed several months later, and others basically dragged on, as the lack of regular mobility and physical contact reduced the level of confidence that must to be developed between the players involved in M&A operations for them to actually happen. On the other hand, the year 2020 actually ended up with a great volume of transactions taking place. In 2020, the Technology sector was one of the four sectors with the most M&A transactions in Portugal – a scenario that has been repeating itself since the beginning of 2021. Finally, it is anticipated that - when compared with 2020 - the year of 2021 will be better for Portuguese and worldwide M&A industries (Santos Vitor and Vassalo, 2021).

Robert Grant (2010) categorized the description of firms' strategy into two different dimensions: static (exploiting today's business; "*competing for the present*") and dynamic (exploring potential opportunities through goal outlining; *"competing for the future")*. Indeed, integrating both dimensions - what D. F. Abell (1993) named as *"competing with dual strategies"* and Tushman and O'Reilly (2004) called *"the challenge of ambidexterity"* - is one of the main problems of nowadays strategic management. Duncan (1976) earlier described organizational ambidexterity as an organization's capability to be efficient in the management of today's business (*i.e.*, exploitation), as well as being adaptive to changes in the firm's environment (*i.e.*, exploration). Indeed, research has shown that ambidextrous organizations are more prone to show high performance than others (Birkinshaw and Gupta, 2013; Junni *et al.*, 2013). Yet, achieving ambidexterity has been proved to be harder than it looks (Levinthal and March, 1993; Jansen, Van Den Bosch and Volberda, 2006), with CEOs and Wall Street analysts sharing disbelieve in the capability of organizations to develop both exploitative and explorative activities (Nagji and Tuff, 2012; PwC, 2016). As research on organizational ambidexterity mainly focuses on how organizations address exploitation and exploration internally (Raisch et al., 2009), an external perspective may further suggest the inorganic growth route as an interesting way of reaching organizational ambidexterity. As stated by Bauer et al. (2018), literature is scarce regarding the effects of ambidexterity applied to inter-organizational relationships, and only a few papers delve into how ambidexterity is obtained via inorganic growth. Indeed, firms tend to engage in M&A operations because they allow firms to gain full access to new and beneficial resources and knowledge (J. Harrison et al., 1991; Vermeulen & Barkema, 2001; Kim & Finkelstein, 2009). On the other hand, firms may also use M&A to gain control over important distribution channels and achieve economies of scale or scope (Tushman and O'Reilly, 2004).

It is also important to notice that one may wrongly see strategic alliances (*i.e.*, cooperative agreements between companies regarding the exchange of resources to achieve common interests and objectives - acording to Grant, 2010) - as a third-way growth mode, *i.e.*, as a substitute path to the organic and inorganic approaches. Such vision has been implicitly ruled out by literature, as strategic alliances are supplementary strategies to the growth mode itself (Badaracco, 1991; Chi, 2000), and not its substitute *per see* (for example: company *X* may have grown through acquisitions in the past five years and still choose to close a contract with company *Y* for supply of its own main needed resources, while company *Z* might have never acquired or merged with a single target and still close a strategic contract with a key distributor *W*, in order to adapt quickly to certain market changes). Also, and from a managerial decision-making point of view, there is no way back from the decision of growing inorganically: once one engages in M&A activity, there is no coming back to the solely organic approach to growth.

Another argument to sustain this logical perception is the diversity of existent types of strategic alliances – such as licensing agreements, supply long-term contracts, distribution alliances, equity alliances or even joint ventures (Barney and Hesterly, 2012) – with such fragmentation making clear that strategic alliances, although relevant ways of growing one's business, are not alternative major modes of growing, in the owner/manager's perspective, when compared to the ultimate decision of either growing internally or by M&A.

2.2. Research questions

The present study and its following research questions focus on exploring which motivations drive ICT firms to pursue either the organic or the inorganic growth path, as well as on exploring the possible relationship between Digitalization and growth mode's choice, COVID-19 and growth mode's options, and, finally between the search for organizational ambidexterity and the choice of firms' growth path.

2.2.1. RQ1 – Which internal motivations drive growth mode's choice?

In RQ1, we try to answer the question: *"What internal motivations have driven the decision making of Portuguese midsize ICT companies when it comes to opting for either organic or inorganic growth?"*.

The Behavioral Theory of Firm (Cyert and March, 1963) explained that performance below certain level will trigger the company for acquisitions. Morozini and Martin (2013) argued that firms with financial slack are more prone to grow inorganically, while the ones showing higher profitability usually opt for growing organically.

Gamache et al. (2015) asserts that top management "*regulatory focus impacts the proclivity of firms to undertake acquisitions, and also influences the magnitude of their investments into such initiatives*". On the other hand, Zhang & Greve (2019) have found that the top management's experience to predict results on team base decisions may better trigger coalitions for acquisitions.

Also, evidence shows that some of the main reason why companies perform M&A is to grow output by increasing their market power (Hitt *et al.*, 2012; Huschelrath and Muller, 2015), while other important and frequent reasons for M&A to happen are: to overcome entry barriers in new markets (Beilfuss, 2015; Scripps, 2015), to sidetrack the heavy costs associated with new product development and increase speed to market (M. A. Hitt et al., 1996; Ellonen et al., 2009; Makri et al., 2010; Evanschitzky et al., 2012; Berends et al., 2014), to evade the high risks associated with developing new products (Ahuja & Katila, 2001; Wan & Yiu, 2009; Grimpe & Hussinger, 2014), to achieve or to increase corporate diversification (Penrose, 1959; M. A. Hitt et al., 1991; Zhou & Delios, 2012; Koryak et al., 2015), to revamp companies' competitive scope (Sirmon et al., 2008; Hannigan et al., 2015), as well as to learn and/or to develop new organizational capabilities (Gantumur & Stephan, 2012; Kaul, 2012; Hajro, 2015), and to explore identified complementarities between the companies/products involved (Hoberg and Phillips, 2010).

Based on these findings, under the RQ1, we would explore the following issues, as the motivations for inorganic growth would come from:

1. Low firm performance;
2. Top management regulatory focus (namely promotion focus);
3. Ability of top management to form coalitions that can promote M&A decisions;
4. Financial slack;
5. Will to grow output by increasing one's market power;
6. Necessity to overcome entry barriers in new markets;
7. Need to sidetrack new product development's costs;
8. Wish to boost a new product's speed to market;
9. Desire to evade the risks associated with developing a new product;
10. Will to increase/achieve diversification;
11. Need to revamp the company's competitive scope;
12. Will to learn and/or develop new organizational capabilities;
13. Will to explore identified complementarities.

On the other hand, the motivations for organic growth would then come from:

1. High firm performance;
2. Top management regulatory focus (namely prevention focus);
3. Lack of ability of top management to form coalitions that can promote M&A decisions;

4. Absence of financial slack;
5. Inexistent will to grow output by increasing one's market power;
6. No need to overcome entry barriers in new markets;
7. No need to sidetrack new product development's costs;
8. No need to boost a new product's speed to market;
9. No need to evade the risks associated with developing a new product;
10. No will to increase nor to achieve diversification;
11. No intentions to revamp the company's competitive scope;
12. No will for learning nor developing new organizational capabilities;
13. No will to explore identified complementarities.

2.2.2. RQ2 – What is the relation between digitalization and growth mode's choice?

In RQ2, we try to answer the question: "*Considering the current global tendency for digitalization, how do decision makers of Portuguese midsize ICT companies plan on deciding their firms' growth mode (i.e., organically, or inorganically)?"*.

According to Albert et al. (2021), the current global tendency for digitalization is impacting the companies' growth path, namely by increasing M&A deal speed and reducing transaction costs, while fostering new M&A-related business models previously not possible. Also, and according to the same authors, 52% of the companies that intended to grow inorganically described themselves as mainly acquiring digital firms.

Based on these findings, under the RQ2, we would explore the following issues, as the current global tendency for digitalization would impact companies' decision on growth mode by:

A.1. Increasing M&A deal speed, thus motivating the choice towards inorganic growth;

A.2. Reducing M&A transaction costs, thus encouraging the inorganic growth option.

2.2.3. RQ3 - What is the relation between the pandemic and growth mode's choice?

In RQ3, we try to answer the question: *"Considering the COVID-19 pandemic, how do decision* *makers of Portuguese midsize ICT companies plan on deciding their firms' growth mode (i.e., organically, or inorganically)?".*

The COVID-19 pandemic held a great impact on the Portuguese and worldwide M&A markets during 2020: many transactions were immediately called off, while others were suspended and resumed several months later, and others basically dragged on, as the lack of regular mobility and physical contact reduced the level of confidence that must to be developed between the players involved in M&A operations for them to actually happen. On the other hand, the year 2020 actually ended up with a great volume of transactions taking place. In 2020, the Technology sector was one of the four sectors with the most M&A transactions in Portugal – a scenario that has been repeating itself since the beginning of 2021. Finally, it is anticipated that - when compared with 2020 - the year of 2021 will be better for Portuguese and worldwide M&A industries (Santos Vitor and Vassalo, 2021).

Also based on the findings above, and under the RQ3, we would explore the following issues, as the COVID-19 pandemic would impact companies' decision on growth mode by:

B.1. Holding back the companies' interest in inorganic growth during the first pandemic year (i.e., 2020), due to the reducing mobility and physical contact that led to a decrease in deal confidence;

B.2. Boosting the companies' inorganic growth operations in the post-pandemic scenario, especially in the ICT sector, starting on the second pandemic year (i.e., 2021).

2.2.4. RQ4 – How does reaching for ambidexterity impact growth mode's choice?

In RQ4, we try to answer the question: *"For the Portuguese midsize ICT firms, how is the choice of their growth mode related with their attempt of reaching organizational ambidexterity?".*

Achieving ambidexterity has been proved to be harder than it looks (Levinthal & March, 1993; Jansen et al., 2006), with CEOs and Wall Street analysts sharing disbelieve in the capability of organizations to develop both exploitative and explorative activities (Nagji and Tuff, 2012; PwC, 2016). As research on organizational ambidexterity mainly focuses on how organizations address exploitation and exploration internally (Raisch *et al.*, 2009), an external perspective may further suggest the inorganic growth route as an interesting way of reaching organizational ambidexterity. As stated by Bauer et al. (2018), only a few papers delve into how ambidexterity is obtained via inorganic growth. Indeed, firms tend to engage in M&A activity because it allows them to gain full access to new and beneficial resources and knowledge (J. Harrison et al., 1991; Vermeulen & Barkema, 2001; Kim & Finkelstein, 2009). On the other hand, firms may also use M&A to gain control over important distribution channels and achieve economies of scale or scope (Tushman and O'Reilly, 2004).

Based on these findings, under the RQ4, we would explore the following issues, as explanatory of the relation between the decision to opt for inorganic growth and the quest for reaching ambidexterity, by showing:

1. A deliberate and recurrent desire to gain full access to new and beneficial resources and knowledge;
2. A deliberate and recurrent desire to improve control over important distribution channels and achieve economies of scale or scope.

In summary, the objective of our study is to explore the dichotomy of organic/inorganic growth from a managerial decision-making perspective, by focusing on the Portuguese medium-sized ICT sector in order to shed light on the pros and cons of both organic and inorganic growth routes, and, ultimately, explain the main following questions:

1. *What internal motivations have driven the decision making of Portuguese midsize ICT companies when it comes to opting for either organic or inorganic growth?*
2. *Considering the current global tendency for digitalization, how do decision makers of Portuguese midsize ICT companies plan on deciding their firms' growth mode (i.e., organically, or inorganically)?*
3. *Considering the COVID-19 pandemic, how do decision makers of Portuguese midsize ICT companies plan on deciding their firms' growth mode (i.e., organically, or inorganically)?*
4. *For the Portuguese midsize ICT firms, how is the choice of their growth mode related with their attempt of reaching organizational ambidexterity?*

3. Chapter 3

3.1. Methodology, methods, and the issue of research ethics

The present qualitative work is founded on a pragmatic realist approach. The central research method employed (though not only) was the interviewing of Portuguese decision makers of mid tech firms, namely via semi-structured interviews.

The present research study firmly rejects the substantial ambivalence demonstrated by a plethora of business researchers who commonly - yet wrongly - address "methodology" and "methods" all together, as if they were actually the same thread (Bryman, 2008). This document separates the discussion regarding research methodology from the research methods, while clearly reflecting the idea that methodology must act as a compass, helping researchers to choose the research methods that will be applied. By using the word "methods", we allude to the techniques/practices used by researchers to try and shed light on their own research topics (*i.e.*, instruments of data collection, tools used for data analysis, or simply some specific aspects of the research process - like sampling), and we treat "methodology" as the study of the methods that are employed in the research (Bryman, 2008). In fact, and as indicated by Morgan (2007), I find it crucial to emphasize methodology as a mode of linking one's thoughts about knowledge's nature with his/her attempt of generating knowledge itself, rather than separating philosophical matters from the research design.

In the following sub-sections, we develop on the chosen research methodology and methods. Finally, we make considerations on certain key ethical aspects of my research.

3.2. Discussion of the research methodology

The word "paradigm" - first introduced by Thomas Kuhn in 1970 - alludes to the group of fundamental beliefs and theoretical assumptions that steer both the researcher's actions and worldview (Lincoln, Lynham and Guba, 2011). Today, the term "worldview" is actually used in the same way as "paradigm" (Lincoln, 1990; Patton, 2002; Rossman and Rallis, 2003; Creswell and Clark, 2011) and is explained by Patton (2002) as being *"a way of thinking about and making sense of the complexities of the real world"*. Indeed, paradigms may work as heuristics for the researcher, thus being theoretical and concrete "tools" used to help resolving particular research problems (Abbott, 2004). There is a variety of (research) paradigms - or worldviews – that build and arrange modern business research, such as positivism, constructionism, or pragmatism – among many others.

Because there are many different paradigms, and in order to distinguish between them, Guba and Lincoln (1994) suggest three questions whose answers shall enlighten the basic set of beliefs that lead to a given researcher's paradigm; the questions are: *ontological* (what can the researcher gain knowledge about in the world that surrounds him or her?), *epistemological* (what is the relationship between the researcher and the object of his/her research?), and *methodological* (how does a researcher get knowledge of the world?). The beliefs of the researcher regarding the nature of the world (*ontology*) and if whether one is able to obtain objective knowledge or if knowledge is actually subjective (*epistemology*), influence his/her choice of *methodology* – and, consequently, the methods which may be considered more appropriate for a given research (Guba and Lincoln, 1994; Creswell, 2009; Lincoln, Lynham and Guba, 2011). According to Bryman (2008), *methodology* is concerned with systematically unveiling the different practices used by researchers, as well as the assumptions that serve as base for those same practices. This idea is shared by Samra-Fredericks (2010), who summarizes *methodology* by stating that it deals with presuppositions, namely *ontology* and *epistemology*, which contribute to the decision of which research method(s) one will choose to adopt.

Considering that the present study is founded on a pragmatic-realist approach, a summary of the study made on pragmatic realism will be outlined. Pragmatism is usually associated with the concept of abductive reasoning (or simply *abduction*) – labeled by Mingers (2012) as "the missing link between *deduction* and *induction*" – which is connected to the use of available knowledge to find a potential explanation for a given problem (Fisher, 2007), thus allowing the researcher to be dynamically involved in generating data and new theories (Morgan, 2007; Goldkuhl, 2012). The pragmatic approach has its philosophical cornerstone within the philosophy of pragmatism (Maxcy, 2003). As a philosophical movement, pragmatism was originated and introduced in the United States, by the hand of one of its foremost philosophers, Charles Sanders Peirce (1839-1914), who defended that truth isn't found via fixed and external criteria or principles, but from a process of interpretation (Mounce, 1997). Indeed, the term *pragmatism* finds its origins in the Greek word *pragma* (from which the words "practice" and "practical" come) which means *action* - a key figure of pragmatism (Pansiri, 2005). In fact, Morgan (2014) develops on John Dewey's work, identifying three strongly shared notions of pragmatism that underline its focus on the nature of *experience* (unlike other types of approaches that rather emphasize the nature of *reality*):

1. "(…) *actions* cannot be separated from the situations and contexts in which they occur". (p. 26);
2. "(…) *actions* are linked to consequences, in ways that are open to *change*". (p. 26);
3. "(…) *actions* depend on *worldviews*, that are socially shared sets of beliefs". (p.27).

As a research approach, Pragmatism rejects participating in the discussion of controversial concepts like *truth* or *reality*. Actually, it agrees that there may be single or various realities that are accessible for investigation (Creswell and Clark, 2011). Although pragmatists accept that there is an objective *truth* or *reality* that exists apart from human experience, it is always stranded in a given scenario (environment), thus being only encounterable via human *experience* (Tashakkori and Teddlie, 1998; Goles and Hirschheim, 2000; Morgan, 2014). Still, Biesta (2010) warns us not to simply comprehend pragmatism as a philosophical stance, but instead as a research paradigm for tackling the practical problems of our world; pragmatism actually began as a framework for the more practical enquirers and academics (Rorty, 2000; Maxcy, 2003; Creswell and Clark, 2011).

When planning a research project, pragmatic researchers usually analyze carefully the different outcomes associated with their decisions regarding research design and research execution (Creswell and Clark, 2011; Morgan, 2014). After weighing up the pros and cons about the of the various available choices, researchers go on with their own warranted beliefs about the probable effects of designing and conducting the investigation in a certain manner. Still, such beliefs are molded by one's former experience and shared by the larger research communities containing the individual researcher(s). Thus, the consequences of choosing one methodology over another can only be measured based on the original research question(s), as well as by the objectives and intentions of the research project (Morgan, 2014).

Contrarily to constructivist researchers, who believe that knowledge is relative and reality is too complex to be grasped, or positivists, who affirm that one can obtain objective knowledge by examining empirical evidences and by testing hypotheses, pragmatists consider the process of knowledge acquisition to be continuous, rather than two opposite and mutually exclusive extremes of either objectivity and subjectivity (Goles and Hirschheim, 2000). In fact, pragmatism comprises both poles and resides somewhere between them, thus providing a superiorly flexible view regarding research design (Pansiri, 2005; Morgan, 2007; Feilzer, 2010). By assuming such position, the pragmatist researcher becomes able to decide which methodology and research design are more adequate to address his/her research question(s) – and not by his/her commitment to any given paradigm and the philosophical principles on which it is allegedly grounded. Indeed, the priority pragmatists give to the research question makes the mixing of quantitative with qualitative research possible, wanted, and necessary to address certain research question(s) (Bryman, 2006). On the other hand, it is important to state that not every research every research question is necessarily significant, nor every methodology is inevitably appropriate: it is the researcher who decides which questions are significant and what methodologies are appropriate, and those decisions are certainly influenced by the researcher's sociopolitical location, past, background and belief system (Morgan, 2007).

As mentioned before, this research work follows the pragmatic realist approach - as it believes in the existence of a concrete reality (the core aspect of *realism*), while assuming a *pragmatic* stance for analyzing it (Pitta Ferraz, 2012).

Realism in general is defined by Phillips (1987) as "the view that entities exist independently of being perceived, or independently of our theories about them.". Realism can also be divided into subgroups; for instance: *scientific realism* claims that reality is absolutely structured, ultimately well-defined, mind-independent and language-independent - thus assuming that the state of the world is unconditionally independent of humans (Torretti, 2000; Chang, 2016), while *pragmatic realism* argues that sensations and images of the real world can be deceptive, thus not always portraying the world exactly as it is (Novikov and Novikov, 2013). Indeed, pragmatic realists believe that human knowledge is always conditioned by a variety of influencing elements, such as the researcher's background or the environment in which a given research occurs, while not rejecting the existence of a factual reality[3] - a notion that led to Fisher's (2007) assertion that realist research does not solely rely on mathematic-strict approaches as, in practice, much realist research is grounded on qualitative methods - such as

[3] Torretti went even further, adding that pragmatism and realism follow an identical course – as the Greek *pragmata* and the Latin *res* have both the same meaning, namely, "things" - so the expression "pragmatic realism" may even be seen as redundant (Torretti, 2000).

case studies. By trying to represent “real life”, qualitative data provides knowledge regarding the more subtle issues, uncovering their related complexity (Van Manen, 1977). Also, it is crucial to realize the existence of other complexities regarding the interviewees’ perceptions and assumptions (Miles and Huberman, 1994), which are presented in *words* - thus being open to interpretation, tempered by methodology (Samra-Fredericks, 2010).

Pragmatic realism has the advantage of being more adaptable, pluralist and context-sensitive than other research paradigms (El-Hania and Pihlström 2002), thus prompting synergistic “practitioner-meaningful” research among researchers and other stakeholders (Van de Ven, 2007). On the other hand, McKelvey (2006) believes that practitioners undervalue academic research, as they are not able to realize the connection between theory and practice. This was one of the reasons that got us to choose the pragmatic realist approach, namely, to reveal the real understandings of the “practitioners”. Another reason for having chosen pragmatic realism, was the fact that this research project focuses on a particular topic of corporate strategy - *i.e.*, deciding between growth modes - within the ICT sector and, within this, a specific market layer – the medium-sized enterprises – where a variety of influences can distort people’s minds and relations (including organizational culture) (Pitta Ferraz, 2012).

It is also important to state that I decided to perform a number of interviews (*i.e.*, interviews aimed for those at the “top” of a given stratification system) – or semi-structured interviews (Adams, 2015) - due to the fact that the interviewees were specifically related to the area of the research - namely, strategic decision making in the IT sector (Mason, 2002; Gibson and Brown, 2009). The interviewees’ contribution to the research is hardly substitutable as they hold senior positions in their firms and possess high levels of knowledge within the researched topics (Margolis, 1995).

Discussion of the research methods

At the beginning of my study process, efforts were made in order to find out if an econometric analysis was feasible. Indeed, Bryman and Bell (2007) encourage the use of quantitative data, stating that big data sets are frequently collected by organizations and that business researchers are increasing their interest in them. Still, quantitative methods are typically successful when applied to large(r) data sets (Morris, 2008) and, after contacting the fifteen larger business database providers (both in Portugal and abroad), I understood the impracticability of such attempt, which was mainly due to the opacity of M&A information provided by companies in

Portugal (and in many other countries). We then realized the need to pursue a more qualitative and longitudinal approach (Stake, 2005; Thomas and Myers, 2015).

In fact, Xie and Reddy (2017), when suggesting researchers to discover what motivates some managers to opt for M&A instead of the organic growth route, stated that empirical research techniques are "not apt" for every practical problem regarding M&A, thus advising the use of qualitative research methods in order to provide greater understanding of a given phenomenon.

Dul and Hak (2008) define the case study as an intensive/longitudinal method where a single case or few cases (*i.e.,* comparative case study) in their natural setting are chosen, and the outcome is interpreted in a qualitative way. A good case study shall attempt to enlighten choice or set of choices, the reason(s) why they were taken, how they were executed, and with which outcome (Shcramm, 1971, cited in Yin and Campbell, 1989). The case study approach is broadly utilized by numerous researchers in business research, as is confirmed by case-based papers in both top European and U.S. publications. Indeed, case studies merit a noticeable role in management research and can be utilized for breaking down management issues, for the situations in which (A) the issue is wide/complex, (B) the theory is somehow scarce, and (C) context is key (Dul and Hak, 2008, cited in Ebneyamini and Moghadam, 2018). We firmly believe that the present study's issues fulfill the three forementioned criteria: (A) decisions regarding companies' growth mode are complex and might have a wide range of decisive factors involved; (B) as it is shown in the literature review, there is a really small number of publications regarding the topic (specially, in the way this study puts it - *i.e.,* in the perspective of the decision maker); and (C) the environment (or context) in which this type of strategic (growth) decisions occurs is absolutely key for unveiling the potentially "hidden" knowledge regarding the topics of research.

On one hand, the case study method was frequently criticized for, allegedly, presenting problems related with research quality (Tellis, 1997). On the other hand, the concepts used to evaluate the quality of research (validity and reliability) have been highly discussed in the context of qualitative studies, with the literature agreeing that researchers should try to ensure and maximize four requirements: construct validity, internal validity, external validity, and reliability. Construct validity can be achieved by using various sources of evidence (*i.e.,* triangulation) - and by having the crucial informers reviewing the draft study before composing the report, as well as by establishing *a clear chain of evidence* in order to allow others to piece together how the researcher went from the research questions to the conclusions). Internal validity is reached by trying to do pattern matching when analyzing data as well as – again – triangulation. External validity can be obtained by following replication logic for multiple case studies, and by providing a clear reasoning for the case study selection - as well as ample details on the case study context - in order to allow others to understand how the sampling choices were made). Finally, case study researchers can guarantee their studies remain reliable, by utilizing a study protocol – in order to enhance *transparency* - and by developing a case study database with all the case study's notes, documents and collected narratives – in order to achieve *replication* - at the phase of data collection). All these four conditions are necessary in order to meet desirable research quality goals, when following the case study method (Gibbert, Ruigrok and Wicki, 2008; Ebneyamini and Moghadam, 2018).

Another crucial aspect of the case study method that was carefully considered when preparing this research, is case selection. Literature clearly states the need for researchers to select information-rich cases – *i.e.*, cases that are suitable for in-dept study – as information richness is fundamental to deciding on the number of cases one will use (Patton, 1999). Therefore, and considering that qualitative sampling seeks information richness, case selection must be purposeful, instead of random (Perry, 1998; Crabtree and Miller, 1999).

In terms of the methods used for gathering data, and along with observation, context analysis and document analysis, the present study is mainly supported by semi-structured interviews with key executives (Gubrium and Holstein, 2001; Adams, 2015). According to Roulston (2010), the discussion of the interview process' theoretical aspects may clarify the design and development of the research project.

Leavy (2020) suggests three types of interview structure: structured, unstructured, and semi-structured interviews. Structured interviews are mostly grounded in the same rigidly strict reasoning as questionnaires, and they do not take advantage of the potentially interesting interviewee's attitudes, stories and opinions that arise from conversations, which could be useful for generating important knowledge. Contrarily, unstructured interviews do not possess any certain format in which questions are predetermined, so the lack of structure enables the interviewer to ask whatever comes to his/her mind at the moment (Leavy, 2020). As a combination between structured and unstructured interviewing, semi-structured interviewing enables new ideas to be invoked as a consequence of what the interviewee may actually say during the conversation, while allowing the researcher to steer the dialogue on topics that may be considering significant for his/her research (Leavy, 2020). In semi-structured interviews, the researcher generally uses a framework of central themes to be discussed - the interview guide (Bird, 2016) - without the need for using any given strict set of questions, thus providing latitude to the interviewee (Fisher, 2007). Indeed, semi-structured interviewing provides more flexibility to the research (Yin, 2013; Patton, 2015) and it permits the researchers to maintain his/her focus on the interview's main goals, while also allowing for the confirmation/rejection of other own's preconceived thoughts, therefore breaking new grounds for research (Prasad, 1993).

The semi-structured method was chosen as the researcher intended to allow interviewees to introduce new thoughts on the interview's topics, by tapping into their own different expertise, backgrounds, and visions (Mikecz, 2012; Merriam and Tisdell, 2016). This permitted follow-up questions to be asked and opinions to be further developed during the interviews (Crang and Cook, 2007).

There are potential issues associated with the interviewer-interviewee relationship, as well as with the emotional matters that may consequently arise (Roulston, 2010). For instance, the fact that the researcher is from a professional IT background too, was considered when choosing the interviewees. For Roulston (2010), the best way to deal with such issues it to assume a neutral point of view while not forgetting to be empathic with the interviewees. Such recommendation was incorporated both in the preparation and execution of the interviews, as the interviewer assumed the role of a "good" but skeptical listener.

Interviews were therefore conducted with decision makers from a group of three to four selected medium-sized Portuguese ICT companies that have been growing organically, as well as from another group of three to four medium-sized Portuguese ICT companies that somewhere in time took the decision to grow via M&A. From such semi-structured interviews, there was an attempt to understand what went well and what went wrong after such events happened, as well as to explore the relation between COVID-19 pandemic and digitalization with choosing one's growth mode, and analyze it under the light shed by the literature review, while also bringing an additional issue to the debate, namely, the existing relation between choosing the growth path and trying to reach organizational ambidexterity (from a managerial decision-making perspective).

For the two above-mentioned groups of companies, this study also tries to analyze the effect of the decision of (not) acquiring other firms, by comparing the evolution of relevant company growth indicators (namely annual sales turnover and number of workers per year), while accounting for firms' age (Variyam and Kraybill, 1992), activity sector (Rodríguez et al., 2003), size (Fiala and Hedija, 2015) and geography (Reichstein and Dahl, 2004). Indeed, firms' age *(>20 years of existence*), sector (*IT*), size (*medium*), and geography (*Portugal*), were considered for sampling purposes.

3.3. Ethical reflections and considerations

The present research paid special attention to the ethical considerations covered by literature that relate to the methodological reasons to opt for conducting interviews, negotiating access, performing the interviews, maintaining confidentiality, as well as to the ethical reflections on the retention of data.

Ethical thinking associated with business research has to be considered from the initial planning stage of any research, comprising reflections regarding the potential harm that may arise from the facts stimulated and revealed during the interviews (Diener and Crandall, 1978). Ethical precautions must be taken into account since the research project's earlier stage, and, then, during its execution and development (Miles and Huberman, 1994). As it is crucial to obtain informed consent from the interviewees (Bryman and Bell, 2007), such ethical precautions were taken – specially, because of the senior positions held by the participants. Indeed, Fisher (2007) suggests the researcher, to talk with the participants - well ahead of the interviews - regarding data protection, privacy, and confidentiality. (Grinyer, 2002) also believes in the anonymity as a general principle for interviewing participants, although he considers that, situations, anonymity may decrease a given participant's interest in participating in the research in case he/she has the intention of gaining recognition through the output of the research work – which was definitely not the case of this work's interviewees.

Taking in consideration the above-mentioned recommendations, a careful analysis of ethical issues was performed, and both anonymity and confidentiality were determined as crucial aspects to make the interviewees feel comfortable towards the inquiry. The companies' decision makers to be interviewed were carefully chosen after a sensible review of which methods to use, how hard it would be to access those companies' executives, and what type of information they would possibly demand. To avoid making specific reference to the executives' names, organizations, or geographical locations, pseudonyms were utilized (so, if contextualization was needed, the study would contain expressions such as "in my city", or "in an ICT firm in Portugal").

It was plainly defined with the participants that the transcripts would only be accessible to the researcher and his supervisor - as well as to other people directly involved in the examination process, with the role of assuring the project's academic standards (all obliged by the same confidentiality). I was established the right of quit from the research at any time, as well as to be assured that all the collected data would be instantly destroyed. The interviewees were also given the contacts of both the researcher and supervisor, for the case of possibly wanting to withdraw from the study.

The principle of confidentiality and the complete details about a participant's right to withdraw the research, as well as the consent forms, were included in Appendix A.

4. Chapter 4

4.1. The empirical study

The selected case-studies were chosen from the Portuguese ICT sector due to the researcher's background – namely in Portuguese technology/technology-related companies - and because of the importance that the ICT sector holds for Portugal's economic activity (as we shown in the Research Background).

The companies' identity and information were obtained from a well-known PME's database (Informa DB, 2022), as we opted to conduct the study on midsize firms specifically - *i.e.*, a company employing less than 250 people and with an annual turnover not exceeding 50 million euros or an annual balance sheet total not exceeding 43 million euros, and that is not classified as a micro or small company (INE, 2022). The eight chosen firms' characteristics and financial indicators are identified in Appendix D.

The initial contacts with the interviews were made via the companies' official e-mail addresses, or by directly contacting their decision makers on LinkedIn. All the interviewees were between 35 and 60 years old, and were members of their firms' Boards, holding decision making positions and being involved in their companies' strategic decision-making processes.

4.1.1. Company A

Founded in 2000, Company A was born as an eProcurement solution for the construction sector. Its number of clients kept rising and the company also expanded geographically, starting with Europe and LATM. Thanks to its strategy of diversification of sectors, products and geographies based on a culture of innovation, the company has offices in France, Germany, Italy, Mexico, Peru, Portugal, Slovenia, and Spain, and is also responsible for the operation of national eProcurement platforms of a variety of Governments worldwide. By the end of 2010, Company A already had almost 10 million in annual sales, with an EBITDA margin of 25%, and 100 employees.

Currently, Company A is a world leader in eSourcing and eProcurement solutions. In its cloud e-Marketplace, more than 10.000 public and private buyers connect every day with an international community of over 350.000 qualified suppliers, thus generating more than 10.000 new business opportunities every month, with more than 90% of the given contracts being attributed to new suppliers. Buyers are able to save money while increasing transparency and reducing risk, while suppliers have the chance to compete for more business opportunities – both supported by advanced tools comprising market intelligence, lead generation, reputation management and comprehensive analysis reporting.

In 2015, a distinguished European Private Equity firm acquired a minority stake in Company A (allowing it to almost achieve a 17% growth rate in 2016, as well as reaching a 26% growth rate in the same year), having latter increased such stake to become its major shareholder. Later, in 2020, the acquirer resold its position to a large north European corporation dedicated to market information and business intelligence. A year after, in 2021, Company A was able to increase its sales by 11%, reaching 14 million euros in annual sales, with a historical EBITDA margin of 41%.

Company A supports clients worldwide - from small public entities (like small townships), large public entities (e.g. large cities, regional governments, and national central procurement entities), to the central public administration of several countries, as well as firms from SMEs to large multinationals. The company has been recognized by renowned independent publications and analysts (e.g. EU, Gartner, Microsoft).

After being acquired by its current Nordic owner, Company A started following a path of acquisitions, acquiring a Portuguese electronic platform for public procurement (specialized in electronic document exchange and electronic bill presentment), in 2020, and a major Spanish provider of information for construction projects, in 2021.

4.1.2. Company B

Created in 1995, and currently inserted in a group of 9 companies (“Company B’s Group”), Company B specializes in assembling and testing electronic and telecommunications equipment, under subcontracting. It works in 4 different business areas, namely:

telecommunications, transportation, general electronics, and refurbishment. Company B has the vision of becoming a worldwide reference in the assembly and testing of electronic circuits. Its mission is to accomplish, sustainably and with high quality, electronic and telecommunication projects, using high-precision and advanced technology. Quality, know-how, innovation, flexibility, commitment, and confidence/confidentiality, are the values of Company B.

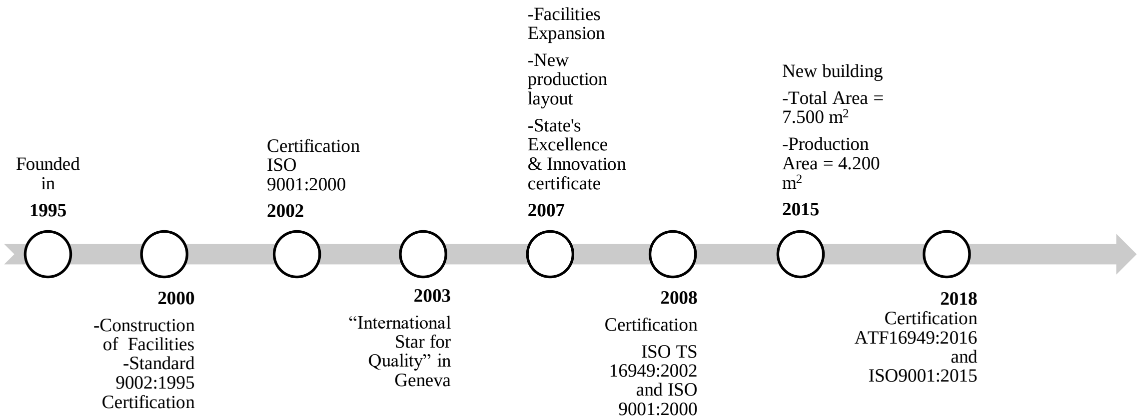

Figure 4.1 - Company B's Key Events Timeline

In order to ensure the quality and functionality of its services, the company has a very qualified team as well as state-of-the-art, efficient assembly tools and testing procedures. The Quality and Environmental Policy of Company B also illustrates their commitment to quality and environmental matters. The firm operates in accordance with the ISO TS 16949:2009 and NP EN ISO 9001:2008 applied quality and environmental systems, as well as the NP EN ISO 14001-supported environmental management system.

While Company B ended 2021 with 150 workers and 22 million euros in annual revenue (thus representing an annual growth rate of 47%), and around 5 million euros in annual EBITDA (*i.e.*, 21% of EBITDA margin), Company B's Group has over 600 full time employees, more than 33 million euros in business turnover, over 2 million component placements per hour (surface mount technology throughput), and more than 13.000 m^2 of total area. The Group offers the services of Surface Mount Technology, Through Hole Technology Mounting, Testing, Packing, Prototyping, Refurbishment, Industrialization Support, and Quality (automatic or manual).

Company B’s Group has maintained its dynamic active acquisitions policy over the last 15 years.

4.1.3. Company C

Company C is an industrial software development firm that was founded in 2009, via spin-off, by a major Portuguese software house and by a number of individuals with backgrounds in the semiconductor manufacturing industry. The company offers a modern Manufacturing Execution System (MES) for discrete product manufacturers with a specific focus on the semiconductor, electronics, and medical device sectors. In 2010, the initial version of Company C’s MES product was formally released. The MES was created especially for hi-tech, sophisticated production processes, and, in 2011, it was used for the first time by a Fortune 500 firm. The potential of Company C's MES was rapidly recognized by the analyst community, and in 2012, Gartner included it for the first time in their list of the Top 30 MES Systems. The staff swiftly grew as the number of clients rose, and the business hired its 100th employee in 2015. The company was able to secure its first deal for more than 30 plants in 2017, due to the fact that its MES' benefits were/are further improved when used in several facilities at the same time.

In 2018, Company C was acquired by a large Asian multinational corporation – a leader in the Semiconductor and Electronics industries – which integrated the company in an enterprise group of companies valued in more than 2 billion dollars combined. Company C closed the year 2018 with 145 employees, an historical level of 11 million euros in sales (36% annual growth rate), and an EBITDA margin of 26%. Such an acquisition gave Company C the financial slack that allowed it to acquire a Chinese MES provider, specialized in Surface Mount Technology. In the 2021 Gartner Magic Quadrant for MES, Company C was recognized as a Leader in its segment, and, a month later, in the 2021 Gartner Critical Capabilities for MES Report, it received the top ratings in a variety of use cases. Company C ended 2021 with 258 employees, a historical volume of sales of over 30 million euros, and a 48% EBITDA margin.

Despite the fact that its headquarters and main technical center are located in Portugal, Company C has created subsidiaries in Central Europe, Asian, and North America. The firm has the vision of making the so called “Industry 4.0” available to all manufacturers, with the mission of driving business value through the merging of intelligence, operations, and automation technologies for the digitalization of production processes. Its values are innovation (for its customers), agility (to adapt to the environment), and commitment (to integrity and ethics towards its staff and clients).

In order to produce the finest client IT solutions, Company C continues to be a Microsoft Gold Competency Partner, demonstrating the company's ability to develop solutions with Microsoft Visual Studio, as well as with .Net. In 2013, the Capability Maturity Model Integration (CMMI) for Development acknowledged Company C's software development model as functioning in accordance with Level 3 of the CMMI. This certification was reaffirmed in 2016, demonstrating the company's unwavering commitment to quality and its clear customer focus. Also, the firm has maintained its ISO 9001 certification (i.e., "Analysis, design and development and support of high value-added software solutions to manufacturing high tech markets") since 2011, and, in 2017, it upgraded to the most recent version of the standard.

With a team of individual founders who have over 15 years of expertise (each of them) in providing software solutions to the semiconductor sector, the firm has a diversified leadership with extensive knowledge. Also, company C has increased the size of its workforce to support a wide variety of high-tech manufacturing sectors, hiring a group of top analysts and developers.

4.1.4. Company D

Company D is a Portuguese pioneer in Data Science that is focused on Business Intelligence, Advanced Analytics and Artificial Intelligence. The company was founded in 2006, with only a couple of workers, and is now a leader in its industry, with presence in Portugal, Northern Europe, LATM and Asia, with more than 300 projects implemented to over 150 clients, in around 15 different countries, and having almost 15 awards since it was founded.

Company D’s values are the ones of Empathy (integrity, responsibility, respect, openness, close relations, congeniality), Professional Pride (critical sense, perseverance, assertiveness, creativity, innovation), and Lean (to avoid excess, waste, and bureaucracy with optimized processes).

Part of the company’s main concept is that knowledge is not particularly helpful in the hands of individuals who work with data all day, but it is beneficial in the hands of others who don't play those particular functions in the business but need quick access to the information that data may provide. High-performing businesses need to know more than just what occurred (Descriptive Analytics), they also need to know what will happen (Predict Analytics) and what steps to take to make it happen (Prescriptive Analytics). Such firms gather, analyze, and process data using advanced analytics techniques like machine learning, optimization, sentiment analysis, cluster analysis, or predictive modeling to generate insights for better business decisions, improved operations, smarter products, and customized marketing campaigns.

Based on its experience in data science, data analytics, and data engineering, Company D creates algorithms and unique mathematical models that help firms exploit the data at their disposal and turn it into competitive advantages. To achieve its bold objectives, Company D has been counting with a team of over 250 data scientists with around 15 different nationalities and from diverse backgrounds - including, but not limited to, economics, physics, computer science, management, aeronautical engineering, and mathematics.

The consulting, outsourcing, and nearshoring services offered by Company D give its clients the knowledge they need to flexibly implement projects, enabling them to take on quick-win initiatives and develop software solutions to meet business goals while effectively controlling project risks. The firm’s experience working on initiatives involving data and business intelligence sets them apart from competitors. Because of this, the company's workforce is made up of consultants with extensive data knowledge and software engineers who have functional and sector-specific abilities. To allow data to be a source of knowledge for its clients, Company D has merged technology, sophisticated analysis tools, and scientific research methodologies.

At the end of 2021, Company D had a record of 274 employees, and almost 13,5 million euros in annual sales - representing an annual sales growth rate of 31%.

In 2022, the company launched its national whistleblowing platform. This platform allows for the creation and management of whistleblowing channels with the aim of helping companies comply with Law No. 93/2021 [Whistleblowing] – a law that make complaints possible, namely via the reporting of irregular, discriminatory or ethically questionable behavior within organizations with more than 50 workers. Also, Company D has an active internal Corporate Social Responsibility (CSR) unit, also showing the company's dedication to solidary and altruistic practices.

4.1.5. Company E

Founded as a press clipping services firm more than forty years ago, Company E has evolved into a major Portuguese media intelligence services provider. Today, the company works for the largest national corporations, as well as for the main Portuguese public entities (e.g. the Portuguese Government, or Turismo de Portugal), capturing over 80% of the Portuguese media intelligence services' market.

Company E, which is owned by its parent company *Company E-Global*, operates in four main areas of activity, namely: Database, Monitoring & Analytics, Press Release (PR) Distribution, and Insights.

In the database's vertical, companies are able to connect with influencers and build relationships to reach their target audience (buyers), through the largest and most complete network of media and social influencers in the country. Company E's database allows its clients to unlock the landscape of global media and influencers with a unique, powerful, and easy-to-use search and filtering engine, counting with more than 850.000 contacts, media and editorial calendars, and over one billion social media profiles.

In the Monitoring & Analytics part of the business, Company E uses an innovative solution to track the results and metrics of its clients' campaigns. In addition to monitoring its domain to determine how many people it is really reaching; it enables its clients to compare performance over time to analyze the success of their efforts. This solution ensures that Company E's clients never miss a mention of their brand or subjects of interest on news and social media websites and other digital channels thanks to its access to over 100 million data sources. Covering different monitorization types – namely online, broadcast, print, social and podcast monitoring - this technology also enables users to convert their dashboard into attractive reports that they can instantly download or share with a short URL with just one click.

The PR Distribution's division of Company E enables Portuguese businesses and organizations to publish their PR content with a large audience of journalists and influencers throughout the world, in a network that comprises over 200 thousand journalists and influencers, eight thousand websites worldwide, and over 2 million social media followers. Company E's PR Distribution services help major clients worldwide gain a new reach, visibility, credibility, and reputation, while allowing them to communicate in a more secure way.

Last, Insight's division provides its clients with valuable perspectives on data-driven communications tactics, generating more data, insights, and possibilities. The work of this team enables clients - including the most well-known brands - to monitor, optimize, and surpass their communication goals, particularly through their team of Sector Analysts, who are committed to assisting the clients in understanding what their audience is saying, why they are saying it, and how to put that into action.

Company E-Global (*i.e.*, the internal group that includes the Portuguese Company E) has the objective to dominate the media and public relations industries globally. In contrast to the Portuguese company's goal of steadily consolidating the current market, the worldwide market's strategy has been to swiftly become the market leader through the purchase of the major global firms in its industry. This is Company E-Global's plan, which ultimately led to the acquisition of its greatest rival in 2014. Then, to expand its business and gain a position in Media Relations, it acquired a company that was not in this area, but that worked in information distribution – which, alone, had a larger dimension than Company E-Global itself (2015). In 2021, to fill a gap in the Social Area, it acquired the world's largest player in the Social Media area. In other words, Company E-Global's objective is to bring together all the major brands of excellence and importance, trying to consolidate them into a single global brand.

Company E finished the year 2021 with a level of annual sales of over 11,5 million euros, more than 70 employees, and an EBITDA margin of 17%.

4.1.6. Company F

Created as a spin-off, in 2014, Company F is an international FinTech software firm (with presence in Portugal, Northern Europe, and North America) that develops and sells an Omnichannel Digital Banking Platform, providing licenses (instead of services) for the financial markets industry. By having the ability to easily integrate with all the major core-banking systems, Company F assists financial institutions by offering a more personalized, inventive, and humanizing experience across all channels of a bank, namely: backoffice channels (content management system, enterprise management system, and monitoring center), customer and member channels (web banking, mobile banking, and wearable banking), and front office channels (customer management front office, contact center, and branch/broker front office).

The mission of Company F is to deepen client relationships while lowering costs and assisting the banking industry in reaching its full potential. This firm’s mission is to create a quick, lean, innovative banking platform with out-of-the-box omni-channel capabilities that can shape the digital banking experience. Company F's major goal is to offer banks the robust and dependable foundation they need to become digitally future-proof and succeed. By doing this, Company F is able to assist banks and financial institutions in hastening the process of their digital transformation, decreasing the time it takes to market, and increasing the rates at which their products and sales are converted to the digital realm. Additionally, it may accomplish all of this while lowering transaction costs and boosting firms' agility & flexibility models, giving them the improved adaptability to overcome any challenge.

Company F has received recognition as one of the top 10 global rising firms in a KPMG ranking and has been recognized by Gartner as one of the top global suppliers supporting digital banking across all critical areas of the bank organization. Company F's platform includes prebuilt core integrations with any core banking system and rich business middleware, the "Company F's Studio" - an integrated environment for quick and secure development, the "Company F's App Suites" - along with complete apps for web, mobile, and watch, open architecture with an API gateway to embrace other Fintech providers, top-notch innovation, and flexible delivery via partners.

In an ongoing effort to reduce risks, safeguard confidentiality, availability, and integrity, as well as to improve resilience in the event of an incident and guarantee business continuity, Company F's information security management system has earned certification under the ISO/IEC 27011 standard. Also, considering that Company F uses the best product development and service implementation methodologies in the market, as well as the best available practices in order to improve its efficiency, effectiveness, and quality of its product (namely Company F's omnichannel platform), Company F's development process model has been recognized by CMMI Institute as CMMI V2.0 Level 2.

The digital platform of Company F has assisted financial institutions all over the world in implementing banking solutions for their clients and internal teams in a timely manner. Company F currently has around 100 full-time employees, and the following elements make up its portfolio: Account opening, Social Banking, Voice Banking, Augmented Reality, Analytics, Campaigns Management, Mobile Banking, Wearable Banking, Branch Front Office, Contact Center, and others.

In December 2021, Company F issued its Code of Ethics and Business Conduct, which sought to communicate a set of ethical and deontological values that direct and define the expectations of a personal and professional relationship for all employees and official Company F representatives. This document covers the key topics of the firm’s vision, mission and values, ethical principles, monitoring and report, internal control, and training, as well as the company's rules and actions regarding employment practices, respect for the individual and organizational environment, sexual and moral harassment, comply with laws, rules and regulations, conflict of interests, anti-money laundering, anti-bribery and corruption policies, intellectual property, confidential information, use of company resources, data protection, media enquiries, and social responsibility and sustainable development.

Company F closed its fiscal year of 2021 with over 90 employees, more than 13 million in annual sales, and an EBITDA margin of 15%. In August 2022, the company launched its Plan for the Prevention of Risks of Corruption and Related Infractions. This plan outlines the values, expectations, and obligations for suitable risk detection, analysis, classification, treatment, and response. It encourages the expansion of the analysis and evaluation of the corruption risk, incorporating all components of the internal organizational structure, and it can be applied to different exposure levels of risk within Company F.

4.1.7. Company G

Company G is a Portuguese leading electronics-based technological company that works in the areas of offset printing, payment solutions, and customer communications management. The company's current clients are Portugal's major banks as well as some of the country's most well-known companies (in diverse areas of activity such as retail, utilities, telecommunications, or oil & gas).

Founded in 1867 as a Portuguese pioneer in the production produce forms, Company G's ancestor was also one of the first certified producers of the standardized Portuguese cheque, when it was introduced by the Portuguese Central Bank (*Banco de Portugal*) in 1980. Nine years later, the concept and the practice of Global Cheques Outsourcing were introduced in Portugal, and, in 1991, Company F's ancestor innovated once more, with its Global Cards Outsourcing. In 1990, the firm inaugurated its first industrial complex (with a total area over 20.000 square meters), and, in 2009, the company created three different areas within the organization: Cards, Technology, and Communications. In 2010, the Technology Area went autonomous through a spin-off operation, thus originating Company G. The company's first Customer Communications Management solution was put into practice in 2014. In 2015, Company G's ancestor and Company G itself were merged under the same name (namely, *Company G*). In 2017, the year that Company G turned 50, new private investors acquired a stake in the company. Before 2020, Company G joined the European Foundation for Quality Management (EFQM), joining a group that consists of more than 500 firms worldwide (but only 7 of them are located in Portugal). Also before 2020, Company G received its ISO / IEC 27001 certification for its information security system, and, in late 2020, the company debuted its new digital platform, which still serves as the public face of its Customer Communication Management part of the business. In the second half of 2021, Company G developed a new online platform that included an innovative Business Movement for the Recycling of Cards with Electronic Components. With this platform, the company hopes to mobilize card issuers to support an environmentally friendly end of life for unused cards.

Today, Company G has three business areas, namely: an Offset Printing unit – from which the company was born and which, today, represents about 30% of its turnover – that prints, for example, Portuguese lotteries, or the ballots for the elections in banking institutions; a Payment Solutions unit - where 90% of the business is related to personalization at scale and loading of confidential data encrypted in bank card chips; and a Customer Communications Management unit, which is divided in two sections, namely a Printing & Finishing section that allows to print with variable data, in scale and in series (for example, for bank statements, from files sent by banks), and another section in charge of custom application development, using a platform with a series of blocks, to pass the customer's physical path to a digital path - for example, making electronic invoicing and electronic custody fully digital, and, if the client wishes to, the firm can also print and send it to the client's address, or we send automatic messages to bank customers, in order to notify them that their bank cards are arriving at their homes.

With the vision of creating significant and customized communications that may reach every client the proper way, Company G's mission is to be the quickest and most trustworthy end-to-end supplier of tailored customer communication solutions. Its values are timely and quality delivery, teamwork, positiveness and ambition, innovation, honesty and integrity, and accountability.

Company G has been approved by both Visa and Mastercard to personalize cards issued by both companies, both physically and in the logical form. In 2021, the company's topped 10 million euros in annual sales, having around 120 full-time equivalents at its disposal.

4.1.8. Company H

Founded in 2015 through an MBO, Company H is one of the leading IT consulting firms in the country. It started with about 15 workers, and, during the last 6 years, on average, it grew around 15% per year, organically. Today, Company H has around 300 employees – thus, more than doubling the size of the firm – and has a client portfolio that comprises some of the major Portuguese multinational corporations, in the sectors of Utilities, Oil & Gas, Retail, Public Sector and Financial Services.

Company H focuses on integrating digital transformation services, including consulting and advisory services (*i.e.*, digital thinking business design focused on change management), cloud, infrastructure, and security (via hybrid IT and innovative user services), application services (with an agile full life cycle approach), and management and outsourcing services.

Company H is a significant corporate Microsoft Partner with a broad pool of certified experts. The firm has more than 15 Microsoft competences in total, the majority of them Gold. Company H is a six-time achiever of Microsoft's Partner of the Year Award in the last three years, in 5 distinct categories. Plus, one of Portugal's main business magazines ranked Company H in the Top15 best places to work in 2021. The firm is also pleased to maintain and capitalize on the renowned EMEA Microsoft Centre of Competence for providing cutting-edge enterprise solutions based on the whole Microsoft stack.

Company H counts with a Board of five partners that have a plethora of experience in working and leading multinational consultancy companies (all of them were previous Commercial and Services directors in the previous American parent company). Their experience has allowed Company H to grow in the IT consulting industry, generating constant organic growth for the company.

Besides the company having presence in both the country's capital and the island of Madeira, it has boldly promoted a flexible and hybrid work culture, that has been allowed to retain and capture new talent, namely dynamic experts that also value a good work-life balance in their professions, focusing on well-being. More recently, the firm has also promoted its CRM Academy and Sitecore Academy – two initiatives that have been boosting the qualification of young people in the field of information technology, through the creation of around 30 openings, for these technological universities; each last up to two months and a half and include a theoretical and practical component, a paid training agreement, mentorship programs, the possibility of technical certification, and admission to Company H.

In 2021, Company H ended the year with a record annual sales of around 13,5 million euros, representing a record growth of 23% per year, and counting with a workforce of 134 workers (the highest number of workers since the company's foundation).

4.2. Findings

In this section, we introduce our research findings, and organize them by each one of our four research questions - namely: RQ1, RQ2, RQ3, and RQ4. Each research question is divided into the practical questions that were actually asked to the interviewees, and each practical question is subdivided into the answer pattern(s) that we obtained from the semi-structured interviews. Such patterns (and respective topics) emerged naturally from the answers given by our interviewees and were grouped considering the number of times they were identified in the interviewing process.

4.2.1. RQ1: Motivations for growth mode

In RQ1, we tried to answer the question: *"What internal motivations have driven the decision making of Portuguese midsize ICT companies when it comes to opting for either organic or inorganic growth?".* The following chart summarizes the structure of RQ1:

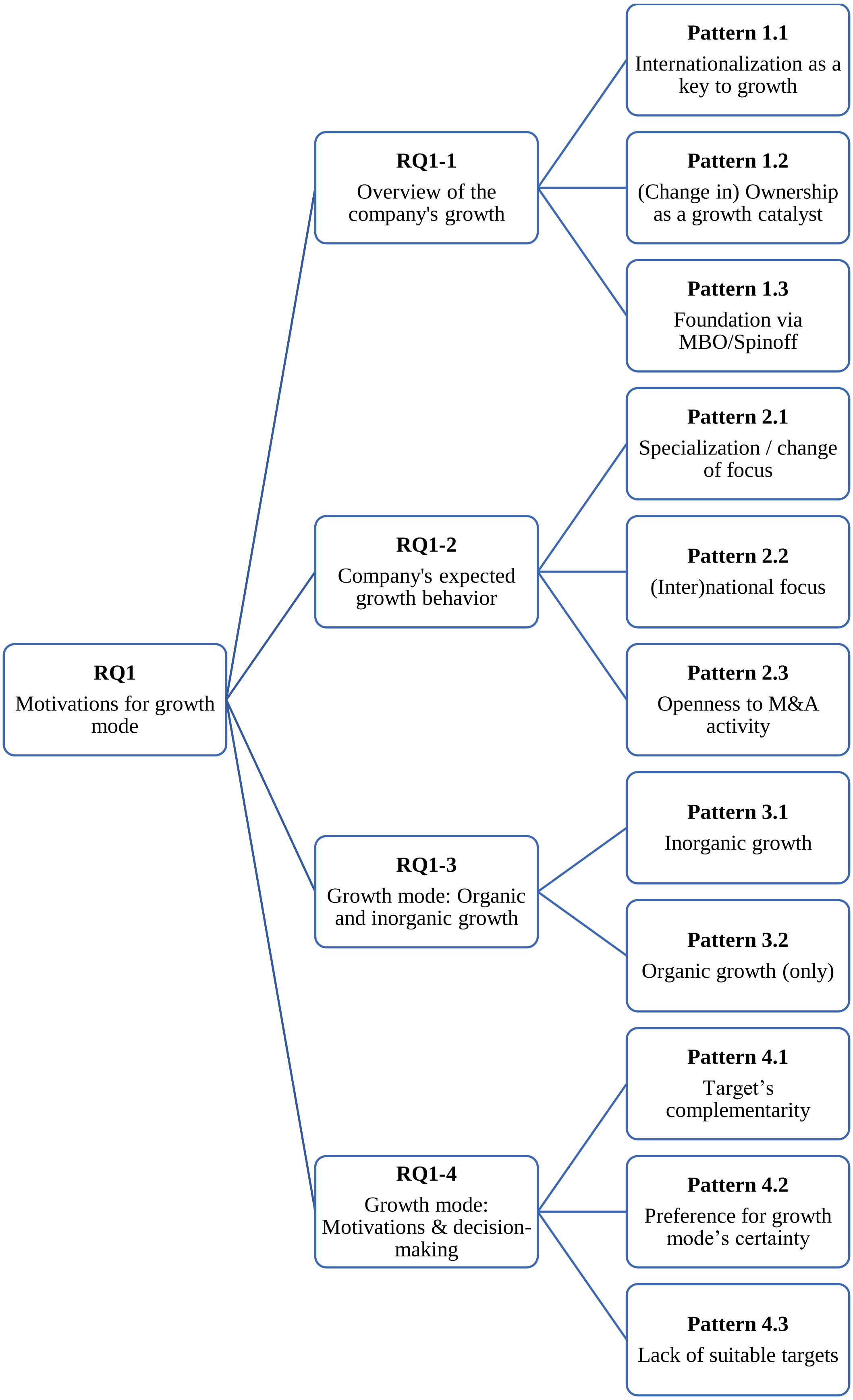

Figure 4.2 - RQ1's structure

4.2.1.1. RQ1 – 1: Overview of the company's growth

In order to start exploring the first research question, we started by openly asking the eight interviewees for their general analysis of the company's growth during the last twenty years.

Their answers ended up addressing the topics of innovation, digitalization, changes in ownership, foundation via MBO and spinoff processes, the importance of the team, internationalization, national focus, the importance of being in niche markets, a company's track record, relying on key partners, and the importance of public incentives.

Three distinct patterns were identified in the interviewees answers and presented below.

4.2.1.1.1. Pattern 1.1: Internationalization as a key to growth

Five interviewees (Companies A, C, E, F, and H) went through the importance of the internationalization process as being key to the success of their firms' growth over the years.

In the case of Company A, it began selling for the construction sector, having later entered the (national) public sector, *"and, consequently, internationally. Today, Company A is the leader in e-sourcing and e-procurement globally"* (Company A) – which shows how important it is for the company to currently have a global presence.

This was aligned with Company C's decision maker stating that *"almost 99%"* of their *"customers are foreign"*, with their *"main competitors being Siemens, IBM and Applied Materials"* (Company C).

Also, Company F's executive affirmed that *"from the beginning, the company was created on an international level", and that as soon as they created it, they "opened an office in London".* Today, *"most of Company F's clients are international"*, with *"97 to 98%"* of their *"turnover coming from abroad."* (Company F).

Also, Company E decision maker expressed awareness towards international operations as a support for their firm's growth – *"There is a sustained growth curve, with organic growth registered via exportations Angola, Mozambique, and Spain."* (Company E).

Company H also showed attention towards internationalization, as it is currently exporting *"(...) to Spain, Germany, France, Belgium, and Angola".* (Company H)

4.2.1.1.2. Pattern 1.2: (Change in) Ownership as a growth catalyst

Four interviewees (Companies A, C, E, and G) mentioned the change in their companies' ownership as an accelerator for growth or company structuring.

According to the decision maker of Company A:

> *"The company was integrated into an international group that also has other business areas - but always related to the aspect of generating business opportunities, namely in the construction sector, in addition to the public sector."* (Company A).

Also, Company C's interviewee pointed out:

> *"In 2018, the company was fully acquired by a Singapore*-based *corporation - which is listed on the Hong Kong stock exchange and is currently a world leader in the manufacture of electronics and semiconductor equipment - offering us a solidity and a name much greater than those we had until then, and does not only represent the typical figure of a shareholder, but also that of a strategic partner who puts us in contact with their own customers, who gives us advice and any support we need."* (Company C).

The decision maker of Company E, to address the registered acceleration in terms of growth, also highlighted that, in 2001, *"the company was 100% acquired by a Swedish multinational listed on the Stockholm Stock Exchange."* (Company E).

Company G's executive explained:

"The company was owned by a family business for 50 years, until the end of 2017, when it was sold to a Private Equity fund. When that happened, a large initial investment was made to professionalize the management of the company and the way it managed its day-to-day operations, its vision, its mission, and its strategic objectives (towards growth)." – although that, and contrary to Companies A, C, and E, their buyer was an active investment fund, and not another typical company or group: *"(...) in the short, medium, and long term, the objective will be to sell the company, because that is Private Equity's core business. So, currently the company is evaluated by the EBITDA, thus we try to improve its EBITDA, for the company to be attractive to the investment market."* (Company G).

4.2.1.1.3. Pattern 1.3: Foundation via MBO/Spinoff

Four interviewees (Companies B, C, F, and H) talked about having gone through a foundation via MBO (Companies B and H) or Spinoff (Companies C and F). Plus, we also know (from the background analysis that was previously conducted) that company G was born from a spin-off operation.

Company B's decision maker stated that, initially, his company *"was acquired via an MBO"*, concluding*: "our growth has always been continuous."* (Company B).

Similarly, Company H's decision maker said that Company H *"was born from an MBO, and it started with about 100 workers. During the last 6 years, on average, it grew 15% per year, organically. Today, we have 300 employees, so we more than doubled the size of the company."* (Company H).

Regarding Company C, it was *"founded in 2009 as a spinoff of a Portuguese parent company (...), without having any products."* (Company C).

Company F's decision maker explained how his company *was also "born of a spinoff, as a software company that sells licenses, instead of services, for the financial markets sector – namely in the omnichannel area of banking - like the mobile internet."* (Company F).

4.2.1.2. RQ1 – 2: Company's expected growth behavior

To continue our quest into RQ1, the eight interviewees were asked about their expectations on their firms' future growth behavior.

The answers ended up addressing the topics of innovation, company's track record, open to M&A activity, national focus, the importance of the team, specialization and change of focus, optimism, internationalization, and the impact of public incentives.

The three different patterns indicated below were observed in the answers.

4.2.1.2.1. Pattern 2.1: Specialization / change of focus

Three interviewees (Companies D, F, and G) mentioned the topic of specialization / change of focus.

Company D's decision maker said that their *"solution is relatively generic",* but that they *"want to make it more and more vertical, thus, one of the evolutions"* they will do, is *"most likely in the product area, focusing on specialization."* (Company D).

The vision of Company G was similar to the one of Company D, as their main shareholder also wants to increase focus, as explained by their executive during the interview: *"The future involves a short-term sale of the offset printing part of the business, as the current majority shareholder's intention is to focus in our digital* area." (Company G).

On the other hand, Company F's decision maker mentioned his firm's intentions of focusing on changing the business model into a more recurring revenue-based one:

> *"We want to focus on a subscription perspective. We are changing the way we license and attract new customers to this model, as it is more recurrent in terms of revenue, and it is also easier for customers to understand what they are paying for."* (Company F).

4.2.1.2.2. Pattern 2.2: (Inter)national focus

Three interviewees (Companies B, F, and G) addressed the issue of either focusing on internationalization or in the domestic market.

Company B's decision maker expressed his will to consolidate the national market, investing internally in order to solidify his presence domestically:

> *"We will keep growing and want to boost our country as much as possible. Over the next 3 to 4 years, we plan to invest another 8 to 10 million euros here, to further strengthen what we have, trying to do as much as possible from Portugal."* (Company B).

Company B's objectives are in line with the ones shared by Company G's decision maker, who stated:

> *"(Although) we expect to continue with our double-digit (annual) growth, there will inevitably be changes, such as the increase in the price of raw materials – which will increase the cost of production. It forces us to take other options such as services providing. First, because the customer does not perceive value in a commodity. Second, because the Blue Ocean Theory*[4] *doesn't apply much to the traditional printing industry, where the company started, because, in terms of offset printing, we stay in the "blood" (red ocean), and we can't move away to the calmer sea, as our competitors tend to assume margin losses, by reducing their selling price in the market. Therefore, in this part of our company's industry, we are in the Red Ocean, competing in existing markets and not creating new ones, with high transportation costs, combined with the scarcity of suppliers, making internationalization difficult."* (Company G).

Companies B and G's domestic focus differs from Company F's will to continue addressing outer markets, as expressed by Company F's decision maker in the interview:

[4] The Blue Ocean Theory states that the best way to overcome competitors is not by trying to beat them directly in their own markets, but, instead, to look for markets that are yet to be explored (Kim and Mauborgne, 2005).

"From a growth perspective, our plan is to continue to grow in new markets outside Portugal. We made a bet for the coming years, which is to enter the US market, where there are several very large clients (banks) with a much higher market value than in any other country." (Company F).

4.2.1.2.3. Pattern 2.3: Openness to M&A activity

Three interviewed companies (namely A, B, and G) showed willingness to be involved in M&A activities in the future.

The most enthusiastic was Company's A decision maker, who stated:

"We want to apply the leadership we have managed to achieve, as well as the experience we gained in the markets we operate, to the acquisitions that we will be making." (Company A).

Company B's interviewee is also considering acquiring a firm in the future:

"We are thinking about if it is worth buying a company in France or Germany, so that we can continue to grow. Creating a company from scratch is difficult. And continuing to grow from Portugal will be difficult as well, so we may have to go to Central Europe." (Company B).

Even Company G's intentions of keep growing their business organically don't exclude the possibility for M&A activity – in this case, for being acquired:

"For the future, we plan on growing organically, but if we are not able to grow alone, we will have to partner with someone better than us, and gain scale. Today we see that a lot: smaller companies partnering with larger companies. Firms in our sector that had the ability to be attractive to large multinationals, probably are in a better position to discuss prices and increase margins, as they get a bigger structure behind them." (Company G).

4.2.1.3. RQ1 – 3: Growth mode: Organic and inorganic growth

The eight interviewees were then asked: *"Assuming that this may have varied between different periods, how would you describe the type of growth followed by your company over the years?"*.

The answers revealed different backgrounds regarding past, or current, M&A activity.
There were five companies describing their periods of inorganic growth (Companies A, B, D, E, and G), while the three others revealed pure organic growth paths only (Companies C, F, and H).

The two different patterns below were observed in the interviewees' answers.

4.2.1.3.1. Pattern 3.1: Inorganic growth

Five interviewees (Companies A, B, D, E, and G) described their experience of going through inorganic growth periods.

Though Company A's growth was organic until 2022, the firm turned to inorganic growth after being acquired in 2020 by a larger group. Since then, Company A already acquired three different targets, namely one in Portugal and two in Spain:

> *"Our history has been one of organic growth. However, in the last twenty-four months, we have made three acquisitions: one in Portugal and two in Spain. At the same time, the company was integrated into an international group that also has other business areas - all related to the aspect of generating business opportunities, namely also in the construction sector, in addition to the public sector, in which Company A is a global leader in terms of the countries where it operates and the public entities that use its technology."* (Company A).

Company B's growth was also previously organic, until the year 2016.

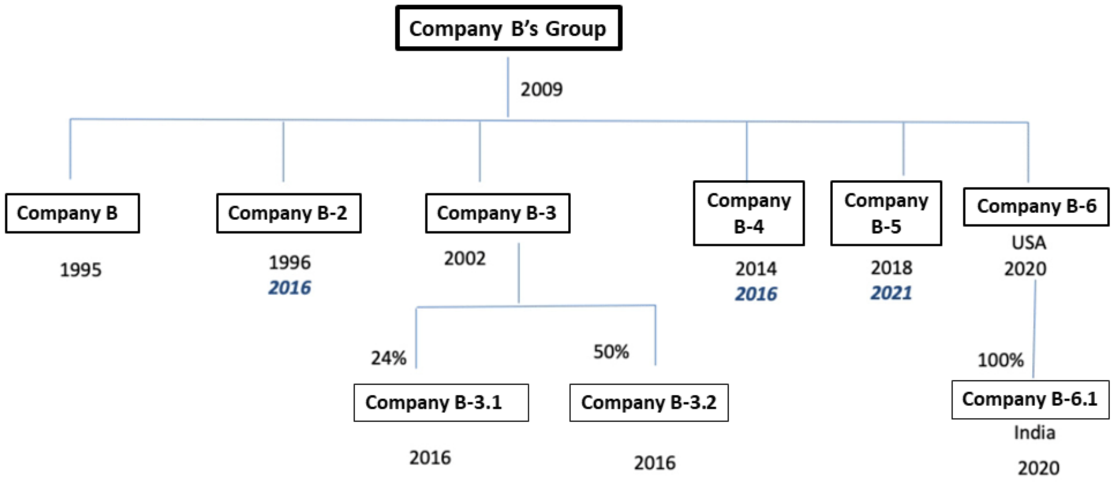

Figure 4.3 - Structure of Company B's Group

Since 2016, the firm has performed a variety of acquisitions, namely the ones of Company B-2 (2016), Company B-4 (2016), and Company B-5 (2021):

> *"In 2016, we heard about a startup from the north of Portugal (Company B-4), that had between one and two years of operation, for which things were not going well, and which was even thinking of closing. We decided to invest in this company and, today, it is solid, it has already been invested by foreign companies and a Portuguese fund and, in 2022, it will generate more revenue than Company B (the parent company). Also, last week they signed a contract with Verison for over 180 million euros for production, over 5 years. Also in 2016, Company B-2 – which is now part of Company B's Group – went through a serious crisis and was also at risk of closing. At the time it had sixty workers. My partners and I thought we shouldn't let the company disappear, as we were interested in having another electronics company and now, we have two companies doing the same thing – Company B and Company B-2. One (Company B-2) does mass production and the other (Company B) is more flexible. Now, Company B-2 already has almost 200 people, things are going well, we invested a lot of money there – around 8 million euros in the first year – to create a clean room, create our own lines, bet a lot on the car industry. And things are going very well. (…) Later, there was a group of people who worked at Novabase. Novabase had a company that was TV-related, which they sold to a German firm, which was later sold to a Russian company and, this Russian company, decided to close all the firms they had in Europe - and that group of workers, who had worked at Novabase, would become unemployed. Of that group, there were four people who were very good and who had been working together for fifteen years. So, I proposed to them to create a cost center within*

Company B-3 and they accepted and came. We would help with market research, and, at the end of the year, we would do the math: If the bills were worth it, we would invest – and that's how it happened. We started in March, and, in December, we invested in the company – the Company B-5, which only works on embedded software – based in Lisbon, as all the partners were from Lisbon. Currently, and due to market vicissitudes, Company B already owns 55% of Company B-5." (Company B).

Company D's growth was always organic, except for the year of 2015, in which the firm pursued an inorganic quest, by acquiring a British tech firm company (*i.e.*, Company D-2):

"It was a startup with a very interesting solution, which had even won some Fintech awards. There were just two employees and a few partners, but all the development they did, they did it using external companies – and we were also one of those companies, having done all its analytical component. When they ran out of funding, we thought it was a good acquisition opportunity – which later turned out to be not. But in the end, it's part of the (learning) process..." (Company D).

At Company E, even though 100% of its national growth is organic (i.e., at the level of the Portuguese firm), there is huge M&A activity at the global level (i.e., at the level of its parent company – Company E-*Global*):

"Our growth in the domestic market has been exclusively organic, in a sustained way and without major peaks. Such growth has been evident since 2001 – the year in which the company was 100% acquired by a Swedish multinational listed on the Stockholm Stock Exchange. Since then, there has been a consolidated growth, organically based on the growth of the national market and on the ability to generate new sources of business within the clipping services' area (…). The acquisitions that are made happen at the level of the group (Company E-Global). For example, a major player in information distribution was acquired, and, being a global company, its acquisition necessarily influenced the national market, because it gave us more potential by allowing us to have more capacity to open our range of services, as well as some contracts that may exist in our market and which are also leveraged from the Portuguese operation." (Company E).

Finally, Company G grew inorganically between 2015 and 2010, and between 2015 and 2016, as explained by its executive:

> *"In historical terms, between 2015 and 2016, we acquired a company that generated greater growth through its M&A operation and, if we go back a little further in history, namely between 2005 and 2010, we did acquire some other companies."* (Company G).

4.2.1.3.2. Pattern 3.2: Organic growth (only)

Three interviewees (Companies C, F, and H) described their experience with organic growth. Since their foundation, these companies have grown solely via organic mode.

Company C has always been keen to grow organically, even after being fully acquired in 2018 by a major hardware multinational corporation:

> *"Our growth was always 100% organic, as we never acquired other companies. (...) In 2018, the company was fully acquired by a Singapore-based corporation that is listed on the Hong Kong stock exchange and is currently a world leader in the manufacture of electronics and semiconductor equipment. The acquirer was very strong on hardware and wanted to enhance themselves by purchasing a software company. Today, the buyer is a very strong partner, offering us solidity and a name much greater than those we had until then. It does not represent the typical figure of a shareholder, but, instead, the one of a strategic partner who puts us in contact with their own customers, who gives us advice and any support we need. (...) We continue to do our organic development, although now with the support of this multinational. We do not plan to acquire other companies. We are building a network of partners, which is very important because we are a product company, a software development company, and the software implementation part is a lot of work because many specialized resources are needed."* (Company C).

Company F never tried M&A activity as well, as stated by its decision maker: *"Our growth has always been organic. We never acquired any entity."* (Company F).

Company H also expressed its taste for organic growth:

> *"An important strategic vector that is part of our DNA, is the fact that we are a company focused on a partner that is the global leader (Microsoft). (...) Also, we rely on the strategic partnership of the company that gave rise to our company, with whom we maintained excellent relations.*

(…) During the last 6 years, on average, we grew 15% per year, fully organically." (Company H).

4.2.1.4. RQ1 – 4: Growth mode: Motivations & decision-making

Next, the interviewees were asked: *"What motivated your company's decision-makers to opt for this/these type(s) of growth(s)?"*.

The obtained answers revealed different reasoning and motivations behind growth mode's decisions.

Their answers ended up addressing the following motives:

1. Country's culture and size;
2. Investors' financial capacity;
3. Time, cost, and risk;
4. Ownership;
5. Fast growth;
6. Financial slack;
7. Culture;
8. Complementarity;
9. Target team's know how;
10. Opportunity;
11. Preference for certainty regarding growth mode;
12. An alternative to organic growth (besides the inorganic path);
13. No need to sidetrack new product development;
14. Consolidation;
15. Diversification;
16. Lack of suitable targets;
17. Management team's experience.

After analyzing the obtained answers, three different (major) patterns were observed.

4.2.1.4.1. Pattern 4.1: Target's complementarity

Three interviewees (Companies B, C, and D) pointed out the importance of the complementarity of the targets to justify their motivation in opting for inorganic growth.

Company B said mentioned complementarity as one of the main reasons that made them acquire their last target companies:

> *"It was because of complementarity. That is, if I have a company here that works in the development area, they will have to do production someday. Then we can do the production – and that suits us too. In the case of Company B-2, it was the matching know-how they already had, combined with the fact that 60 people would get unemployment – which was difficult for us to hear. Today, for example, we are thinking about whether it is worth buying a complementary company in France or Germany, so that we can continue to grow."* (Company B)

Like Company B, Company C also mentioned the complementarity issue, but, instead, it mentioned the lack of complementarity, in order to justify its motivation towards growing organically, instead of acquiring any targets:

> *"It is quite complicated to find a company with which we can have a complementary fit, which would have to have a complementary product - a product that we were not able to idealize well." (Company C).*

Also in line with Company C, and despite the given less positive outcome, Company D's interviewee shared:

> *"In 2015, we acquired a company that had a very interesting solution, which had even won some Fintech awards. They did all their development via external companies - like ours - and we did their analytical part. When they ran out of funding, we thought it was a good acquisition opportunity. It had a very innovative complementary solution, with great traction and with a lot of interest from the client's point of view. But, maybe, too much ahead of time. It had to do with loyalty, it involved several partners, and the process of selling innovation is not always easy. We even sold a project in Germany and did some proofs of concept, but it never came to fruition, so we ended up making a stop loss and divesting."* (Company D).

4.2.1.4.2. Pattern 4.2: Preference for growth mode’s certainty

Three interviewees (Companies C, D, and E) mentioned the importance of continuing to bet in an already proved growth mode (*i.e.*, organic growth) that they know has been providing a constant, positive, and sustainable outcome over the last years – instead of risking and trying a new approach based on inorganic growth.

Company C’s interviewee stated:

> *“Even at the product level, there are competitors of ours who, in fact, grew by acquiring other companies, but then the final product ends up working a bit like a “patchwork quilt”, with different interfaces and philosophies. When we go to approach the customer, he prefers a more consistent alternative, which makes sense from beginning to end. We have never felt that the margin for organic growth was running out. In other words, inorganic growth is not something that we strategically seek, as we have always been successful through organic growth.”* (Company C).

In agreement with Company C’s perspective, Company E’s interviewee said that:

> *“At the Portuguese company’s level, the main reason that makes us want to grow organically is related with our history of more than 30 years of successful organic growth. We are a company that used to make press clippings and was able to transform itself into a Media Intelligence company, all by itself. Today it works with the largest multinational Portuguese companies, and with the main governmental organizations, from the Portuguese Government to the main public tourism entity in the country (Turismo de Portugal). This means we have around 80% of the national market. The remaining 20% end up being that “margin of fun" for the commercial area – and we are happy to keep some flame alive. We have always been market leaders, with the ability lead organically and via sustained growth.”* (Company E).

Both ideas are in line with Company D’s, whose interviewee stated: *“(…) we’ve always grew organically with success, and that's what we are and what we will be doing.”* (Company D) – thus believing in the same *“if it works, why change it?”* perspective.

4.2.1.4.3. Pattern 4.3: Lack of suitable targets

Three interviewees (Companies E, F, and G) referred to the importance of the lack of suitable M&A targets available, as an inhibitor for the inorganic growth mode.

Company E's executive stated:

> *"In Portugal, it would be hard to opt for the inorganic route, because the options in the market for public relations tools and software were not attractive enough to justify investing in inorganic growth."* (Company E).

The above quote is in line with the answer from Company F's decision maker, who said that:

> *"Even in other countries, our presence is almost exclusively with commercial teams, made up of 3 or 4 people – so it makes no sense to be acquiring a company by just 3 or 4 people, because there are no representation companies of such a small size."* (Company F).

Finally, Company G's interviewee also pointed out the lack of suitable M&A targets as a motivation to opt for organic growth instead of the inorganic route, but highlighting the difficulties felt by the acquirers when it comes to discussing valuations with company owners:

> *"The acquisition multiple is a constraint for inorganic growth, because, many times, target companies' decision-makers give us multiples much higher than the comparable companies in the same industry – many times they are multiples of 10, 12, sometimes 14 times the EBITDA... Such multiples are an inhibitor for our company's acquisition policy, conditioning us (to organic growth). Also, many of the attractive companies are startups, so their valuation is complicated, as the traditional models look at the historical value, and, if there is no history, what should we look at? Evaluating a startup is an art and not a science. The owners of these companies often fail to evaluate their company rationally, doing it in an emotional way instead. It's complicated to talk to people who value their company by the money they've invested in the business so far."* (Company G).

4.2.2. RQ2: Digitalization and growth mode

In RQ2, we tried to answer the question: *"Considering the current global tendency for digitalization, how do decision makers of Portuguese midsize ICT companies plan on deciding their firms' growth mode (i.e., organically, or inorganically)?"*. The following chart summarizes the structure of RQ2:

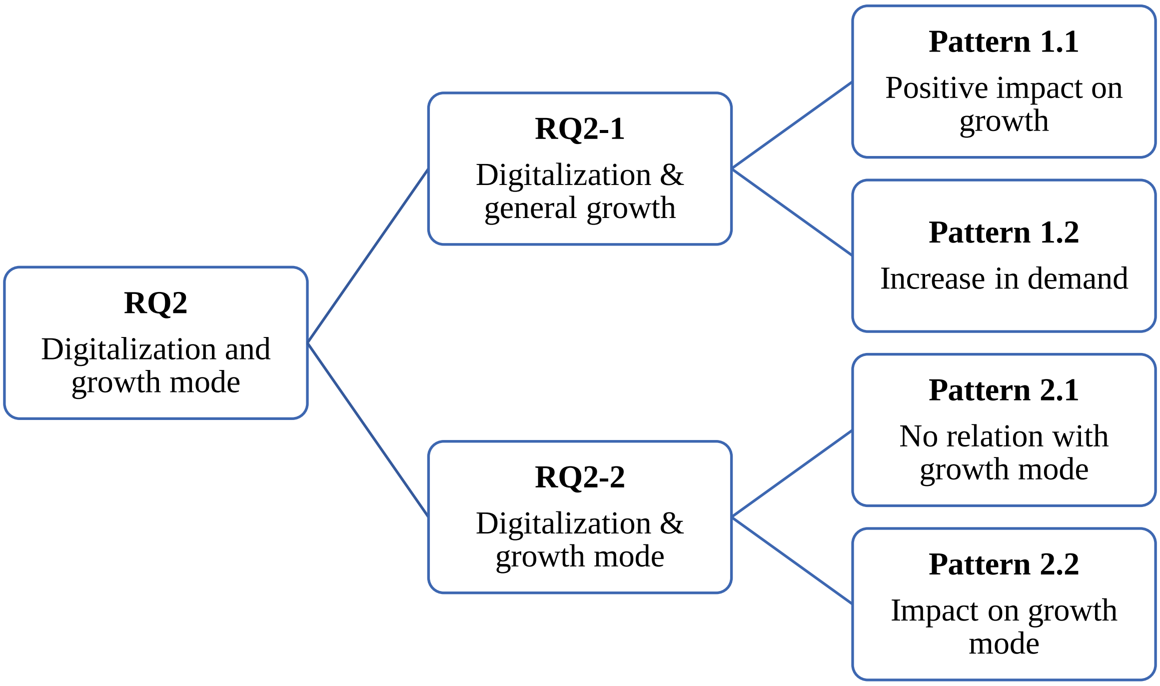

Figure 4.4 - RQ2's structure

4.2.2.1. RQ2 – 1: Digitalization & General Growth

Considering the current global trend towards digitalization, the interviewees were asked *"what influence has digitalization (or 'Digital Age') had"* on their *"company's overall growth"*.

After analyzing all answers, the following two patterns were observed.

4.2.2.1.1. Pattern 1.1: Positive impact on growth

All the eight companies revealed a positive relation between digitalization and each firm's growth.

For instance, Company A's decision maker described digitalization has having *"a positive impact on the company"*, as *"at this moment, non-digitalization represents a great risk of loss of competitiveness and, even at the level of talent retention"* (Company A). He also believes that the lack of digitalization may be related with a pejorative innovation and human resources' perception: *"Today, non-digitalization is associated with accommodated companies, where talent is probably also accommodated."* (Company A).

For Company F, this issue is even related with their own identity as a business:

> *"Our DNA lives on digitalization, namely through the digital transformation of banks. A big part of our business is digital and omnichannel transformation - with every customer of every financial institution having a platform to manage all interactions with the bank…"* (Company F).

Company G even puts digitalization at the core of next year's strategic planning:

> "We have been increasingly investing in the part of our digital business. Our sales mix has been increasingly diversified through the digital component, which generates a better gross margin and a more leveraged VCM[5], because it has no prime cost. So, we have already planned for next year's budget: this interest and this strategic objective of increasingly changing the mindset for our digital business. What we have been doing, for example, is hiring salespeople who already have this mindset from other companies in our segment." *(Company G).*

4.2.2.1.2. Pattern 1.2: Increase in demand

Half of the analyzed firms manifested an increase in demand/business activity caused by digitalization and its subsequent effects – namely, companies C, D, E, and H.

Company C's interviewee stated that the pandemic generated *"more interest"* in their *"type of products"* (Company C).

[5] VCM (Variable Contribution Margin) = Net Sales – Variable Costs.

The interviewed decision maker of Company D also agreed with the idea, stating that *"Demand has increased - which ended up helping growth"*, even though that *"there is still a long way to go, with a lot of room to grow in this sector".* (Company D).

Company E's executive answered:

> *"It has huge influence. Our genesis is information, and, in recent years, from one year to the next, the information that is generated more than doubles. In fact, our activity has always been supported by information, so, the greater the digitalization, the greater relevance it gives to our service, thus increasing demand."* (Company E).

Last, Company H's decision maker was also in line with the above, having stated:

> *"Digitalization increases the demand for our services. We are aware that the world is increasingly digital, and that the impact of digitalization is tremendous. We have noticed a very large trend towards digitalization in all areas of the consulting industry, as digital is in all sectors and its impact on our growth is enormous."* (Company H).

4.2.2.2. RQ2 – 2: Digitalization & Growth mode

Following the previous question, and in order to help understanding if there is a relation between digitalization and the choice of a company's growth mode, the interviewees were asked: *"How has digitalization (or "Digital Age") influenced the number of acquisitions made by your company?".*

Half (four) of the interviewed companies said digitalization did not have any influence over the number of made, three stated it had a positive impact, and only one considered it had a negative impact.

4.2.2.2.1. Pattern 2.1: No relation with growth mode

Companies B, C, F, and G's interviewees didn't find any relation between digitalization and the number of acquired firms.

For instance, Company B’s decision maker even went further and explained:

> *“The idea was not to acquire companies because digitalization was happening. Instead, we always tried to include new technologies in our companies, and the digitalization of processes is something that is on the order of the day, and that must be done.”* (Company B)

4.2.2.2.2. Pattern 2.2: Impact on growth mode

Companies A, E, and H described a positive relation between digitalization and the number of acquisitions made.

Company A, that has been growing inorganically since 2020 (the first pandemic’s year), described digitalization has having a positive impact on the number of acquisitions:

> *“I think that the greater digitalization is, the better a company is positioned to consolidate and buy other companies. We try to take advantage of our leadership and advantage of having developed some products and solutions, having gained go-to-market experience - that some competitors haven’t implemented yet. And, as we carry out this consolidation process, we are, on the one hand, growing and gaining time to enter these markets – thus building a consolidation platform. So, digitalization puts us in a different position to create value in the M&A process, because network businesses, like the one in which the company operates, are businesses where scale is a very important factor, because of the value it adds to those who are in that network and because it makes business difficult to replicate. Network businesses tend to create “winner takes all”' ecosystems – and that is why there is, for example, only one Amazon, or only one Alibaba, and, in Portugal, the dynamic is the same.”* (Company A).

Companies E, that has been growing organically at the national level since its foundation, stated:

> *“It had a huge influence, as it allowed us to have more services available and keep growing organically, acquiring more and more clients, and differentiating our portfolio of services by the level of need of each client. Thus, reaffirming our option for organic growth.”* (Company E).

Last, Company H – that, like Company E, always grew organically as well – said:

“Digitalization increases the demand for our services, thus reinforcing our wish of keep following our organic growth path, without acquiring other companies.” (Company H).

4.2.3. RQ3: COVID-19 pandemic and growth mode

In RQ3, we tried to answer the question: *“Considering the COVID-19 pandemic, how do decision makers of Portuguese midsize ICT companies plan on deciding their firms’ growth mode (i.e., organically, or inorganically)?”.* The following chart summarizes the structure of RQ3:

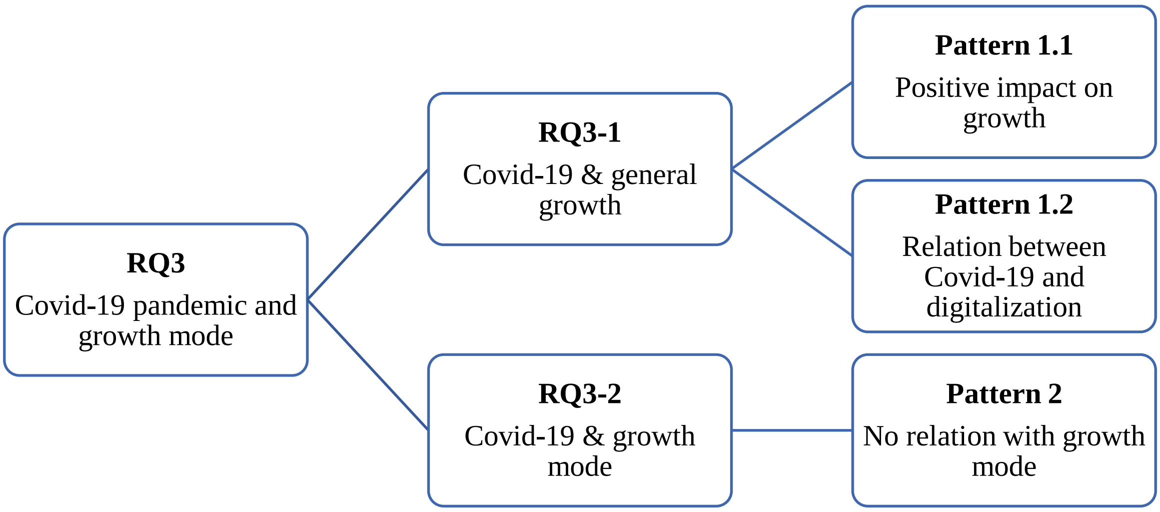

Figure 4.5 - RQ3's structure

4.2.3.1. RQ3 – 1: COVID-19 & General Growth

Considering the profound impact that the economic crisis generated by the COVID-19 pandemic had on the most varied sectors of society, the interviewees were asked: *“In general, how did the pandemic crisis affect the growth of your company?”*.

Five companies (A, B, C, F, and H) spoke about COVID-19’s positive impact on growth, two (D and G) described a neutral relation, and one (Company E) said it had impacted their growth negatively.

After analyzing all answers, two main patterns were observed.

4.2.3.1.1. Pattern 1.1: Positive impact on growth

Despite the general worldwide negative impact the pandemic had on the global economy, five interviewed companies – namely, companies A, B, C, F, and H – identified a positive impact of the pandemic on their own growth.

According to Company B's interviewee, the pandemic crisis made their clients opt for their services, abandoning some of their Asian competitors:

> *"We had a lot of potential customers and some current customers who, during the pandemic, decided to leave China. They were mainly Israelis, Germans, and French, who told us "China?! Never!"* (Company B).

Company C's representative stated: *"It had a positive effect. It generated additional demand from our customers due to our type of products."* (Company C).

The interviewee from Company F said: *"COVID-19 has brought more users to banks – which, being more skeptical, were forced to use (our) digital platforms."* (Company F).

Companies A and H's executives also expressed opinions in line with the ones above – "*It has had* a positive impact *on the growth of the company"*, stated Company A's interviewee.

4.2.3.1.2. Pattern 1.2: Relation between COVID-19 and digitalization

Seven interviewed companies (A, C, D, E, F, G, and H) have linked the COVID-19 pandemic, and its subsequent effects, with digitalization.

Company A's decision maker said: *"The pandemic has accelerated our digital literacy and technology adoption by at least five years (...)"* (Company A).

Company C's interviewee stated:

"(Because of the pandemic) Companies felt a greater need not to depend so much on manual functions, to be able to manage themselves remotely, to be able to automate part of their processes - and that is what we do." (Company C).

In line with these thoughts, Company D's executive answered:

> *"(...) people began to realize that they had to change several things. We have done many projects related to eCommerce for companies of retail and distribution who started wanting different things, because there was a great evolution in these sectors. Companies, in general, realized that they were not as prepared for the digital age as they thought, and the pandemic came to accelerate this process. Demand has increased, and now, there are more projects and more people looking to do things smart – and that is what we do."* (Company D).

Company E's interviewee stated:

> *"COVID-19 had a negative impact on growth (...), but it was partly compensated by the new dependence on the media by decision-makers and consumers, combined with an exponential increase in technology and dependence between information and technology. The dependence on information has not stopped and even customers who were most affected by the crisis maintained the need to be attentive to the market."* (Company E).

Similarly, and for Company F's executive:

> *"These phenomena made financial institutions certain that their path must the one of digitalization. They forced a series of issues that people were afraid of, like sending money without being over the counter, for example." (Company F).*

For Company G's decision maker, such relation, between the pandemic and digitalization, has increased the list of recruitment possibilities, namely due to remote work's culture:

> *"The pandemic is a challenge for all of us (...) but it is also a strength, because of the opportunity to grow in the digital area. The pandemic has turned people towards teleworking, namely programmers and people from the development team, facing the digital area, which*

creates an opportunity: we will be able to look for new partnerships and new FTEs in a global market, for example, in India." (Company G).

Company H's interviewee said that the pandemic worked both as a catalyst and as a globalizer for the phenomenon of digitalization:

"The pandemic accelerated digitalization on the one hand and globalized it on the other. First, some areas that were more hesitant about digitalization were forced to do it overnight – or they would have to close their businesses - thus, the pandemic further accelerated the investment in digital caused by digitalization. Second, is that the pandemic has globalized digitalization via the labor market - we have a team in Spain and another in Madeira that work as if they were all together - and via the relationship with customers, with todays' barriers being more tenuous." (Company H).

4.2.3.2. RQ3 – 2: COVID-19 & Growth mode

Following the previous question, and in order to help understanding if there is a relation between the COVID-19 and the choice of a company's growth mode, the interviewees were asked: *"How did the Pandemic affect the number of acquisitions made by your company so far?*

4.2.3.2.1. Pattern 2: No relation with growth mode

None of the interviewed companies was able to identify nor establish a relation between the pandemic crisis (and its effects), and the number of acquisitions made.

By way of example, Company B's executive stated:

"Although, in business terms, last year was our best year ever and this year will be even better, in the last 3 years we have not acquired capital from any company - so it was not the pandemic that led us to acquiring others. It has never been our policy to take advantage of others' problems and buy companies because they are going through crisis." (Company B).

Also, and for instance, Company C's decision similarly maker said: ***"****COVID-19 has not affected our M&A policy. At most, it may have affected our partner network policy, as it was something in which we reinforced our investment."* (Company C).

4.2.4. RQ4: Organizational ambidexterity and growth mode

In RQ4, we tried to answer the question: *"For the Portuguese midsize ICT firms, how is the choice of their growth mode related with their attempt of reaching organizational ambidexterity?".* The following chart summarizes the structure of RQ4:

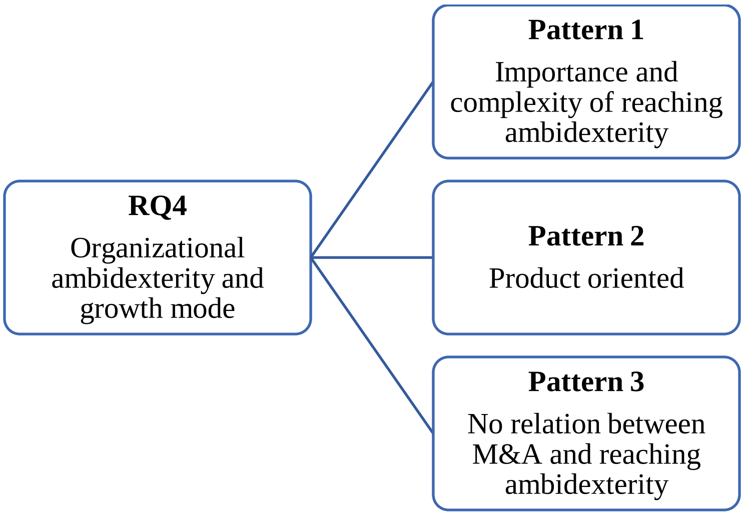

Figure 4.6 - RQ4's structure

We asked the companies about how they perceived the balance between exploring new opportunities and exploiting existing ones (for some shorter answers, we've added a follow-up question of how they analyzed possible changes to the life cycle of their products).

The interviewees' answers addressed the topics of:

1. Importance and complexity of reaching ambidexterity;
2. Commoditization / physical product's oriented;
3. Product vs service's mindset;
4. Events, conferences and fairs;
5. No relation between M&A and reaching ambidexterity.

The three main patterns below were observed in the obtained answers.

4.2.4.1. Pattern 1: Importance and complexity of reaching ambidexterity

All the interviewed companies (A, B, C, D, E, F, G, and H) identified the importance and complexity of being able to balance an efficient management of today's business with the ability to coping with tomorrow's changing demand.

According to Company A's decision maker, it is key not to enter in the so-called innovation schizophrenia:

> *"We must create solutions that will generate the new revenue streams of tomorrow, and, for that to happen, a good balance must be maintained between exploration and exploitation of resources, because, if we live permanently trying to bring new things in, we end up not taking the value we can get from the products we have. If we live in a permanent schizophrenia of indiscriminately launching new things – small products, a lot of new stuff for hyper-niches – we will have products that are less consolidated, less relevant in the market, with less scale and less profitability. Therefore, I think it is necessary to keep this balance in mind. In other words, to think about innovation in the long term, and try to never neglect the consolidation of the current business."* (Company A).

Company B's executive showed prudence about the decisions to enter in every available opportunity for innovation:

> *"Every day there are new opportunities to explore. When something new comes up every week, off we go to study it, but not in depth, because we don't have time for everything – we have around 150 customers and over 600 products a year, already - but we like to develop products. Therefore, the balance (of exploration and exploitation) is made by the opportunity, while obviously looking at the monetary and financial part, but, at the same time, the pleasure of contributing to do new things. For example, in the environmental segment, everything is yet to be done."* (Company B)

Company C's interviewee, on the other hand, focused his answer on the time-to-market and product's sphere:

"We want to address more functionalities. We want to focus and stay on our core of producing manufacturing software, but there are peripheral things – like automation, 3D printing or planning – that are functional areas for us, and that we can get into. We have very automated processes, and the current trend is to have shorter release cycles. We currently make between 3 and 4 releases a year and, possibly, we will be able to accelerate the pace of development, which is a trend that we will not be able to escape from." (Company C).

Company D gives importance to in-house synergies and to their roadmap in order to help the herculean task of balancing exploration and exploitation:

"It is something very difficult to do, almost as if we had two professions instead of one. There are some synergies between different units. Sometimes, having people who are idle or with less work in other units, we can ask them to do R&D – and they like it. In the same way, the kind of skills that we needed to develop this product can also be capitalized on in other types of projects. Therefore, we also ended up taking advantage of having in-house synergies. We are in an area where evolution is constant, technology is always growing, and it is not possible to make a product that we can consider definitively finished. Therefore, we have a roadmap with new features, with the adoption of new architectures and technologies, easier to scale and to integrate with other features, with the inclusion of more intelligence such as conversational boats." (Company D).

Company E's executive explained the importance of conciliating the Group's technology with their Portuguese clients' needs, in order to balance exploration and exploitation:

"In the globalized world, there is an inherent challenge to our growth: reconciling the local desire to innovate and create highly customized solutions for our clients, with what is a brutal dynamic for innovation that emerges from our Group – which has its own mechanisms of product development and innovation, with resources incomparable to ours here in Portugal. So, our challenge is to bridge the gap between the use and transition from local tools to global ones, with due regional adaptation, while maximizing the potential of technology development that comes from abroad, using our capacity to intervene in our clients. This is our big challenge, and we will probably stop developing many of the things we do for the local market, because we have a centralized development, with much greater agility and an incomparable time to market. But we continue receiving requests with specific needs from some national clients. So,

our mission here is to do this immersion of these two worlds and try to reconcile the best that is being done in terms of technology.” (Company E).

The decision maker from Company F mentioned the importance of a good internal division to achieve ambidexterity:

”We balance exploration and exploitation through a huge internal division. On the product side, we have three teams: the first team is related to the maintenance of what already exists, that is, with the consistency of what exists with small changes at the customer level. Then we have a second roadmap team that deals with the already decided product improvements. Finally, we have a smaller team, related to market and technology trends, from which we bring a set of innovations and ideas, which we then test in different environments and in different ways. Of course, not everything that comes out of this third team makes it to production, as we're not going to put all these innovations in the product roadmap just because we think it's a good innovation - we're prototyping, we're listening to the market within the customers we already have and, by perceiving their feedback, we decide if we should then produce and include them in the roadmap product.” (Company F).

The ideas above are all in line with Company G’s vision:

“By not neglecting what we already have, while investing the internal development of our skills, we look outside and try to find new opportunities for our firm.” (Company G).

Last but not least, Company H’s decision maker emphasized the importance of their *Digital Lab* in order to help balancing exploration and exploitation:

“We have a team called Digital Lab, that is constantly identifying and exploring new trends and figuring out how we can apply them to both our service and customers teams. It also works as an internal accelerator to scale the innovation of the things we do. This department looks at a given topic and says that it is necessary to accelerate and train new people to bring such a topic to the market. But the opportunity may also arise from there to a point in which we end up getting a new product/solution.” (Company H).

4.2.4.2. Pattern 2: Product oriented

Two of the interviewed companies (A, and C) identified their intentions to continue strengthening their orientation towards product-oriented solutions, in order to reach ambidexterity.

Company A’s decision maker stated:

> *“We seek to have a participative product management policy, by adopting open innovation practices and making our roadmap known to our customers in a hands-on approach. Although I do not anticipate disruptions to our product creation and launch processes, I see as natural that, as time goes by, what we offer becomes commoditized and standard.”* (Company A).

Also in line with Company A, Company C’s executive answered:

> *“Above all, we want to focus and be a product company - like SAP is, for instance. A trend that we will have to embrace is the improvement of our offer on the cloud side, as our software runs a lot on-prem, and we already have some customers who ask us for cloud-based solutions - so, this will be an area that we can't escape, for sure.”* (Company C).

On the other hand, Company G’s executive does believe that his product must get digitalized, in order to keep up with the times:

> *“In the short term, the constant increase in production costs tends to force a change in vision and strategic objectives regarding commodity products. In other words, we tend to avoid investing in everything that is a physical product, thus investing more in the digital component instead. Basically, letting the existing physical products follow their normal path, while investing in the digital part - making it grow, organically, or even through investment with other companies that also want to grow with us.”* (Company G).

4.2.4.3. Pattern 3: No relation between M&A and reaching ambidexterity

None of the interviewed companies identified nor established any given relation between M&A activity, and balancing exploration with exploitation. None of the interviewees mentioned topics like growth mode, acquisitions, inorganic growth, or similar, as there was no obtained answer regarding these topics.

4.3. Discussion

In this section we analyze the results that were obtained and presented in the previous one, under the light of the findings from the authors covered in the Literature Review and summarized in the Research Design's chapters. By doing a critical comparison and analysis of this study's findings, we intend to shed light on the proposed research questions previously identified.

RQ1

Before addressing the first research question (*i.e., "What internal motivations have driven the decision making of Portuguese midsize ICT companies when it comes to opting for either organic or inorganic growth?"*), we analyzed the overview of the companies' general growth.

Interviewees mentioned the topic of internationalization as a key to growth - thus showing their attention towards the organizational environment that surrounds their firms, as summarized by Grant (2010) - as well as the issue of the changes in their ownership as being an important growth catalyst, as well as their foundation via MBO or Spinoff - as stepping stones for success.

The changes in ownership were described as having generated new business opportunities, improved market awareness due to the acquirer's well-known status, and enabled the existence of a considerable financial slack. As already seen in the literature – *e.g.,* in Morozini & Martin (2013) – companies with financial slack are more prone to grow inorganically. On the other hand, the fact that a representative percentage of the analyzed firms has been founded by either an MBO or via a Spinoff, is a clear evidence of the founders/decision-makers capacity to establish strategic partnerships and alliances, as seen in the literature (Badaracco, 1991; Chi, 2000; Grant, 2010).

Then, we explored the companies' expectations regarding their future general growth behavior, with the interviewees expressing huge will for (changing) focus or specialization, as a plan for their next years of activity, thus showing a persistent assessment of their internal resources and capabilities (Grant, 2010). The firms have also put great importance either on their national or international focus – regarding the sectors in which they operate – displaying great concern towards corporate strategy's key topics of decision making *("where to compete")*, as already covered by Piskorski (2005). Last, the openness to M&A activity was also present in the companies' vision for the next years of growth, thus showing internal availability towards the inorganic growth route (Hess and Kazanjian, 2006; Lockett *et al.*, 2011) – even in those cases that have been growing solely organically.

Regarding RQ1's main quest to understand what motivated the companies' decision-makers to opt for either organic or inorganic growth, the firms have mentioned the complementarity that was identified in their targets as one of the main reasons to pursue the inorganic growth path. Such complementarities' (or synergies') aspect was previously identified in the literature, as seen, for example, in Hoberg & Phillips (2010), as being a crucial factor in considering the M&A approach to growth. Thus, our findings validate the existent literature on that specific topic.

On the other hand, the companies that have been growing successfully in an organic way showed preference for their growth mode's certainty, in a way that they aren't susceptible to switch their growth mode for what they perceive to be a more uncertain alternative one (namely the inorganic approach, via M&A). This is mainly because we are talking about high performing firms – seen in the literature with Cyert & March (1963), when they explained that performance under certain levels would trigger the companies' appetite for M&A – and therefore there is an implicit agreement with the authors findings, in a way that these firms' success, thrive, and repetitive organic-based growth had probably led their decision-makers to not initiate M&A activity (with all the associated uncertainty a change of paths means – or could mean).

Finally, we came to face with decision makers pointing out the alleged lack of suitable M&A targets as the main reason to remain in the organic growth path. Either because there are apparently no good M&A targets in Portugal, or because there are no plausible targets anywhere in the world, or because of the (too) high EBITDA multiples used in valuating firms all over the world (specially tech firms), or even because of the subjectivity beyond the evaluation methods that usually favors the target companies' price assessment. Indeed, many of the interviewed companies have pointed out the lack of good targets as a reason to not pursue acquisitions. Such results weren't identified in the existent literature findings. This may be due to a possible lack of high-financial expertise on the side of some of the Portuguese companies, when compared with firms from other nationalities.

RQ2

Before exploring the second research question (*i.e., "Considering the current global tendency for digitalization, how do decision makers of Portuguese midsize ICT companies plan on deciding their firms' growth mode (i.e., organically, or inorganically)?")*, we analyzed the way decision makers perceived the impact of Digitalization (or *Digital Era*) on their firms' overall growth.

Companies have mentioned both a positive impact of digitalization in their overall growth, as well as an increase in demand, allegedly caused by the positive externalities of the Digitalization process. Some interviewees even believed that the lack of digitalization may be related to a negative innovation policy, thus associating such lack of digitalization with accommodated organizations (and, therefore, accommodated human resources). Others have linked Digitalization and Innovation with their own DNA as a firm, as it is something that must to be daily present in their organizations, in order to satisfy their own clients' needs.

Altogether, such findings are in line with these firms' sector (ICT) which is a sector clearly and intrinsically related to research, development, innovation, and digitalization.

Regarding RQ2's main quest to understand what the relation between Digitalization and the number of acquired targets through M&A activity is, half of the interviewed firms said digitalization did not have any influence over the number of acquisitions made, three stated it had a positive impact, and one considered it had a negative impact on the number of M&A operations performed. Of those that considered Digitalization to be a catalyst for acquisitions, it has been stated, for example, that the greater the level of digitalization is within organizations, the better they are positioned to possibly consolidate and buy other companies. On the other hand, Digitalization's impact on the consumers' preferences towards a more technological solution was identified by some of the organic growth firms, as being a key reason to remain in the organic growth path (*i.e.,* not acquiring any firms), as demand was growing, which also caused the available number of solutions within their portfolio to increase as well.

Therefore, we weren't capable of validating Albert et al.'s (2021) findings that the current global tendency for digitalization would impact companies' decision on growth mode by increasing/decreasing M&A deal speed/transaction costs, thus motivating the choice towards either organic or inorganic growth.

RQ3

Before focusing on the third research question (*i.e., "Considering the COVID-19 pandemic, how do decision makers of Portuguese midsize ICT companies plan on deciding their firms' growth mode (i.e., organically, or inorganically)?")*, we analyzed how decision makers perceived the impact of COVID-19 pandemic crisis on their firms' overall growth.

Companies did mention a (paradoxical?) positive impact of the pandemic on their overall growth levels – some because their clients were fleeing China, and others because the pandemic has supposedly generated increased demand.

Also, the interviewed companies related the COVID-19 pandemic, and its subsequent effects, with digitalization itself, stating that one phenomenon actually advanced the other. Some said that digital literacy was advanced by the pandemic, while others said that the pandemic called for the importance of automation; others believed that the pandemic made the end consumer become more tech savvy, in a way he/she started to demand for more (and better) technology, while others stated that the impact of Digitalization has been particularly noticeable in the labor market by increasing the workers preference towards remote-work, thus increasing the available supply of labor in the national market (as one could hire Indians or Scotts, to perform a remote job in Portugal).

Regarding RQ3's main pursuit to understand the relation between COVID-19 pandemic and the number of acquisitions performed by the interviewed companies, we weren't able to extract conclusions regarding such causality, as we weren't able to validate any of the two hypothesis – namely B.1 and B.2 - presented in the Research Design for RQ3. For instance, interviewees didn't mention any transactions being called off during the first year of the pandemic, nor suspended (and only resumed several months later), nor the diminishing mobility/physical contact as a cause for a decrease in the number of M&A operations achieved.

RQ4

Before addressing the fourth and last research question (*i.e.*, "*For the Portuguese midsize ICT firms, how is the choice of their growth mode related with their attempt of reaching organizational ambidexterity?*"), first, we analyzed how decision makers perceived the importance and complexity of reaching organizational ambidexterity, and then we tried to understand what they were planning regarding possible changes in their product orientation mindset.

All the interviewed companies identified the importance and complexity of being able to balance an efficient management of today's business with the ability of coping with tomorrow's changing demand, thus confirming the findings of the existent literature (Levinthal & March, 1993; Jansen et al., 2006; Nagji & Tuff, 2012; PwC, 2016). This shows the great awareness these firms' decision makers have towards the ever-changing organizational environment they are in, as well as a smart posture towards the uncertainty of the challenges their organizations may face. Some interviewees even described the task of trying to reach ambidexterity as a second full time job, given both the importance and the complexity that such a task implies.

Regarding the companies' perspective on possible changes in their product-life cycle and possible launching of new products, there was an interesting tendency for companies to wish to productize their solutions, by standardizing them and transforming them into more digital/product-oriented ones, instead of focusing on developing or introducing new services or lateral add-ons to already existent solutions – which may mean that the companies are more interested towards increasing their recurring (and anticipable) revenue streams and/or their scalability potential.

Regarding the main focus of RQ4 itself (*i.e.,* to find out if there was a relation between reaching ambidexterity and M&A activity), no conclusions could be done from the interviewees answers, as we were not able to either: confirm there was an deliberate and recurrent desire to gain full access to new and beneficial resources and knowledge (Harrison *et al.*, 1991; Vermeulen and Barkema, 2001; Kim and Finkelstein, 2009), nor to assure there was a deliberate and recurrent desire to improve control over important distribution channels and achieve economies of scale or scope (Tushman and O'Reilly, 2004).

All in all, we were able to conduct a constructive and efficient analysis of the findings achieved in this research, under the light of the authors that we studied in the Literature Review – whose findings were more carefully seen and comprised in the Research Design's chapter. We therefore believe the goals of this Discussion's chapter were achieved, as all the suggested topics and questions were covered in full detail.

5. Chapter 5

5.1. Conclusion

From the semi-structured interviews performed to decision makers, there was an attempt to understand what went well and what went wrong after the decisions made about growing organically or inorganically, and the respective associated motivations; as well as to explore the relation between COVID-19 pandemic and digitalization with choosing one's growth mode, and analyze it under the light shed by the literature review, while also bringing an additional topic to the debate, namely, a possibly existing relation between choosing one's growth path and trying to reach organizational ambidexterity (from a managerial decision-making perspective).

The interviewed decision makers manifested a crucial focus on internationalization as a key to growth, indicated changes in the firms' ownership to be key growth catalysts, and pointed out their companies' foundation via MBO or Spinoff as having been an important launch pad for current high growth rates. They also showed great awareness of topics related to both business strategy (namely the specialization/change of focus of their firms) and corporate strategy (to compete nationally or internationally, and through which organizational structure).

Regarding the study of the motivations that were behind the decisions of growing organically or inorganically (somewhere in time), we were able to confirm the literature's findings regarding the importance of targets' complementarity in justifying acquisitions, as well as the preference of decision makers towards the growth mode's certainty offered by the organic approach. On the other hand, and in terms of contributing to the body of knowledge and to the business world, we have added newfound knowledge to the literature, by identifying the lack of suitable targets (either for non-existence, decision makers' unawareness, or different views in company valuation assessment) as a key motivation behind the decision of growing organically.

When analyzing the relation between digitalization and the choice of one's growth mode, we could not infer any relation between growth mode and digitalization, as the results were various. Half of the interviewed firms said digitalization did not have any influence over the number of acquisitions made, three stated it had a positive impact, and one considered it had a negative impact on the number of M&A operations performed. Of those that considered Digitalization to be a catalyst for acquisitions, there were pointed out reasons related to the fact that, for example, the greater the digitalization is, the better a company is positioned to consolidate and buy other companies. On the other hand, Digitalization's impact on the consumers' preferences towards more technological solution was identified by some of the organic growth firms as being a key reason to remain in the organic growth path (*i.e.*, not acquiring any firms), as demand for their products grew even more effectively than before - which also caused the number of available solutions to increase withing their portfolios.

Still, the interviewed decision makers stated that digitalization has a positive impact on their firms' general growth, and that digitalization increased the market's demand for their products and/or services.

Regarding COVID-19 pandemic crisis, the interviewees told us about a positive impact the phenomenon has had on their firms' general growth, while additionally linking COVID-19 pandemic with the phenomenon of digitalization itself, believing that the pandemic ended up accelerating digitalization as a process and as a phenomenon.

As to the link between the COVID-19 pandemic and the choice of companies' growth mode, we weren't able to conclude any sort of relation between the two themes.

Finally, although there was an overwhelming knowledge of the importance and complexity that is associated with the topic of reaching ambidexterity, and though the interviewees expressed huge awareness towards the necessity to adapt, develop and evolve their product's approach, no relation between M&A and reaching ambidexterity was possible to be identified.

We believe this study helped to shed light on the topic of growth mode's decision, having additionally set up the basis for further investigations to be conducted on the topic, but also on the link between growth mode's decision and organizational ambidexterity applied to management and business administration.

5.2. Research limitations

The present study has potential limitations. The primary limitation is related to the generalization of the empirical results, even though this is a qualitative study, namely due to the sample size of the study, as eight interviews do not allow us to soundly generalize our findings. The second limitation concerns the limited access to information, as Portuguese companies usually do not disclose their M&A activity – not even to the public authorities, in many situations – which makes it very difficult for researchers to know which companies have been really growing solely organically, and which companies have not (and this may generate problematic sampling issues). Then, there may have been also some possible limitations regarding time constraints of the researchers, which may suggest the need for a future longitudinal study to answer this research problem. Also, the lack of previous research studies on the topic (namely, "Organic vs Inorganic Growth") is a serious concern, as prior research studies that are relevant to this study are very limited. Finally, there may have been conflicts arising from cultural bias and/or other personal issues, as the researcher had previously worked in advising M&A deals, thus possibly – although in an unplanned and unintentional way – it may have favored the idea of a preference towards the choice of the inorganic growth path over the organic one.

5.3. Perspectives for future research

Regarding our suggestions for future research, we believe that there is space for building upon the findings of this study. First, it may be feasible to consider the further study of the relation between the tendency of a company to grow either organically or inorganically with the strategic genesis of the organization, namely if it was founded by either Spinoff or MBO. Second, and regarding the motivations behind the choice of a company's growth mode, it could be interesting to further research the argument of the lack of suitable and/or fair-valued available targets as a potential inhibitor of M&A activity (a factor that we did not anticipate). Third, we have shown that there is space to look deeper into the real relation between the phenomenon of digitalization and the choice of a firm's growth mode. Also, we believe that there remains an enormous gap regarding the study of the relation between M&A activity and reaching organizational ambidexterity.

Finally, and in terms of the context of this study - which was focused on midsize IT Portuguese companies - we believe that future studies can address our research problem(s) in a different setting, context, location and/or culture. For instance, if the alternative chosen location allows for trustable search on the number/cases of companies that have been really growing organically/inorganically, then a quantitative study could be attainable and very highly recommended.

6. Chapter 6

6.1. References

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7. Appendix A - Letter to the interviewees / Consent form

Chamo-me Guilherme Fonseca e sou candidato ao grau de doutor no programa doutoral em Gestão Empresarial Aplicada no ISCTE-IUL.

O meu projeto de investigação é estudar as decisões estratégicas de crescimento das médias empresas portuguesas inovadoras na área das Tecnologias de Informação (TI). Para este efeito, pretendo entrevistar decisores e membros executivos de empresas de TI, sendo que, a recolha e tratamento de dados desta investigação tem fins exclusivamente académicos.

Quero muito convidá-lo a participar na entrevista que proponho e ela não demorará mais do que 40 minutos. A participação tem carácter voluntário pelo que poderá não aceitar ou decidir interrompê-la a qualquer momento, se assim o entender.

Todos os dados recolhidos são anónimos e confidenciais. Asseguro que o seu nome e o da sua empresa serão anonimizados. Caso pretenda algum esclarecimento sobre este estudo, por favor, não hesite em contactar-me através do e-mail: francisco_guilherme_fonseca@iscte-iul.pt.

Subscrevo-me com os meus melhores cumprimentos,
Guilherme Fonseca.

Tendo tomado conhecimento sobre a informação acerca do estudo, declaro que aceito participar nesta entrevista de investigação:

☐ Aceito participar.

☐ Não aceito participar.

____

(Nome do participante)

dd/mm/yyyy

Orientador: Professor Álvaro Rosa (alvaro.rosa@iscte-iul.pt)

ISCTE-Instituto Universitário de Lisboa

Cidade Universitária de Lisboa, Av. das Forças Armadas, 1649-026 Lisboa

8. Appendix B – Guide for the interviews

Bom dia / Boa tarde / Boa noite,

QUESTION 1

Agradeço a disponibilidade para esta entrevista, durante a qual falaremos abertamente sobre assuntos relacionados com o crescimento da sua empresa.

A entrevista não seguirá regras rígidas, sendo uma conversa entre dois profissionais, em que abordaremos assuntos sem o constrangimento de questões pré-formatadas e muito direcionadas que nos imponham a resposta a um determinado assunto.

Gostaria de notar que, ao longo desta conversa, utilizarei a expressão "tipo de crescimento" para me referir ao modo - orgânico ou inorgânico - em que a sua empresa cresceu ou cresce. Para clarificar: crescimento orgânico, quando a empresa cresce naturalmente, por investir nos seus recursos e aumentar as vendas; crescimento inorgânico, quando a empresa cresce por ter adquirido outra ou outras empresas.

- Antes de abordarmos os assuntos principais, gostaria de lhe pedir que me falasse um pouco, e de uma forma geral, sobre o crescimento da sua empresa, durante os últimos anos.

- Ainda sobre o crescimento da sua empresa, como perceciona esse mesmo crescimento para o futuro? O que acha que vai mudar?

- Admitindo que este poderá ter variado entre vários períodos, de que forma descreveria o tipo de crescimento seguido pela sua empresa ao longo dos últimos anos?

- O que poderá ter motivado os decisores da sua empresa a optarem por esse(s) tipo(s) de crescimento(s)?

QUESTION 2

Considerando a atual tendência global para a digitalização, gostaria de lhe perguntar:

- Que influência é que a essa mesma digitalização (ou *"Era Digital"*) tem tido no crescimento, em geral, da sua empresa.

- De que forma é que a digitalização (ou *"Era Digital"*) tem influenciado o número de aquisições realizadas pela sua empresa?

QUESTION 3

Considerando que a crise económica gerada pela pandemia COVID-19 teve um impacto profundo nos mais variados sectores da nossa sociedade, gostaria de lhe perguntar:

- De que forma é que a crise pandémica terá afetado o crescimento, em geral, da sua empresa.

- De que forma é que a Pandemia afetou o número de aquisições realizadas pela sua empresa até agora?

QUESTION 4 (ambidestria)

De um prisma geral, como vê o futuro da sua empresa?

- Como perceciona o balanço entre o explorar de novas oportunidades e o tirar proveito dos recursos e produtos já existentes? / Como analisa eventuais mudanças ao ciclo de vida dos seus produtos?

9. Appendix C – Companies' K.P.I.

9.1. Company A

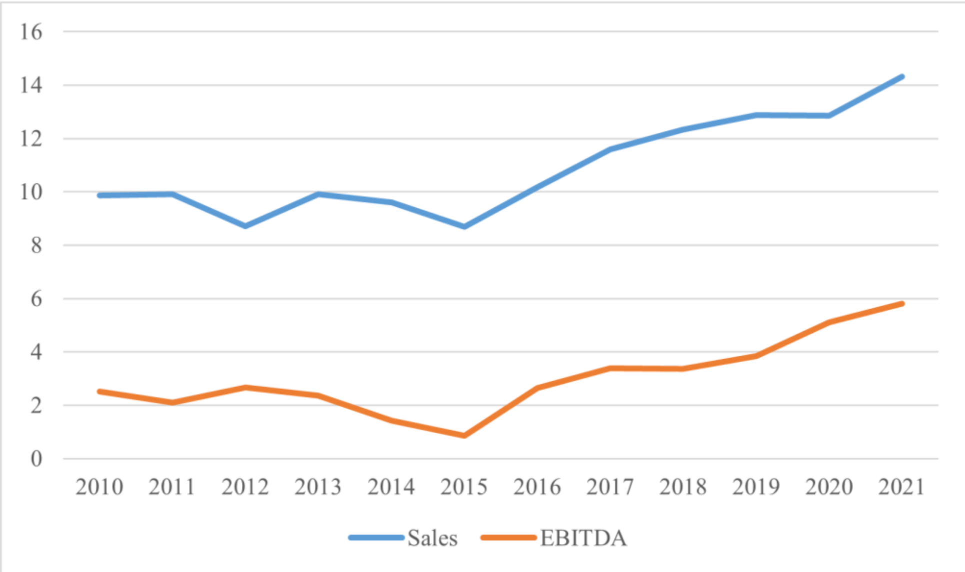

Figure 6.1 - Company A's sales and EBITDA: By year (Euros - Millions). Source: Informa DB, 2022.

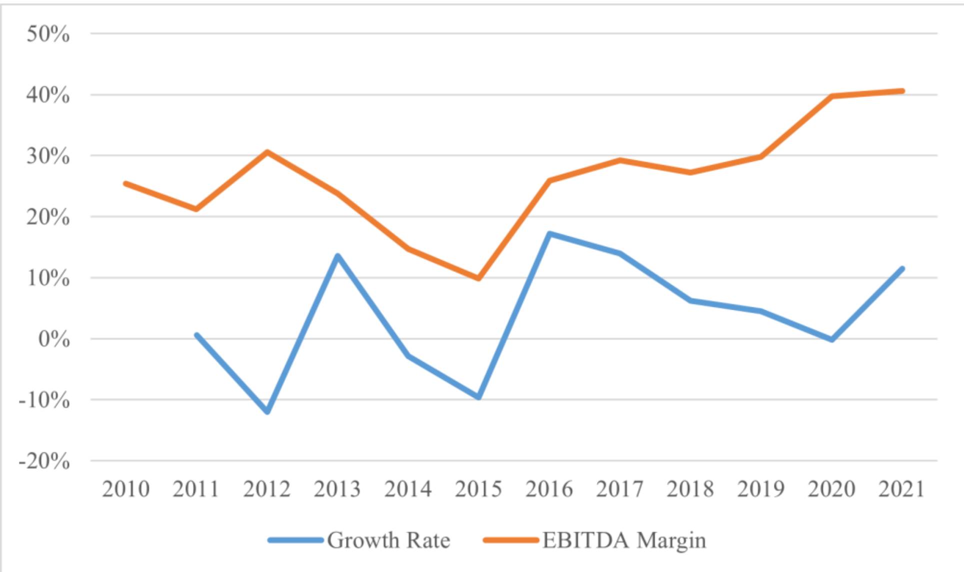

Figure 6.2 - Company A's sales growth and EBITDA margin: By year (%). Source: Informa DB, 2022.

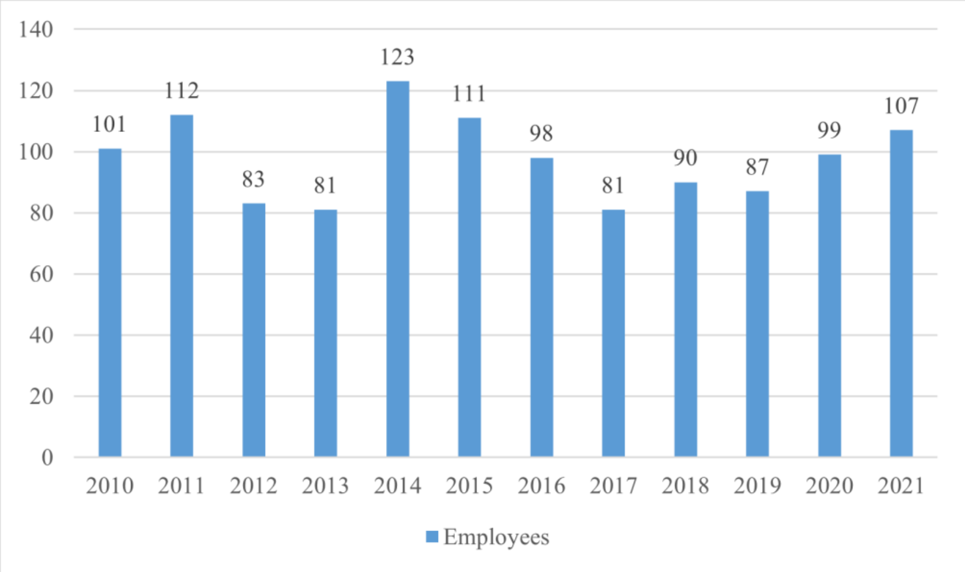

Figure 6.3 - Company A's full-time employees: By year (total). Source: Informa DB, 2022.

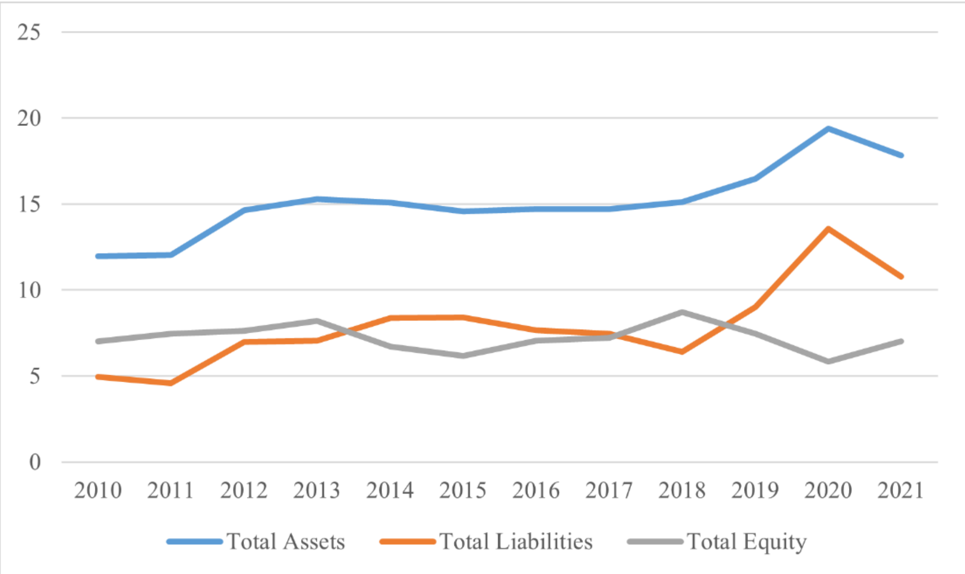

Figure 6.4 - Company A's total assets, liabilities, and equity: By year (Euros - Millions). Source: Informa DB, 2022.

9.2. Company B

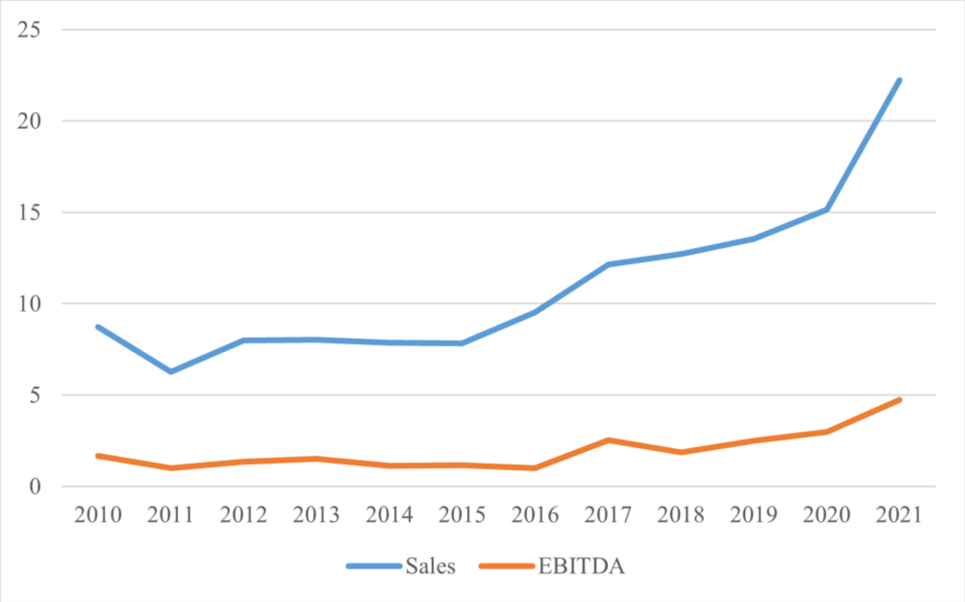

Figure 4.5 - Company B's sales and EBITDA: By year (Euros - Millions). Source: Informa DB, 2022.

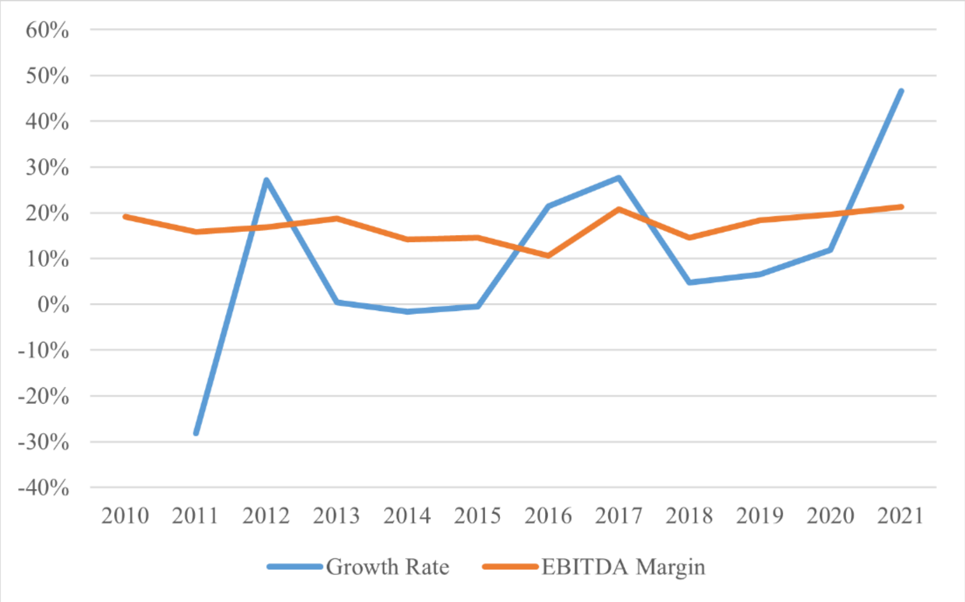

Figure 6.6 - Company B's sales growth and EBITDA margin: By year (%). Source: Informa DB, 2022.

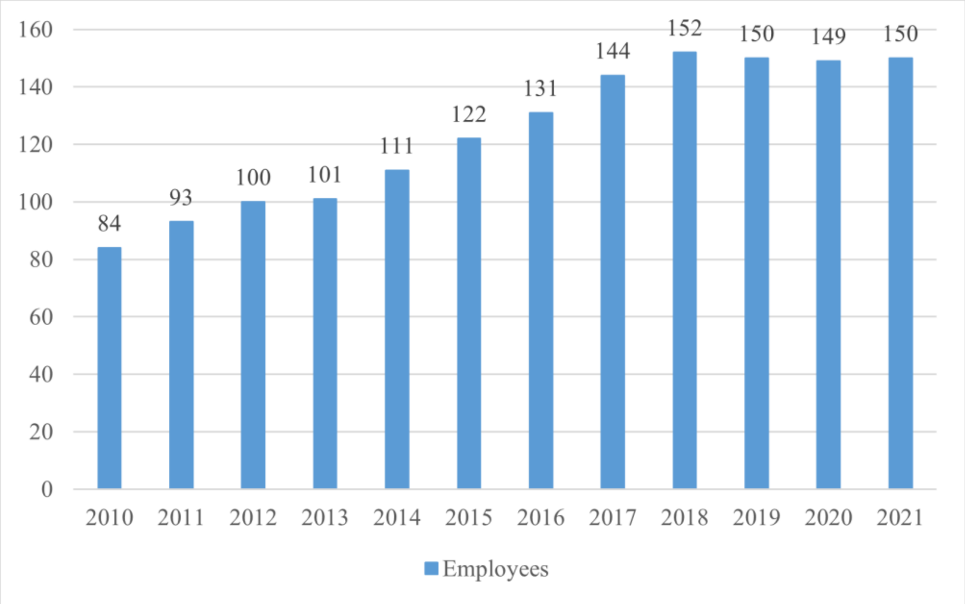

Figure 6.7 - Company B's full-time employees: By year (total). Source: Informa DB, 2022.

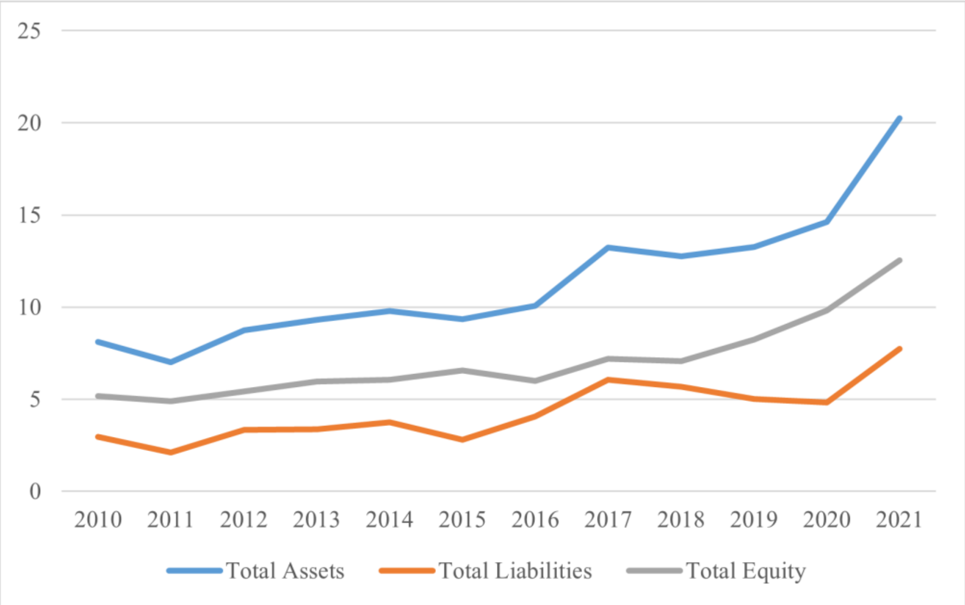

Figure 6.8 - Company B's total assets, liabilities, and equity: By year (Euros - Millions). Source: Informa DB, 2022.

9.3. Company C

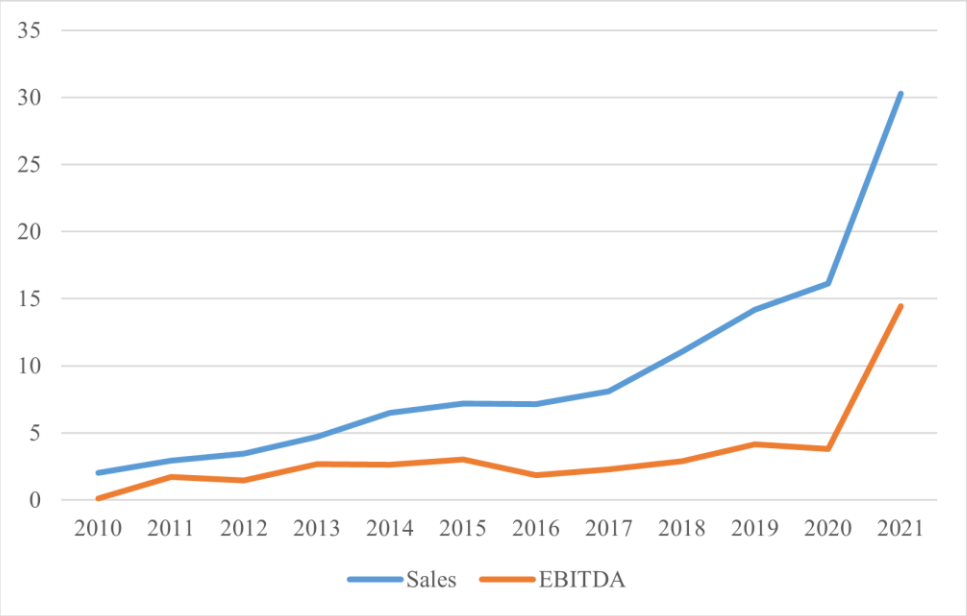

Figure 6.9 - Company C's sales and EBITDA: By year (Euros - Millions). Source: Informa DB, 2022.

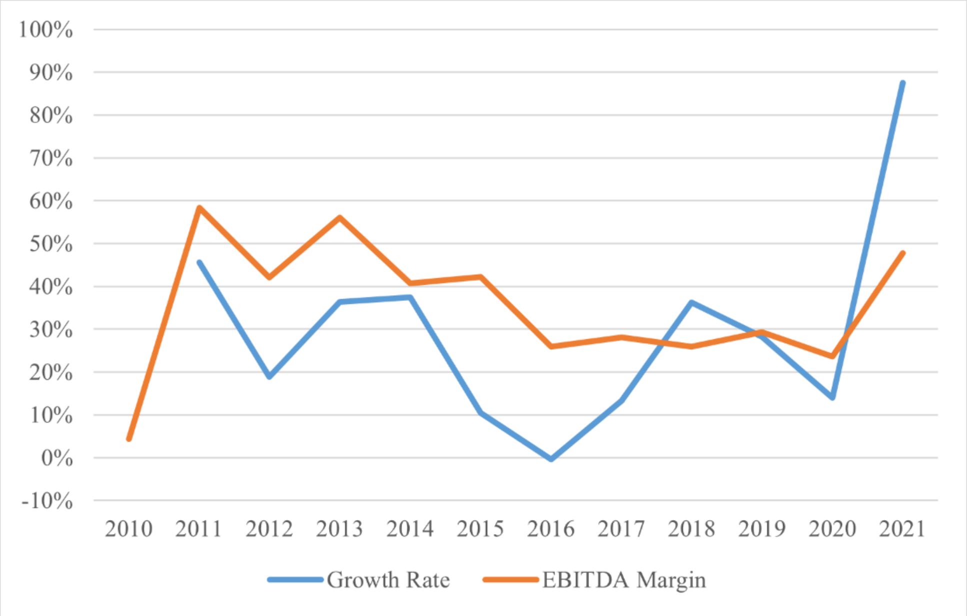

Figure 6.10 - Company C's sales growth and EBITDA margin: By year (%). Source: Informa DB, 2022.

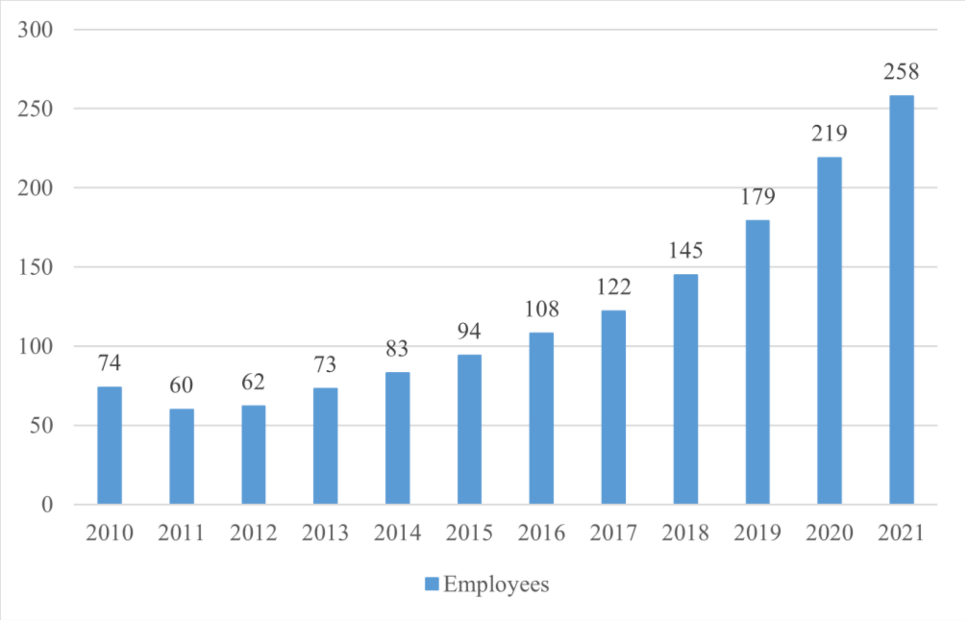

Figure 6.11 - Company C's full-time employees: By year (total). Source: Informa DB, 2022.

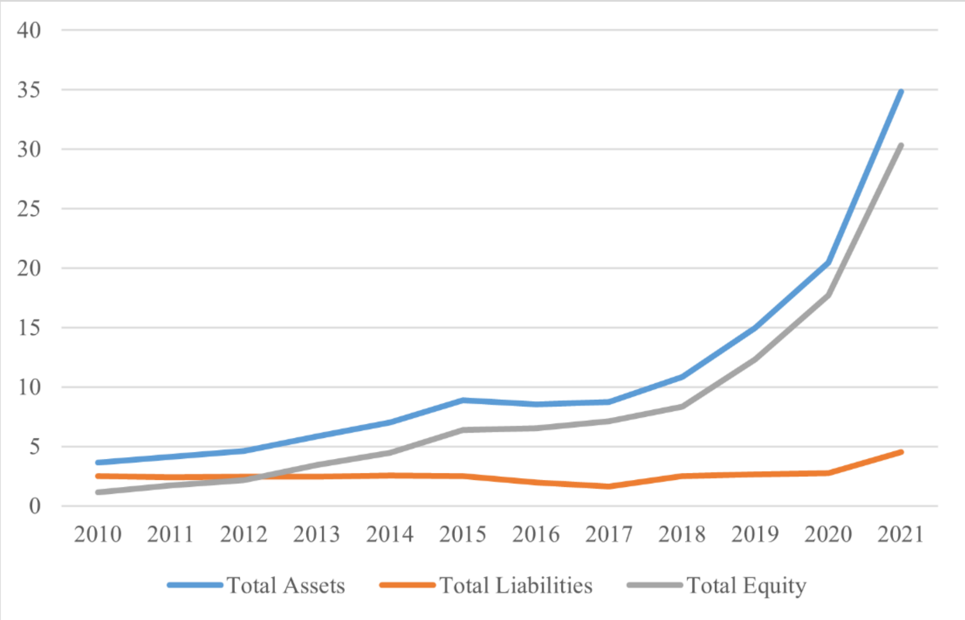

Figure 6.12 - Company C's total assets, liabilities, and equity: By year (Euros - Millions). Source: Informa DB, 2022.

9.4. Company D

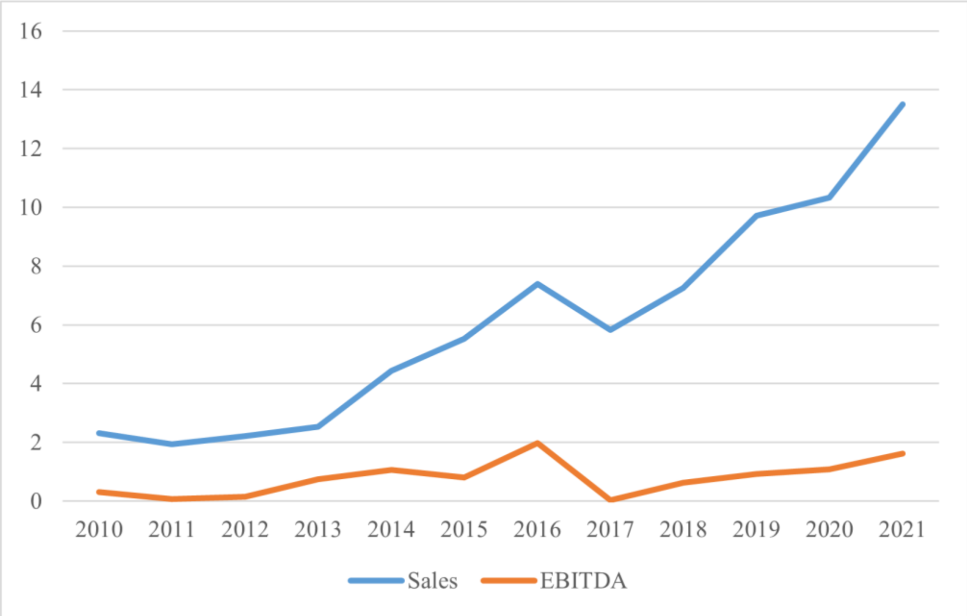

Figure 6.13 - Company D's sales and EBITDA: By year (Euros - Millions). Source: Informa DB, 2022.

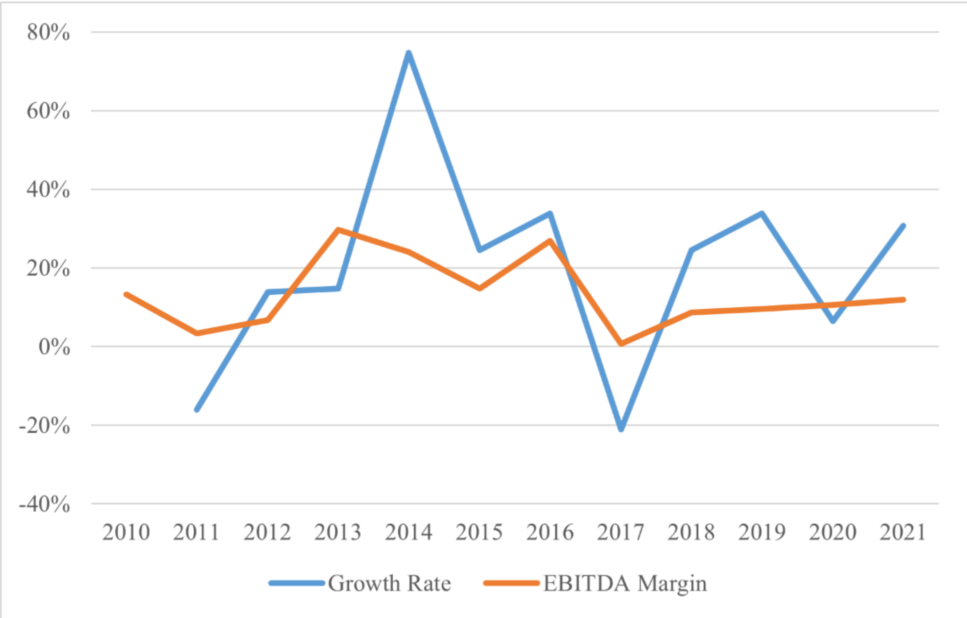

Figure 6.14 - Company D's sales growth and EBITDA margin: By year (%). Source: Informa DB, 2022.

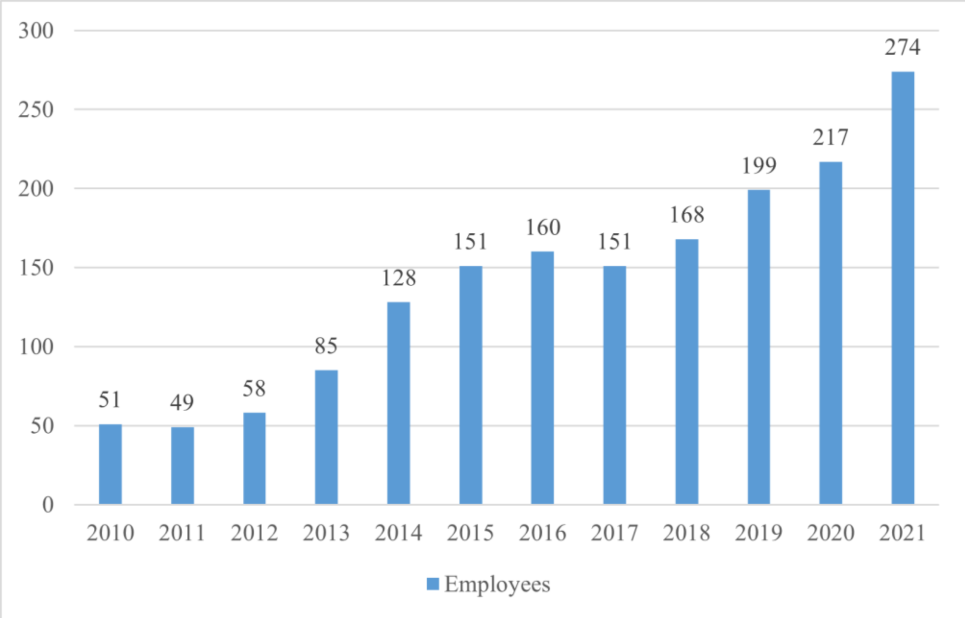

Figure 6.15 - Company D's full-time employees: By year (total). Source: Informa DB, 2022.

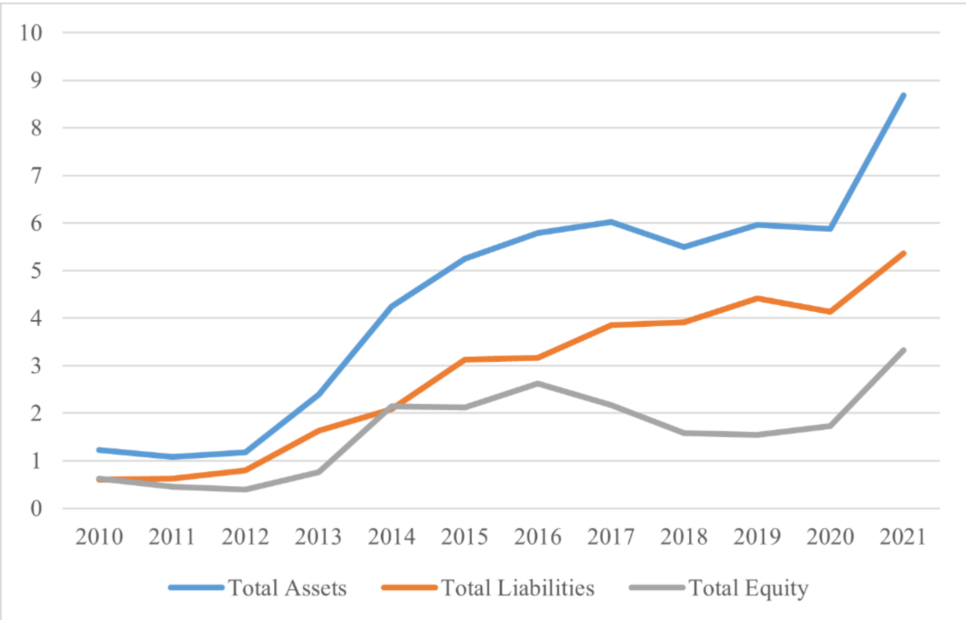

Figure 6.16 - Company D's total assets, liabilities, and equity: By year (Euros - Millions). Source: Informa DB, 2022.

9.5. Company E

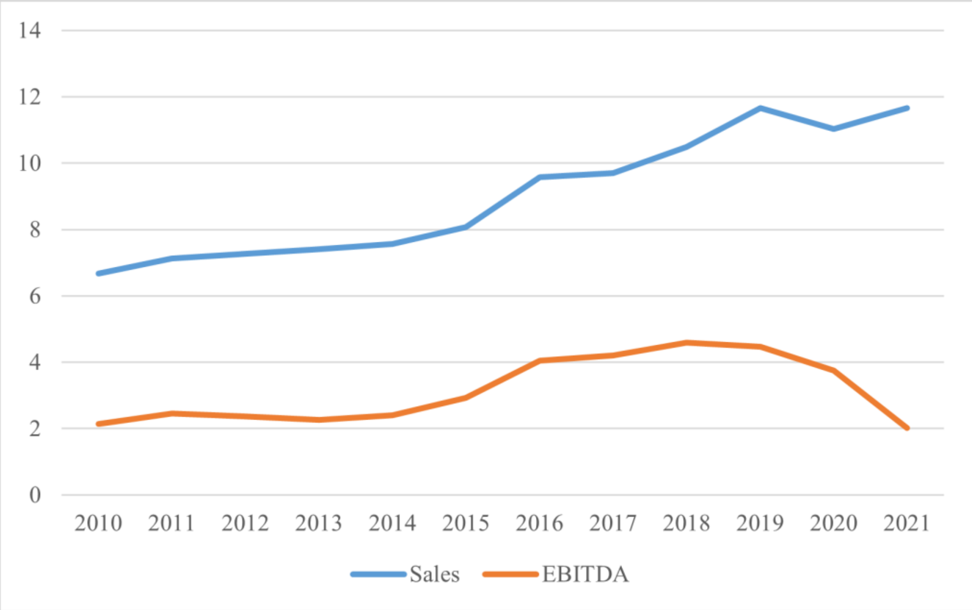

Figure 6.17 - Company E's sales and EBITDA: By year (Euros - Millions). Source: Informa DB, 2022.

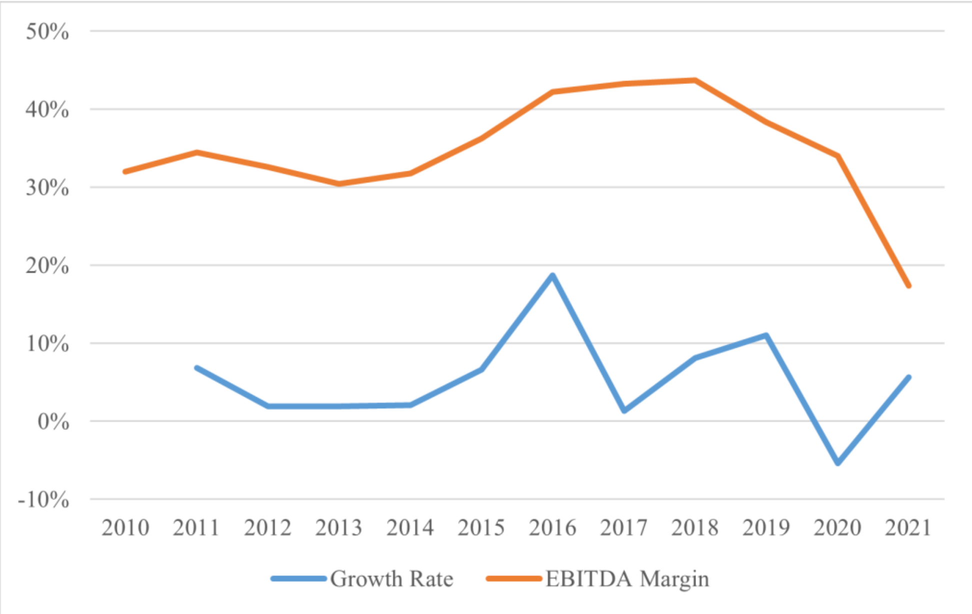

Figure 6.18 - Company E's sales growth and EBITDA margin: By year (%). Source: Informa DB, 2022.

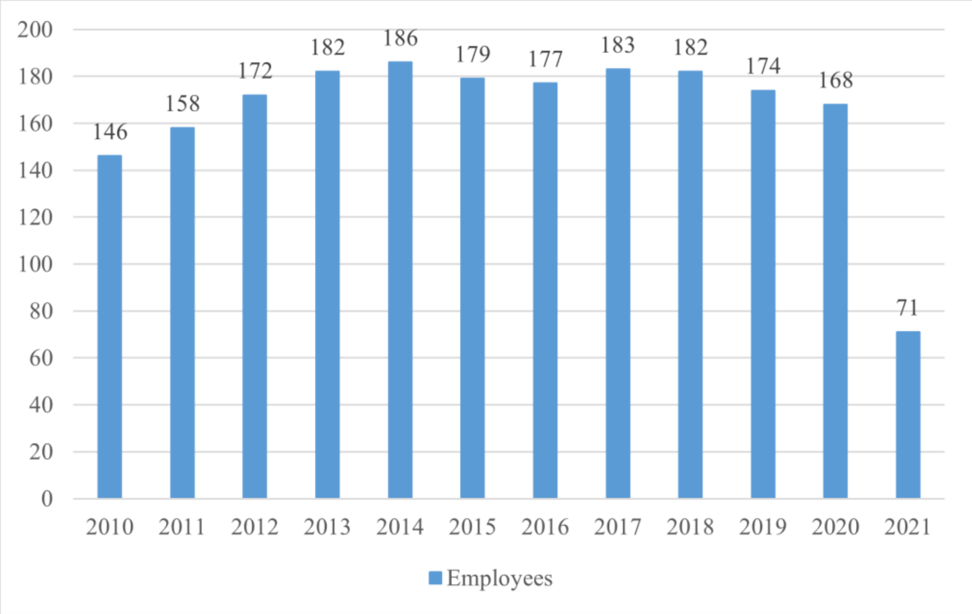

Figure 6.19 - Company E's full-time employees: By year (total) Source: Informa DB, 2022.

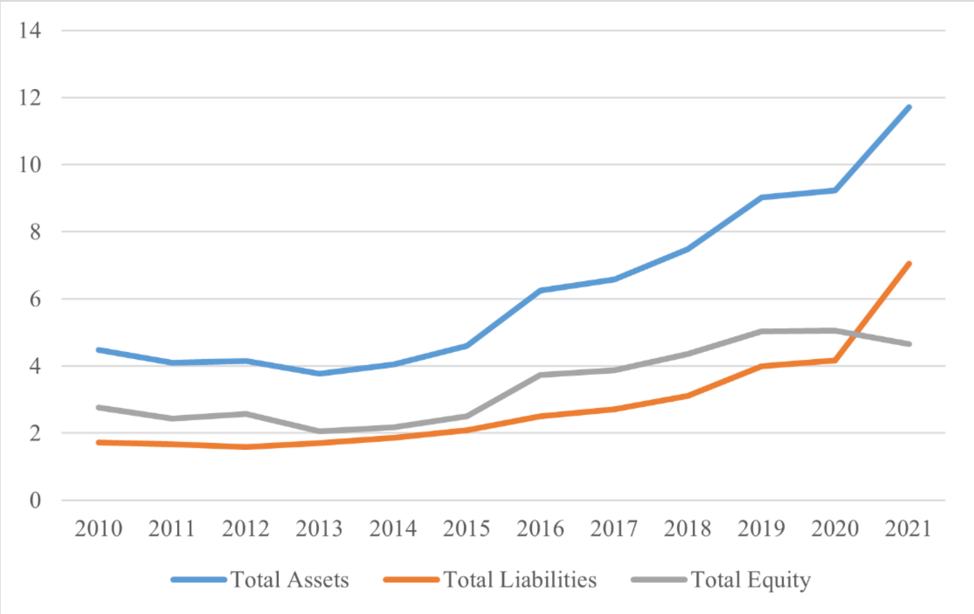

Figure 6.20 - Company E's total assets, liabilities, and equity: By year (Euros - Millions). Source: Informa DB, 2022.

9.6. Company F

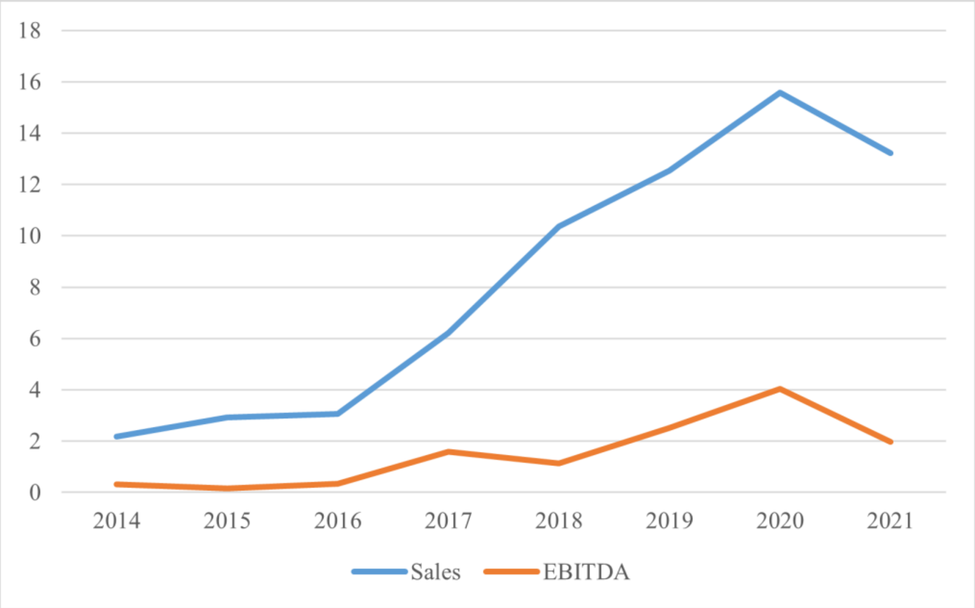

Figure 6.21 - Company F's sales and EBITDA: By year (Euros - Millions). Source: Informa DB, 2022.

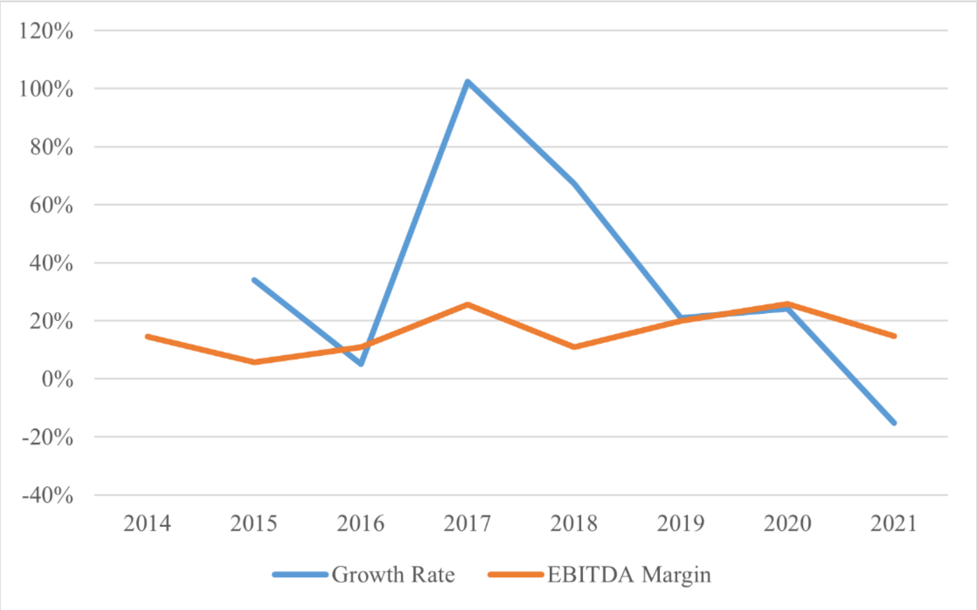

Figure 6.22 - Company F's sales growth and EBITDA margin: By year (%). Source: Informa DB, 2022.

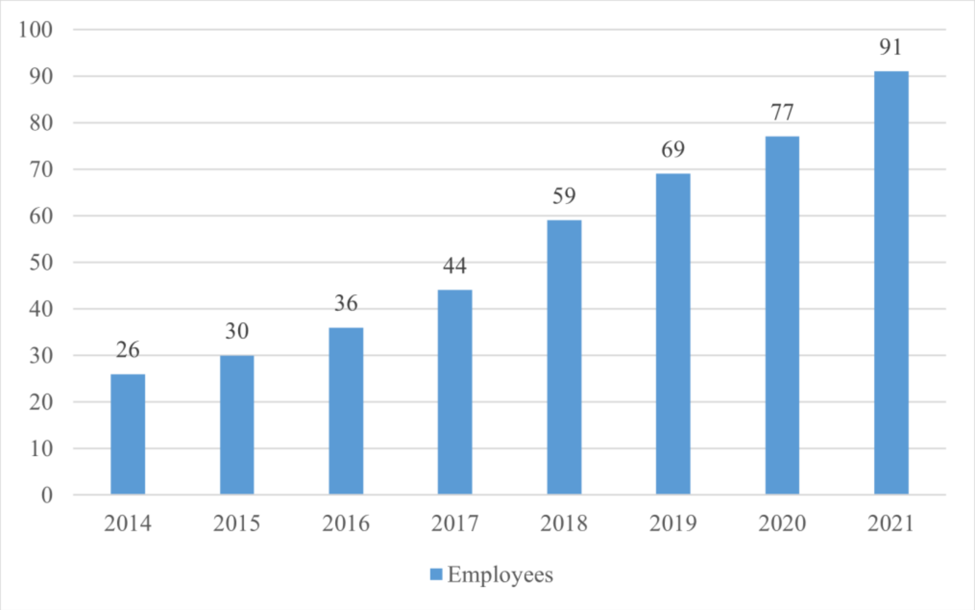

Figure 6.23 - Company F's full-time employees: By year (total). Source: Informa DB, 2022.

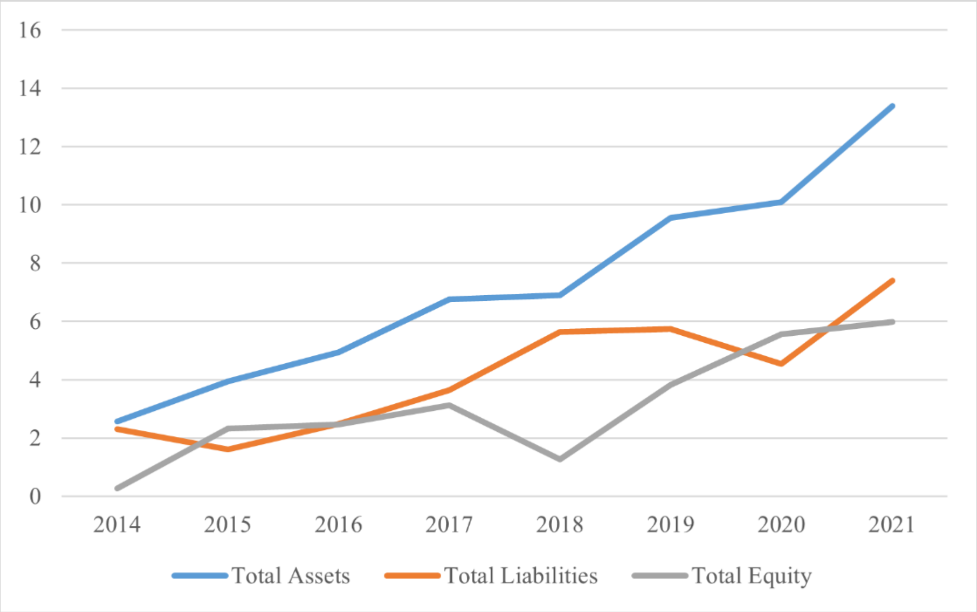

Figure 6.24 - Company F's total assets, liabilities, and equity: By year (Euros - Millions). Source: Informa DB, 2022.

9.7. Company G

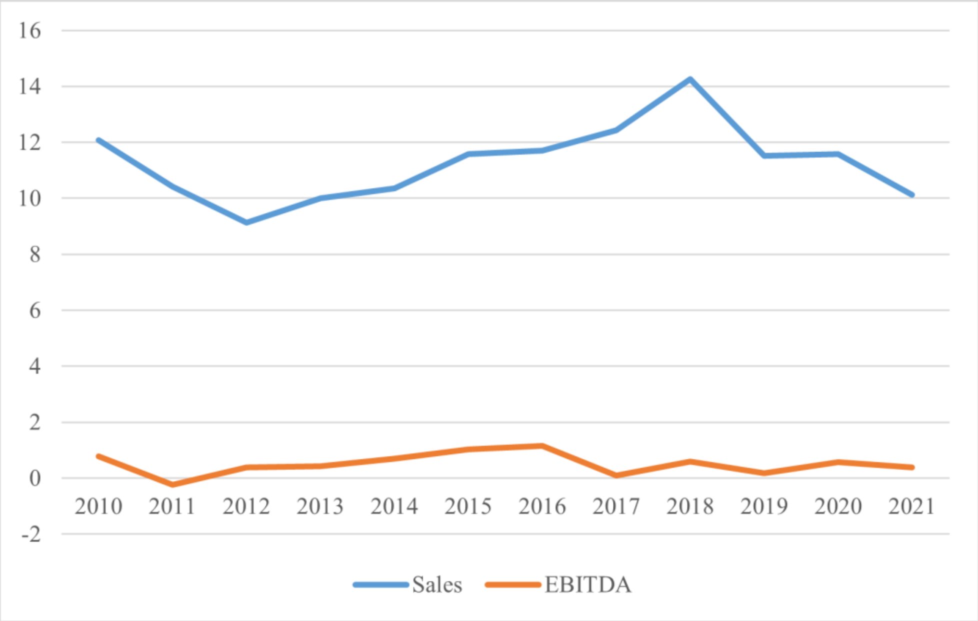

Figure 6.25 - Company G's sales and EBITDA: By year (Euros - Millions). Source: Informa DB, 2022.

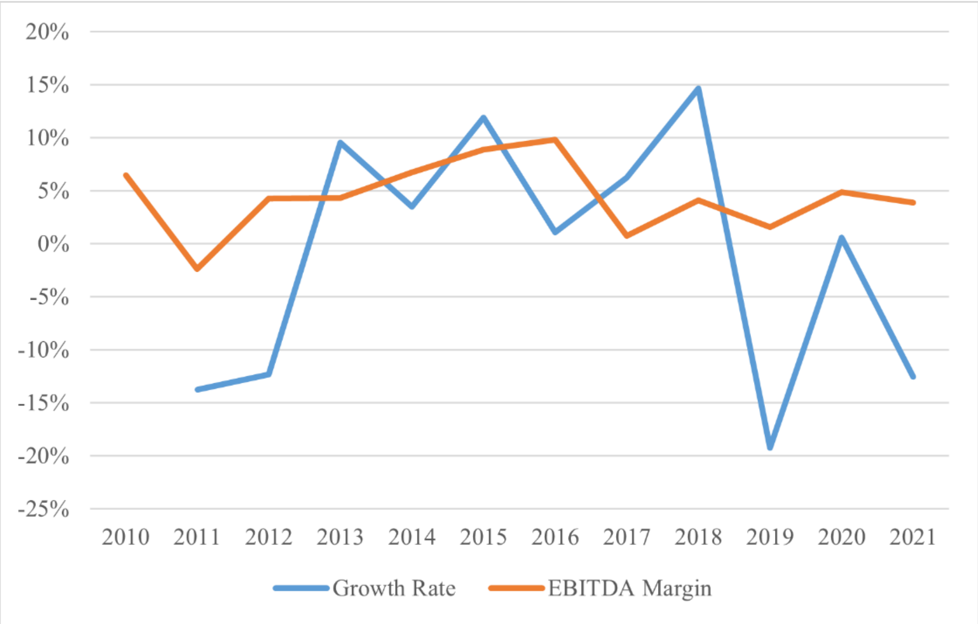

Figure 6.26 - Company G's sales growth and EBITDA margin: By year (%). Source: Informa DB, 2022.

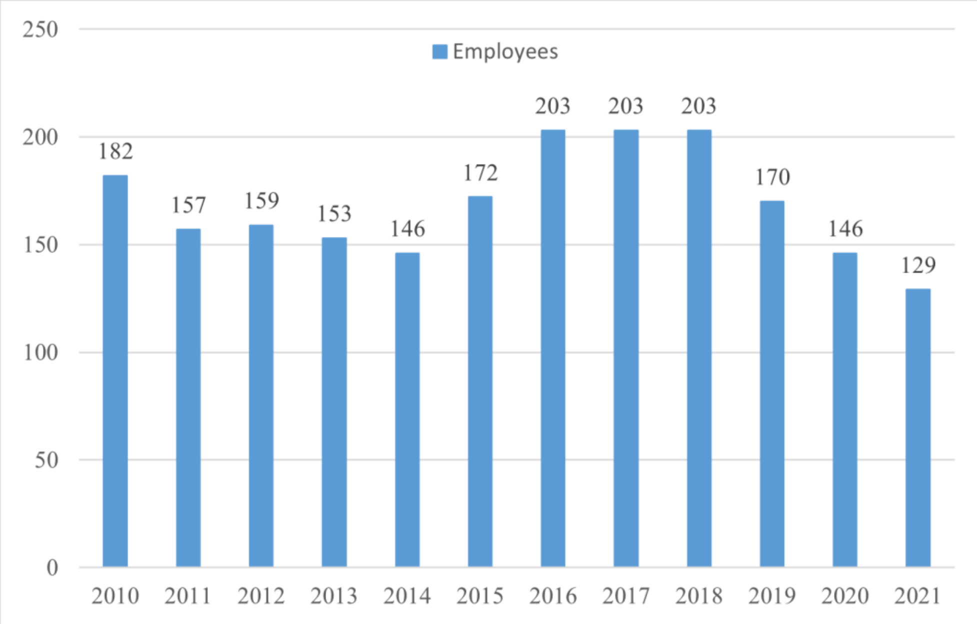

Figure 6.27 - Company G's full-time employees: By year (total). Source: Informa DB, 2022.

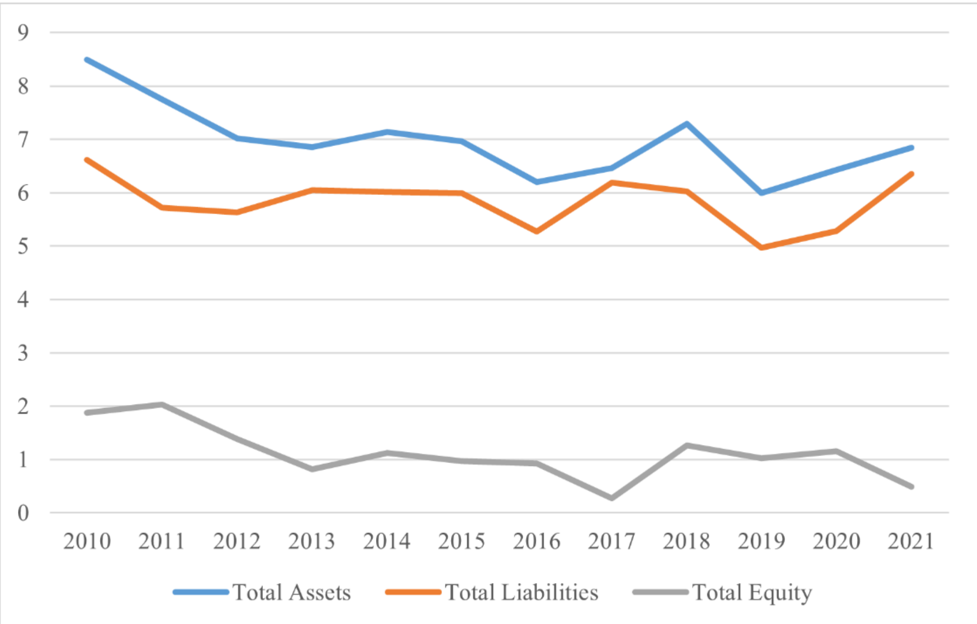

Figure 6.28 - Company G's total assets, liabilities, and equity: By year (Euros - Millions). Source: Informa DB, 2022.

9.8. Company H

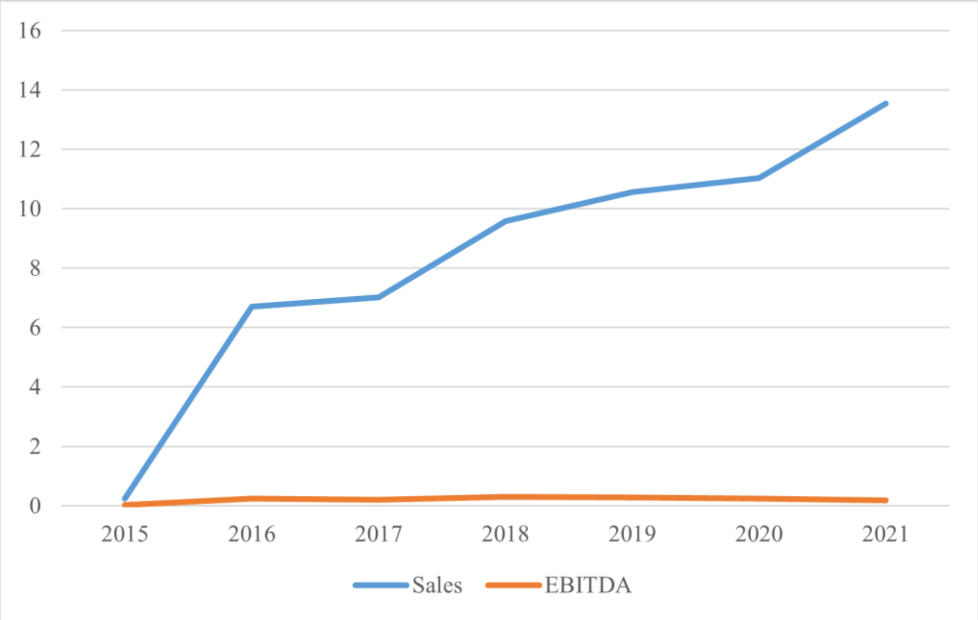

Figure 6.29 - Company F's sales and EBITDA: By year (Euros - Millions). Source: Informa DB, 2022.

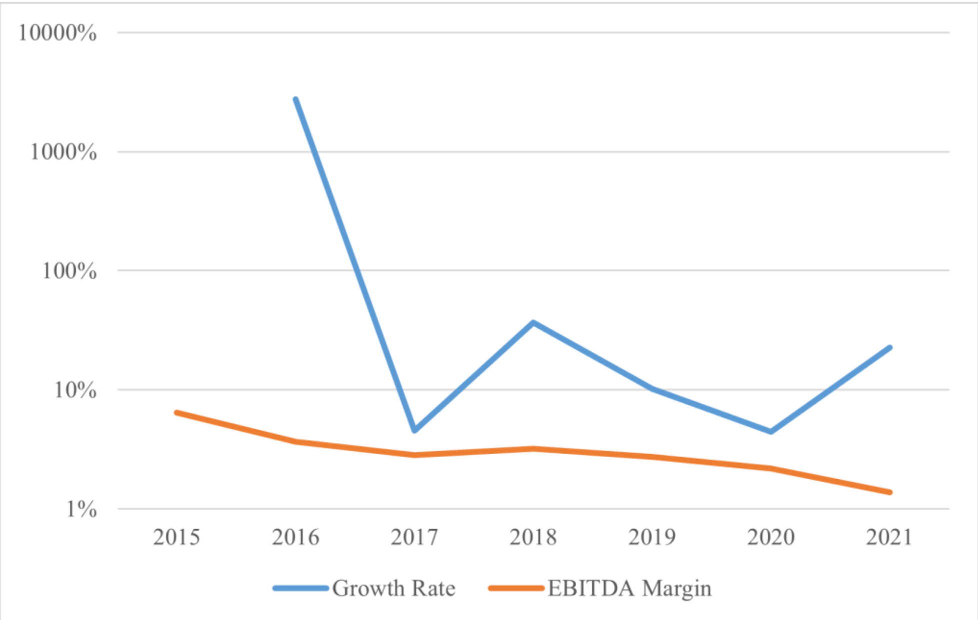

Figure 6.30 - Company H's sales growth and EBITDA margin: By year (%). Source: Informa DB, 2022.

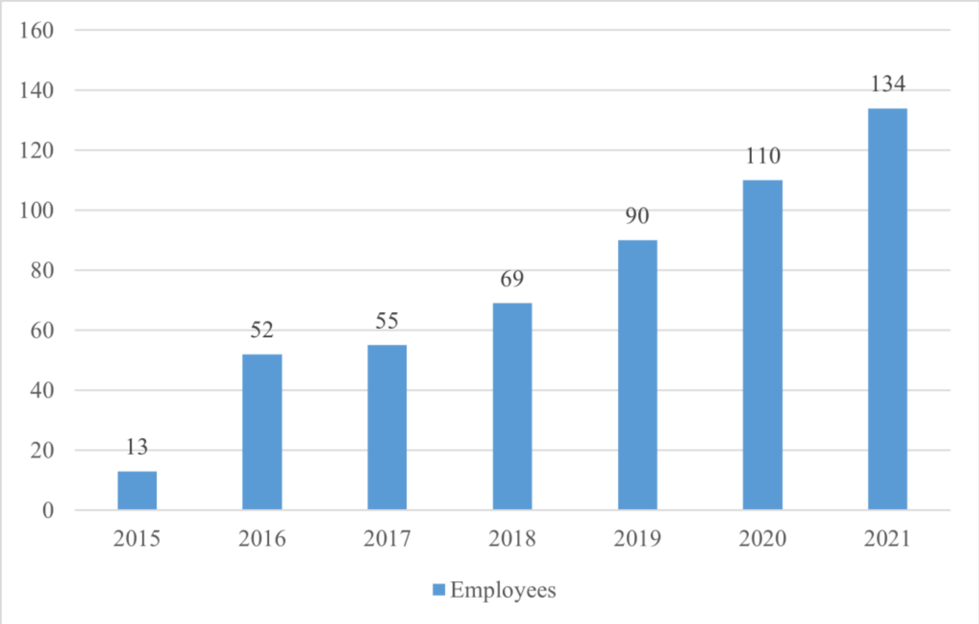

Figure 6.31 - Company H's full-time employees: By year (total). Source: Informa DB, 2022.

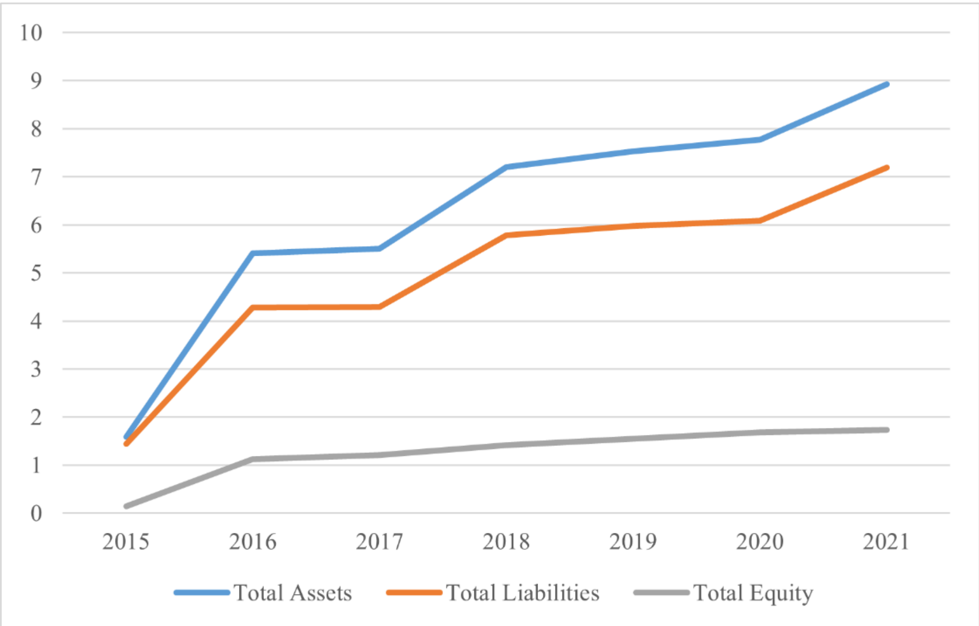

Figure 6.32 - Company H's total assets, liabilities, and equity: By year (Euros - Millions). Source: Informa DB, 2022.

10. Appendix D – Companies' Growth & Financial Metrics

Company	Year	Employees	Sales	Growth Rate	EBITDA	EBITDA Margin	Total Assets	Total Liabilities	Total Equity
Company A	2010	101	9 852 984 €		2 502 410 €	25%	11 967 862 €	4 962 966 €	7 004 896 €
	2011	112	9 905 333 €	1%	2 104 514 €	21%	12 025 352 €	4 576 868 €	7 448 484 €
	2012	83	8 715 217 €	-12%	2 661 500 €	31%	14 628 040 €	6 998 562 €	7 629 478 €
	2013	81	9 896 035 €	14%	2 350 559 €	24%	15 279 788 €	7 064 508 €	8 215 280 €
	2014	123	9 611 511 €	-3%	1 417 084 €	15%	15 070 807 €	8 355 384 €	6 715 423 €
	2015	111	8 687 282 €	-10%	854 111 €	10%	14 572 969 €	8 409 120 €	6 163 849 €
	2016	98	10 178 768 €	17%	2 632 524 €	26%	14 696 871 €	7 650 732 €	7 046 139 €
	2017	81	11 596 587 €	14%	3 384 165 €	29%	14 695 065 €	7 462 762 €	7 232 303 €
	2018	90	12 317 493 €	6%	3 352 249 €	27%	15 126 775 €	6 404 123 €	8 722 652 €
	2019	87	12 865 608 €	4%	3 835 625 €	30%	16 466 850 €	9 006 348 €	7 460 502 €
	2020	99	12 847 618 €	0%	5 105 279 €	40%	19 373 328 €	13 552 839 €	5 820 489 €
	2021	107	14 317 799 €	11%	5 809 034 €	41%	17 810 225 €	10 792 788 €	7 017 437 €
Company B	2010	84	8 730 668 €		1 671 060 €	19%	8 121 034 €	2 944 700 €	5 176 334 €
	2011	93	6 271 864 €	-28%	990 135 €	16%	7 001 431 €	2 103 044 €	4 898 387 €
	2012	100	7 976 626 €	27%	1 343 611 €	17%	8 745 312 €	3 339 309 €	5 406 003 €
	2013	101	8 005 928 €	0%	1 501 337 €	19%	9 317 019 €	3 351 067 €	5 965 953 €
	2014	111	7 872 675 €	-2%	1 117 048 €	14%	9 781 935 €	3 732 881 €	6 049 053 €
	2015	122	7 836 432 €	0%	1 144 892 €	15%	9 337 738 €	2 788 074 €	6 549 663 €
	2016	131	9 510 979 €	21%	1 004 340 €	11%	10 057 789 €	4 060 555 €	5 997 234 €
	2017	144	12 139 026 €	28%	2 519 667 €	21%	13 240 727 €	6 038 523 €	7 202 204 €
	2018	152	12 712 570 €	5%	1 843 221 €	14%	12 744 430 €	5 673 088 €	7 071 342 €
	2019	150	13 545 987 €	7%	2 481 383 €	18%	13 262 129 €	5 013 516 €	8 248 613 €
	2020	149	15 150 757 €	12%	2 965 860 €	20%	14 616 352 €	4 811 628 €	9 804 724 €
	2021	150	22 221 419 €	47%	4 737 321 €	21%	20 265 463 €	7 737 922 €	12 527 541 €
Company C	2010	74	2 003 023 €		87 494 €	4%	3 660 877 €	2 513 174 €	1 147 703 €
	2011	60	2 917 573 €	46%	1 700 786 €	58%	4 130 101 €	2 421 466 €	1 708 635 €
	2012	62	3 467 257 €	19%	1 457 546 €	42%	4 626 024 €	2 475 177 €	2 150 847 €
	2013	73	4 728 046 €	36%	2 648 775 €	56%	5 859 349 €	2 439 249 €	3 420 100 €
	2014	83	6 500 054 €	37%	2 644 023 €	41%	7 024 383 €	2 545 941 €	4 478 441 €
	2015	94	7 178 865 €	10%	3 031 798 €	42%	8 883 153 €	2 482 806 €	6 400 347 €
	2016	108	7 148 341 €	0%	1 856 605 €	26%	8 528 949 €	1 986 274 €	6 542 675 €
	2017	122	8 101 946 €	13%	2 272 407 €	28%	8 744 598 €	1 647 294 €	7 097 305 €
	2018	145	11 036 936 €	36%	2 864 418 €	26%	10 847 927 €	2 515 926 €	8 332 001 €
	2019	179	14 155 527 €	28%	4 149 798 €	29%	14 947 052 €	2 635 119 €	12 311 933 €
	2020	219	16 136 732 €	14%	3 801 771 €	24%	20 478 229 €	2 762 534 €	17 715 695 €
	2021	258	30 258 352 €	88%	14 450 824 €	48%	34 840 542 €	4 528 195 €	30 312 347 €
Company D	2010	51	2 314 668 €		305 271 €	13%	1 228 312 €	601 871 €	626 441 €
	2011	49	1 942 728 €	-16%	63 902 €	3%	1 078 105 €	627 981 €	450 125 €
	2012	58	2 211 364 €	14%	149 671 €	7%	1 180 601 €	791 694 €	388 907 €
	2013	85	2 537 649 €	15%	752 662 €	30%	2 388 794 €	1 633 836 €	754 958 €
	2014	128	4 432 304 €	75%	1 063 547 €	24%	4 238 456 €	2 088 888 €	2 149 568 €
	2015	151	5 516 246 €	24%	808 558 €	15%	5 253 089 €	3 126 997 €	2 126 092 €
	2016	160	7 381 568 €	34%	1 983 856 €	27%	5 793 478 €	3 168 525 €	2 624 953 €
	2017	151	5 828 030 €	-21%	37 994 €	1%	6 024 129 €	3 851 352 €	2 172 777 €
	2018	168	7 256 770 €	25%	633 015 €	9%	5 496 119 €	3 916 910 €	1 579 209 €
	2019	199	9 707 809 €	34%	931 499 €	10%	5 958 276 €	4 415 530 €	1 542 746 €
	2020	217	10 328 320 €	6%	1 088 435 €	11%	5 870 293 €	4 138 958 €	1 731 335 €
	2021	274	13 498 261 €	31%	1 615 541 €	12%	8 679 617 €	5 355 346 €	3 324 271 €

Company	Year	Employees	Sales	Growth Rate	EBITDA	EBITDA Margin	Total Assets	Total Liabilities	Total Equity
Company E	2010	146	6 669 695 €		2 136 501 €	32%	4 481 815 €	1 719 046 €	2 762 768 €
	2011	158	7 128 687 €	7%	2 454 418 €	34%	4 093 501 €	1 660 899 €	2 432 601 €
	2012	172	7 265 919 €	2%	2 368 812 €	33%	4 141 267 €	1 577 987 €	2 563 280 €
	2013	182	7 405 492 €	2%	2 253 247 €	30%	3 773 045 €	1 711 997 €	2 061 048 €
	2014	186	7 561 688 €	2%	2 401 407 €	32%	4 036 827 €	1 864 688 €	2 172 138 €
	2015	179	8 064 210 €	7%	2 921 861 €	36%	4 597 117 €	2 092 856 €	2 504 261 €
	2016	177	9 575 191 €	19%	4 044 231 €	42%	6 239 656 €	2 509 683 €	3 729 973 €
	2017	183	9 702 808 €	1%	4 194 588 €	43%	6 577 389 €	2 703 761 €	3 873 627 €
	2018	182	10 493 526 €	8%	4 587 231 €	44%	7 475 311 €	3 110 960 €	4 364 352 €
	2019	174	11 652 481 €	11%	4 471 550 €	38%	9 028 245 €	3 992 337 €	5 035 908 €
	2020	168	11 028 719 €	-5%	3 749 333 €	34%	9 223 260 €	4 170 838 €	5 052 423 €
	2021	71	11 653 241 €	6%	2 021 710 €	17%	11 703 520 €	7 053 712 €	4 649 808 €
Company F	2014	26	2 174 597 €		316 815 €	15%	2 565 507 €	2 304 230 €	261 277 €
	2015	30	2 914 132 €	34%	167 358 €	6%	3 937 300 €	1 604 788 €	2 332 512 €
	2016	36	3 062 155 €	5%	334 483 €	11%	4 931 003 €	2 474 643 €	2 456 360 €
	2017	44	6 201 198 €	103%	1 586 949 €	26%	6 757 080 €	3 634 506 €	3 122 574 €
	2018	59	10 371 603 €	67%	1 124 360 €	11%	6 895 167 €	5 635 638 €	1 259 529 €
	2019	69	12 544 286 €	21%	2 518 755 €	20%	9 561 348 €	5 731 338 €	3 830 010 €
	2020	77	15 586 210 €	24%	4 032 223 €	26%	10 091 274 €	4 537 191 €	5 554 083 €
	2021	91	13 222 738 €	-15%	1 960 576 €	15%	13 384 461 €	7 394 070 €	5 990 391 €
Company G	2010	182	12 083 461 €		781 894 €	6%	8 488 926 €	6 612 589 €	1 876 338 €
	2011	157	10 421 811 €	-14%	- 248 724 €	-2%	7 750 778 €	5 716 166 €	2 034 612 €
	2012	159	9 136 727 €	-12%	387 435 €	4%	7 018 959 €	5 635 302 €	1 383 657 €
	2013	153	10 008 102 €	10%	430 269 €	4%	6 859 375 €	6 043 912 €	815 463 €
	2014	146	10 355 263 €	3%	696 473 €	7%	7 141 423 €	6 016 413 €	1 125 010 €
	2015	172	11 583 559 €	12%	1 028 927 €	9%	6 962 684 €	5 989 740 €	972 945 €
	2016	203	11 708 844 €	1%	1 147 154 €	10%	6 198 621 €	5 275 030 €	923 591 €
	2017	203	12 436 332 €	6%	91 366 €	1%	6 462 003 €	6 188 183 €	273 821 €
	2018	203	14 253 439 €	15%	583 052 €	4%	7 294 080 €	6 027 443 €	1 266 637 €
	2019	170	11 510 934 €	-19%	179 082 €	2%	5 991 180 €	4 963 338 €	1 027 842 €
	2020	146	11 573 819 €	1%	559 915 €	5%	6 433 378 €	5 277 933 €	1 155 445 €
	2021	129	10 119 477 €	-13%	389 973 €	4%	6 840 068 €	6 355 396 €	484 671 €
Company H	2015	13	234 770 €		15 055 €	6%	1 586 211 €	1 442 747 €	143 465 €
	2016	52	6 708 706 €	2758%	245 729 €	4%	5 408 791 €	4 284 760 €	1 124 031 €
	2017	55	7 011 629 €	5%	199 177 €	3%	5 502 985 €	4 295 435 €	1 207 550 €
	2018	69	9 587 586 €	37%	305 887 €	3%	7 204 603 €	5 785 801 €	1 418 802 €
	2019	90	10 567 087 €	10%	287 488 €	3%	7 527 029 €	5 975 993 €	1 551 036 €
	2020	110	11 036 314 €	4%	239 630 €	2%	7 772 439 €	6 093 764 €	1 678 675 €
	2021	134	13 528 956 €	23%	185 826 €	1%	8 931 781 €	7 194 163 €	1 737 618 €

Figure 6.33 – Companies' Growth and Financial Metrics. Source:Informa DB, 2022.