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Acting Entrepreneurially and Strategically in Heavily Regulated Sectors

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Abstract

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This thesis investigates how firms act entrepreneurially and strategically in heavily regulated sectors. Over four studies, the thesis develops a deeper and more empirically grounded understanding of how entrepreneurial and strategic actions are developed and combined. It is examined how firms' internal organizational resources can prepare the ground for entrepreneurial and strategic actions as these resources can facilitate such activities (Ireland et al., 2009). The literature identifies several internal organizational resources that influence the success of both activities. This thesis particularly examines three of these resources: management support, work discretion, and rewards/reinforcements. In addition, it is explored how firms can use their external embeddedness to act entrepreneurially and strategically through decision-making and networking dynamics. Finally, it is examined how the combination of entrepreneurial and strategic actions is manifested. A mixture of qualitative and quantitative methodologies is used to provide a more comprehensive analysis of the investigated issues. The results show that firms use their internal organizational resources to develop and conduct both types of activities. These internal organizational resources appear to be important organizational antecedents that drive both types of activities. The findings also illustrate how firms use their external embeddedness to identify opportunities, mobilize beneficial resources, secure a competitive advantage, overcome the difficulties inherent to heavily regulated sectors, and create a new market. This was possible through combinations of entrepreneurial and strategic activities conducted through effectual and causal decision-making and network dynamics. Finally, the results show that the combination of entrepreneurial and strategic actions was manifested in different ways. In the examined financial services firms, the combination of both activities was manifested through the design of adapted internal organizational resources that facilitated the development and combination of both types of activities. The combination was challenged by two opposite organizational resources: top-down managerial control (centralized decision-making) and bottom-up freedom (decentralized decision-making). In the case of the new venture creation process, the combination of both activities varied depending on changes in the external environment, and it was sometimes facilitated but at other times challenged by those changes. Overall, the thesis offers several theoretical, managerial, and methodological contributions to a range of scholarly conversations, including the literature on strategic entrepreneurship, entrepreneurial decision-making, organizational preparedness for entrepreneurship, business networks, and the new venture process.

Keywords: advantage-seeking, decision-making, entrepreneurial action, internal organizational factors, networks, new ventures, opportunity-seeking, strategic action, strategic entrepreneurship

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“From the point of view of pure logic or philosophy, there will often be a dialectical tension between two concepts.”

“For example?”

“If I reflect on the concept of ‘being’ I will be obliged to introduce the opposite concept, that of ‘nothing’. You can’t reflect on your existence without immediately realizing that you won’t always exist. The tension between ‘being’ and ‘nothing’ becomes resolved in the concept of ‘becoming’. Because if something is in the process of becoming, it both is and is not.”

Jostein Gaarder, 1991. *Sophie's World: A Novel About the History of Philosophy*.

List of Papers

This thesis is based on the following papers, which are referred to in the text by their Roman numerals.

- I Casales Morici, B., & Zander, I. (2020). Developments in Strategic Entrepreneurship. *Foundations and Trends® in Entrepreneurship*, 16(6), 444–513
- II Casales Morici, B. Strategic Corporate Entrepreneurship Practices in Financial Services Firms: The Role of Organizational Factors. In review. *SN Business and Economics*
- III Casales Morici, B. The dynamics of entrepreneurial decision-making when creating and developing new ventures. Submitted to *Journal of New Business Ventures*
- IV Bengtson, A., Casales Morici, B, Lindholm, C. Becoming a public sector insider. In review. *Industrial Marketing Management Journal*

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Introduction

All roads lead to Rome. This famous phrase refers to the many long, straight roads that the Roman Republic (that later became an Empire) built around 300 B.C. The road network included 29 major roads that connected 113 of the empire's provinces, with Rome at the center. These roads stimulated both economic growth and trade. To provide order on the trade, the Roman imperial established a tax. The tax was intended to guarantee trade would function and behaviors intended to manipulate prices would be punished. In other words, Rome regulated market transactions by guaranteeing the rights of all parties involved (i.e., producers, merchants, and consumers). Some Roman law historians maintain that there was an intentional policy to promote market exchange at least since the Republican age (Wilsom & Bowman, 2018). The establishment of regulations intended to encourage market growth and efficient use of markets, represents an ancient strategy for organizing commerce that still plays an important role in developing business practices. Today, almost all sectors are regulated, and many types of regulations and practices regulate, influence, or affect how firms operate. Heavily regulated sectors in this thesis refers to sectors where regulation plays a fundamental role in the development of firms' operations. The market dynamics in heavily regulated sectors are different from those in other sectors due to the large role that the regulators play in such sectors while trying to achieve certain policy goals (Awasthi et al., 2012).

In heavily regulated sectors, firms operate in an unusual multi-actor marketplace where various interdependencies of systems often complicate their development. An important inquiry with significant practical relevance in these challenging settings is how firms can create and sustain a competitive advantage while identifying and exploring new opportunities. This is the primary question on which strategic entrepreneurship is based, placing it at the nexus of strategic management and entrepreneurship. Therefore, the focus of this study is strategic entrepreneurship, which has its ground in bringing together two types of activities in firms: the sustaining of competitive advantage (advantage-seeking activity) and the identification of opportunities (opportunity-seeking activity) (Hitt, et al., 2011; Ireland et al., 2003; Ireland & Webb, 2007, 2009). Thus, acting entrepreneurially and strategically refers to entrepreneurial and strategic activities, also defined as opportunity-seeking (entrepreneurial) and advantage-seeking (strategic) (Hitt et al., 2001). Acting

entrepreneurially involves newness and the exploration and identification of opportunities (the purview of entrepreneurship) for which future competitive advantages can be developed, whereas acting strategically includes developing and successfully exploiting those opportunities to maintain current competitive advantages. There are firms that regard acting strategically as playing a critical role in their success, while other firms regard acting entrepreneurially as playing a critical role in their success. Start-up ventures have been relatively skilled in identifying opportunities but less effective at developing and maintaining the competitive advantage needed to exploit those opportunities. In contrast, more established firms have shown relatively superior skills when developing and sustaining competitive advantages but have been less effective in recognizing opportunities (Ireland et al., 2003, p. 966)

Given the scope of opportunity-seeking and advantage-seeking activities to make a significant impact individually, it is somewhat logical to assume that combining the two would result in a powerful mechanism for firms. Indeed, evidence suggests that firms that act strategically and entrepreneurially can hit the mark regarding performance, sustained competitive advantage, and wealth creation for stakeholders (Burgelman & Grove, 2007). Such firms can also be better placed than rivals to navigate the prevailing uncertainties inherent to challenging settings such as heavily regulated sectors. Reasons for this advantage include an agility to face regulatory changes, a higher capacity to innovate continually, a more flexible response to challenges, and, more importantly, an ability to identify viable opportunities and use a relevant strategic approach to exploit these opportunities.

Strategic entrepreneurship has been explained through several models in the literature, but they have rarely been empirically examined. Moreover, most studies in the field of strategic entrepreneurship do not consider the operating environment. The few that acknowledge these contextual factors treat them as input variables rather than investigate their potential to facilitate or hinder the effectiveness of strategic entrepreneurship (Birkinshaw & Gupta, 2013; O'Reilly & Tushman, 2013). No firm is wrapped in a bubble as all are subject to influence from internal and external factors. Although the importance of acting entrepreneurially and strategically is widely acknowledged, less attention has been given to the examination of both phenomena when conducted in heavily regulated sectors. During the last two decades, the predicament of firms in heavily regulated sectors have changed substantially as the result of several factors such as regulations and new technologies, conditions that have substantially altered the domestic competitive environment of these firms. Notably, new technologies have received intense public and regulatory intervention. During these periods of technological change, previous rules and regulations may become obsolete (Anderson & Tushman, 1990). That is, a new well-defined regulatory framework is needed to govern a new technology's production, distribution, and consumption. Although these episodes of regulatory changes can negatively affect a firm's business development, firms can take

advantage of these changes, shaping the market in their favour (Santos & Eisenhardt, 2009). For example, as a result of regulatory changes in the healthcare system over the last several decades, the healthcare sector has produced more private initiatives (Venkatesh & Jayachandran, 2008; Outreville, 2007). This trend provides the possibility to investigate important issues overlooked in the literature, such as the ability of firms to act entrepreneurially and strategically using a broad range of activities, resources, and capabilities to navigate the difficulties inherent in heavily regulated sectors. Although previous studies have provided several steps towards understanding issues concerning firms and their regulatory environments (Stenholm et al., 2013; Klapper et al., 2006; Ciccone & Papaionnou 2006; Acs et al., 2008; Ardagna & Lusardi 2009, Djankov et al., 2002), less is known about the ability of firms to act entrepreneurially and strategically when operating in heavily regulated sectors.

One good example of firms acting entrepreneurially and strategically under a heavy regulatory framework is large and established financial services firms. Since the 1990s, re-regulation has opened the sector to new actors such as financial startups, which offered innovative services traditionally not provided by established firms. This forced large financial services firms to embed new technologies and offer new and competitive services. Unlike product and manufacturing firms, at that time, established financial services firms were primarily focused on incremental improvements of current offerings (Das et al., 2017). This originated a need for such firms to leverage new capabilities, create new internal organizational structures, and embed processes to enable innovation (Geerts et al., 2010) that was associated with devastating organizational change effects (Henderson & Clark, 1990). Later, under the influence of the 2008 financial crisis, such firms were challenged again but now, by new legislation (e.g., Basel III[1], MIFID II[2], and PSD II[3]). This new legislation, in contrast, required more bureaucratic and predominantly efficiency-oriented internal organizational resources.

Previous studies have focused on different issues such as internal barriers of radical innovation (Das et al., 2017), consumer adoption barriers (Lee et al., 2003), cultural differences that result in barriers to implement innovations (Singer et al., 2008), the impact of financial innovations on the market and customer behavior (e.g., Gerardi et al., 2010; Amin et al., 2008), the relationships between financial innovation and growth (Beck et al., 2016), and the effect of innovation such as the internet on a bank's profitability (DeYoung et al., 2007). However, less is known about how firms can use their internal organizational resources to stimulate and facilitate the development and combination of opportunity-seeking and advantage-seeking activities in the heavily regulated financial sector. A deep examination of several internal organizational factors offers an important and more accessible way for established firms to build internal systems and processes that facilitate opportunity-seeking and advantage-seeking activities. Additionally, a deeper examination and

analysis of these internal organizational resources can offer firms important information and new insights to mitigate the inertia caused by regulations (Das et al., 2017). In this regard, the ability to simultaneously pursue both incremental (advantage-seeking) and discontinuous (opportunity-seeking) activities requires the design of contradictory internal organizational resources within the same firm (Tushman & O'Reilly, 1996). Developing this ability helps the development of major transformations while facilitating the exploitation or the refinement of existing products or services.

In addition, this thesis examines how firms, in this case startups, can use their external embeddedness to act entrepreneurially and strategically. In the heavily regulated healthcare sector, firms interact with many public and private actors, creating relationships that provide them several advantages such as access to needed resources, identifying opportunities, and sustainable competitive advantages. Especially during a new venture's creation process, startups could have limited information available, reducing their ability to evaluate current and future environmental states. Examining firms' external embeddedness through decision-making and network dynamics can elucidate important insights about hybrid approaches such as the combination of opportunity-seeking and advantage-seeking activities in the new venture creation process. For example, the combination of causal decision-making (advantage-seeking) and effectual decision-making (opportunity-seeking) is essential for the success of a startup (Galkina et al., 2021). Thus, networks and decision-making dynamics are analyzed here as useful instruments used by firms to combine entrepreneurial and strategic actions. Given that opportunity-seeking and advantage-seeking activities are largely driven and affected by external factors (Hitt et al., 2011), it is surprising that the examinations of firms operating in a challenging environment such as heavily regulated sectors are currently scarce in the extant literature of strategic entrepreneurship. This oversight is perhaps because the assumption that successful firms develop a "systematic, identifiable approach to environmental adaption" (Zahra & Pearce, 1990, p. 751). This adaptive approach considers the actions of firms relative to the environment to address different problem domains, such as the extent to which firms exploit existing product markets versus seeking new opportunities (Miles & Snow, 1978). The ability to simultaneously pursue both advantage-seeking and opportunity-seeking action from hosting multiple contradictory structures, processes, and cultures within the same firm calls for unique structural and organizational designs to support the creation of both types of action.

Startups tend to act more entrepreneurially than established firms (Hitt et al., 2011), so they have different challenges in the implementation and combination of both types of activities compared to larger companies. Moreover, less empirical research has focused on how the development and combination of both activities evolve over time. These are some of the gaps in the literature that this study aims to address. Overall, this thesis and the four papers included

provide a deeper and more empirical understanding of the combination of “acting entrepreneurially and acting strategically”, uncovering important issues overlooked in the literature.

Aim

This thesis investigates how firms act entrepreneurially and strategically in heavily regulated sectors by developing a deeper and more empirically grounded understanding of the combination of opportunity-seeking and advantage-seeking activities. Specifically, this thesis answers three research questions. The first question investigates firms' internal organizational resources that have been theorized and demonstrated to represent an important element for successfully developing strategic entrepreneurship activities (Hornsby et al., 2002). Empirically, there are many questions concerning the internal organizational resources still open to investigation. Many of these questions surround the links between these internal organizational resources and opportunity-seeking and advantage-seeking activities (Ireland et al., 2009). Thus, the first research question of this study is as follows:

1. How do organizations use their internal organizational resources to act entrepreneurially (opportunity-seeking) and strategically (advantage-seeking)?

A firm's external environment can facilitate or hinder its ability to identify or create opportunities and, subsequently, its ability to exploit those opportunities as a foundation for competitive success (Hitt et al., 2011). In sectors that are heavily regulated, politically sensitive, and heavily professionalized, external embeddedness of a firm is inherently dynamic. This reduces a firm's ability to assess present and future environmental states, creating ambiguity during decision-making (Hitt et al., 2011). However, there is a positive relationship between environmental dynamism and new venture creation (Aldrich, 1999) through the stimulation of entrepreneurial and strategic activities (Wang & Li, 2008). In heavily regulated sectors characterized by high professionalism and political sensitivity, interconnectedness can explain the paths to identify opportunities and build competitive advantage. For example, firms can use business relationships to gain access to needed resources from partners and then bundle them to identify opportunities and secure a competitive advantage. Thus, the second research question is as follows:

2. How do organizations use their external embeddedness to act entrepreneurially and strategically?

Combining opportunity-seeking and advantage-seeking activities is essential for firms to identify viable opportunities while developing a strategic approach to exploit them. Combining means that resources are allocated between opportunity-seeking and advantage-seeking activities in a way that existing competitive advantages are exploited and new business opportunities are simultaneously explored (Ireland & Webb, 2009). Thus, the third question is as follows:

3. How is the combination of entrepreneurial and strategic actions manifested?

The third research question aims to build a deeper and more empirical understanding of how firms can combine activities that take advantage of current advantages (advantage-seeking) and challenge themselves to embark on new adventures, seeking new opportunities (opportunity-seeking).

Disposition

The thesis is organized as follows. First, an *overview of the papers* is presented. This overview includes what each study investigates and their knowledge contributions. Then, the *frame of reference* is presented, starting by describing what the literature says about strategic entrepreneurship, followed by a discussion of the firms' internal organizational resources and their external embeddedness. The next chapter offers an overview of the related research activities and choices made to conduct the studies included in the thesis—e.g., the research design and motivations, ontological and epistemological assumptions, methodological choices, data collection and analysis, and assessment of research quality. Next, the findings are examined, and the study implications are discussed. This is followed by a description of the theoretical, managerial, and methodological contributions of the thesis. Finally, some concluding remarks are made.

Overview of dissertation papers

The dissertation comprises an overcover and four papers, which I briefly outline below. All four papers use different methodologies (e.g., structural equation modelling, moving average, content analysis, and inductive-deductive approaches). Paper I is a literature review of the strategic entrepreneurship field. Paper II focuses on strategic corporate entrepreneurship and its organizational antecedents; Papers III explore decision-making and Paper IV networks in the process of new venture creation. These four papers contribute to a range of scholarly conversations, including the literature on strategic entrepreneurship, strategic corporate entrepreneurship, entrepreneurial decision-making, organizational preparedness for entrepreneurship, business networks, and the new business formation process.

Tabell 1: Disposition of the dissertation

Papers	Sector	Type of Firm	Activities and resources	Contributing literature
I. Developments in Strategic Entrepreneurship	All	All	Strategic Entrepreneurship	Strategic Entrepreneurship
II. Strategic Corporate Entrepreneurship practices in Financial Services Firms: The Role of Organizational Factors	Financial	Large and Established	Internal Organizational Resources Incremental and Discontinuous Strategic Corporate Entrepreneurship	Strategic Corporate Entrepreneurship Organizational Preparedness for Strategic Corporate Entrepreneurship
III. The Dynamics of Entrepreneurial Decision-making During the Creation and Development of New Ventures	Healthcare	Startups	Effectuation and Causation	Entrepreneurial decision-making Entrepreneurship
IV. Becoming a Public Sector Insider	Healthcare	Startups	Networks	Business Relationships New Business Ventures Formation Process

Paper I

Developments in Strategic Entrepreneurship

Paper I, a review of the research on strategic entrepreneurship between 2001 and 2019, tracks the development of this new field of research to see whether it has lived up to the original promises regarding forging closer links between two vibrant but traditionally separate disciplines of research—i.e., entrepreneurship and strategic management. The promised synergies could benefit and change both fields and their respective theories (Ireland et al., 2001). Strategic entrepreneurship also pledges to resolve a persistent challenge among both startups and established firms: How do firms identify and pursue new business opportunities (acting entrepreneurially) while securing competitive advantage and above-average returns (acting strategically)? The review of 131 articles reveals a set of interrelated issues concerned with conceptual ambiguity,

model boundaries, and consistency in the application of conceptual foundations, which have had a decreasing effect on previous developments in the field. The review also identifies several avenues for future research as well as a pressing need for firmer practical guidelines to effectively integrate the entrepreneurial and strategic aspects of management.

Paper I contributes knowledge to this field in several ways. First, the review assesses the collective evidence in the strategic entrepreneurship field of research, providing an overview of areas where the re-search is disparate and interdisciplinary. Second, it synthesizes the knowledge from the reviewed studies, providing evidence that could inform policymakers and practitioners about the different issues found in the literature. Third, by synthesizing research findings, the review reveals uncovered areas where more research is needed, which is a critical component of creating theoretical frameworks and building conceptual models. In this regard, the review also points towards some potentially helpful ways of pushing the field forward. Such a knowledge base constitutes a valuable tool for firm owners and managers to effectively integrate the simultaneous demands on opportunity-seeking and efficiency-seeking actions.

One crucial issue found in the literature review was conceptual ambiguity accompanied by a lack of proper instruments to measure strategic entrepreneurship activities. Therefore, this was an interesting opportunity to clarify and empirically explore how organizations use their internal organizational resources to act entrepreneurially and strategically. Embracing strategic entrepreneurship as a heterogeneous phenomenon facilitated the empirical examination of their different forms and natures by investigating several internal organizational resources that enable their development. This guided the investigation towards the creation of an instrument that separately captures the various activities of strategic corporate entrepreneurship in its different forms and the exploration of their organizational antecedents, which constituted the starting point for the Paper II. Overall, Paper I contributes to a better understanding of what strategic entrepreneurship is and how its development as a field of research has unfolded over the years.

Paper II

Strategic Corporate Entrepreneurship Practices in Financial Services Firms: The Role of Organizational Factors

Paper II examines a less explored area of strategic corporate entrepreneurship in financial services firms—specifically, the relationship between internal organizational resources and strategic corporate entrepreneurship practices. The strategic entrepreneurship field has established the importance of an entrepreneurial organizational work environment within companies. However, there is a lack of research showing how the association of organizational factors

with different strategic corporate entrepreneurship practices unfolds in financial services firms. Given the role of these firms in the world economy and firms' ability to successfully exhibit strategic corporate entrepreneurship based on combinations of several organizational resources (Antonicic & Hisrich, 2001; Hornsby et al., 1993), Paper II addresses a relevant gap in the literature. An empirical analysis from Swedish financial services firms using Structural Equation Modelling was conducted to examine the internal organizational drivers of strategic corporate entrepreneurship practices. The internal organizational factors were not only tested for the different practices that strategic corporate entrepreneurship entails (sustained regeneration, organizational rejuvenation, and strategic renewal) but also tested for their different natures (discontinuous and incremental). Whereas the organizational factors of management support and reward/reinforcement positively affect both incremental and discontinuous strategic corporate entrepreneurship practices, work discretion was found to have a differentiated effect. That is, whereas work discretion had a negative effect on incremental strategic corporate entrepreneurship practices, it had a positive effect on discontinuous activities.

Paper II offers diverse knowledge contributions. First, it represents a first step toward understanding how internal organizational factors spur strategic corporate entrepreneurship practices within service firms, especially those operating in the heavily regulated financial services sector. Second, Paper II offers a starting point for developing a set of reliable and valid measures of strategic entrepreneurship. Therefore, a validated instrument that separately captures the various practices of strategic corporate entrepreneurship in its different forms can advance the field and provide more reliable support for its theoretical claims. Third, Paper II provides novel empirical evidence of internal organizational factors supporting strategic corporate entrepreneurship practices in the often-overlooked financial services sector. Therefore, Paper II identifies how organizations use their internal organizational resources to act entrepreneurially and strategically in the heavily regulated financial sector. In addition, Paper II adds new knowledge by moving away from the mono-sectorial manufacturing high-technology type of study commonly found in strategic entrepreneurship and innovation literature.

Paper III

The Dynamics of Entrepreneurial Decision-Making During the Creation and Development of New Ventures

The lack of qualitative approaches applied to the analysis of startups found in the literature review in Paper I was the starting point to explore decision-making dynamics in the startups examined in the Paper III. In these firms, decision-making tends to be highly dependent on the context where they operate. Moreover, decision-makers in startups tend to be concentrated on single or

small groups of individuals, which facilitates the study of opportunity-seeking and advantage-seeking dynamics linked to decision-making. This study examines two modes of decision-making—i.e., effectuation and causation (Sarasvathy 2001, 2009)—when creating and developing new ventures. Combining qualitative and quantitative methods and through a longitudinal approach, Paper III analyses 67 decisions across two ventures that were crucial for the digitalization process of the Swedish primary healthcare sector. The findings suggest a hybrid approach to decision-making, illustrating how the effectual and causal modes are combined and shift over time. A dynamic model is proposed where changes in regulations feature an external factor influencing shifts between both decision-making modes. Given that decision-making is context-dependent (Alvarez & Barney, 2005; 2007) and the context changes over time, decision-making modes are also likely to change.

Paper III offers several knowledge contributions. Theoretically, the findings offer a deeper understanding of external factors influencing effectual and causal decision-making over time. In this capacity, Paper III extends previous research examining stagnant conditions affecting decision making such as entrepreneurial expertise (e.g., Dew et al., 2009; Sarasvathy, 2001) from which it is not possible to get insights into dynamics in the use of effectual and causal decision-making over time. Therefore, Paper III contributes to theory development on decision-making in particular and, in the creation and development of new ventures in general. Second, Paper III offers a contrasting approach with studies that take effectual and causal decision-making as mutually exclusive and/or opposite decision-making modes (e.g., Brettel et al., 2012; Dew et al., 2009). Third, Paper III provides insights into how startups frame their decision-making and how they gauge the contingencies related to imagined paths into the future, addressing the recent debates in the entrepreneurship literature on shaping the future versus predicting the future (Alvarez & Barney, 2007; Dew et al., 2009; Sarasvathy, 2001; Shane & Venkataraman, 2000). Fourth, the results extend and support previous theoretical argumentations regarding the context-dependence of entrepreneurial decision-making in creating and developing new ventures (Alvarez & Barney, 2005). Overall, the findings helped address the aim of this thesis as this paper shows how startups can act entrepreneurially and strategically through an important instrument such as decision-making. Effectual decision-making is related to acting entrepreneurially as it implies exploring and experimenting with business opportunities (opportunity-seeking) where the potential losses are limited to an affordable level. It involves a proactive way to act accompanied by non-predictive control of the environment. In contrast, causal decision-making is related to acting strategically because it comprises elements of strategic planning for achieving predetermined goals where structures and processes are shaped and information on competitors, industry dynamics, and the marketplace is collected (advantage-seeking). Moreover, Paper III highlights how startups use their external embeddedness to act entrepreneurially and strategically. This dynamic

is reflected in their creativity to combine accessible resources, and their ability to reach flexible arrangements with other actors.

Paper IV

Becoming a Public Sector Insider

When exploring startups' external embeddedness, it was also observed that they formed relationships with a wide range of actors stemming not only from the business sphere but also from political, legal, and professional spheres (Hadjikhani et al., 2008; Lagerström & Lindholm, 2020). This was applied to the very first set of activities constituting the startups, allowing them to gain access and provide resources to the network (Coviello, 2006) and to take advantage of new business opportunities (Galkina & Chetty, 2015). Therefore, Paper IV focuses on other important activities startups perform that relate to acting entrepreneurially and strategically in the heavily regulated healthcare sector—networks. Examining the new business creation processes of startups from a relationship and business network perspective, it is highlighted another way startups use their external embeddedness to act entrepreneurially and strategically. Paper IV focuses on startups' new business venture formation process examined within the framework of the digitalization process of the Swedish primary health care sector. Specifically, it is analysed what it takes to become an insider in this sector. Accordingly, Paper IV explores the newcomer's gradual embeddedness (insidership) into the network and the ability of startups to form relationships with established actors to increase their possibilities to identify new opportunities and exploit them (Johanson & Vahlne, 2009; Forsgren, 2016). Despite the attention given by many scholars, our understanding of the new business formation process remains limited (Snehota, 2011). Attending to calls for more process-oriented research to new business formation (Landström et al., 2012), Paper IV offers a novel perspective on starting new business ventures, shifting the attention from static explanations to process explanations and from an internal perspective (within the company) to an external perspective (business relationships). Furthermore, it does take a different stand towards the literature on liability of outsidership (Johanson & Vahlne, 2009; Yamin & Kurt, 2018; Lagerström & Lindholm, 2020). The processual phenomenon of the Uppsala internationalization business development model is applied instead in a domestic, public-sector market. We found the Uppsala model applicable despite the lack of an international angle creating an opportunity for interesting studies on, e.g., startup processes on established domestic markets.

The findings show that exchanging resources between startups and established actors in the healthcare sector was crucial for the new business formation process. The rapid development of the business formation began when startups provided a valuable resource in the shape of technical knowledge into

the relationships they formed with established actors. Moreover, startups' comprehensive and previous knowledge about the healthcare regulation system was also an essential resource when entering the publicly funded healthcare system and its network. In this regard, this study reveals that relationship-based interactions in the business formation process occurred in sequential phases that contained the same dimensions of reaching increased knowledge and legitimacy through relationships but differ from each other in terms of the types of relationships developed and resources accessed. For example, during the first phase, privately owned startups with access to and knowledge of digital technology launched digital primary care by forming relationships with different actors established within the healthcare field. In the following two phases, despite their quick entrance and growth or perhaps even due to it, the digital healthcare providers dealt with several legitimacy achieving issues. The third phase was characterized by criticism concerning the digital services, both in terms of quality and, most all, in terms of the financial effects for the public healthcare system.

Paper IV offers several knowledge contributions. First, by attending to calls for more process-oriented research to new business formation (Landström et al., 2012), it provides important in-sights concerning the dynamics of constituent elements in the new business venture process, including the sequences of events through which start-up processes evolve (Ambos & Birkinshaw, 2010) and new insights about new ventures' initial entry into a business network (Snehota, 2011). Second, Paper IV contributes to the literature on networks, particularly the literature on the liability of outsidership. The processual phenomenon that has been much studied in the empirical context of internationalization and market entry is applied to a domestic public-sector market. Paper IV also contributes to a deeper understanding of the concept of legitimacy in networks. The importance of legitimacy for the startups entering a network (insiders) is partly explained by the fact that the process unfolds in a highly professionalized and politically sensitive context. This is particularly evident as the arguments differ considerably depending on the target audience. When the argument is aimed at investors, the startups emphasize a potentially favourable financial development and future returns on investments, an argument that would have reduced legitimacy if directed to, for example, politicians or patients. In this regard, the investigation illustrates that the same argument, in a context characterized by complexity, may increase or decrease legitimacy depending on the actor group targeted.

Altogether, the findings help address the aim of this thesis showing another critical activity used by start-ups to act entrepreneurially and strategically in the heavily regulated healthcare sector. By developing relationships through networks, startups obtained information from their external embeddedness, information that helped them identify potential opportunities (opportunity-seeking). One of the main identified opportunities by startups was to be publicly funded and to become subcontractors to publicly financed healthcare,

which allowed their entry into the region's reimbursement system. Throughout the newness of their digital platform for digital visits, startups pioneered the digitalization of Swedish primary healthcare. Furthermore, the external embeddedness of startups through networks provided them with crucial resources such as access to patients and important capabilities such as their ability to collaborate with and distribute their digital platform to public actors. Startups also mobilized and deployed resources such as their regulatory and medical knowledge, obtaining significant competitive advantages.

Frame of Reference

The overarching theoretical/conceptual pillars of the thesis are discussed in this chapter. The theoretical/conceptual anchor for addressing the research questions is Strategic Entrepreneurship. Several internal organizational resources are described together with decision-making and networks that allow firms to conduct strategic entrepreneurship through their external embeddedness. These theoretical/conceptual perspectives were chosen and analyzed to explain how firms conduct strategic entrepreneurship in heavily regulated sectors. Initially, the theoretical/conceptual perspectives are briefly described. Then, the chapter discusses the model of analysis where these perspectives are structured.

Strategic entrepreneurship

Strategic entrepreneurship research integrates two entities—entrepreneurship and strategic management—into a single unique entity. According to Hitt et al. (2001) and Ireland et al. (2003), strategic entrepreneurship is concerned with opportunity-seeking and advantage-seeking behaviors resulting in value for individuals, organizations, and/or society. This definition is in line with Venkataraman and Sarasvathy (2001, p. 651), who state that entrepreneurship and strategic management are “two sides of the same coin and that they are conceptually linked together.” Additionally, Kyrgidou and Hughes (2010, p. 45) define strategic entrepreneurship “as the process that facilitates firm efforts to identify opportunities with the highest potential to lead to value creation, through the entrepreneurial component and then to exploit them through measured strategic activities, based on their resource base.”

As the literature review conducted in Paper I suggests, there is a conceptual ambiguity and a variety of definitions of the phenomenon of strategic entrepreneurship. To embrace the several elements analyzed in this thesis, I stick with a broad definition of the concept. Strategic entrepreneurship is a term used to capture a firm’s efforts to exploit today’s competitive advantages while exploring opportunities that will be the base for tomorrow’s competitive advantages. Acting entrepreneurially and strategically helps firms respond to the different and significant environmental changes that face many of today’s organizations, especially those operating in heavily regulated sectors. One of

the essential outcomes of strategic entrepreneurship is a firm's ability to anticipate and respond to environmental change. This ability represents the source of sustainable competitive advantages and the effective response to environmental dynamics (Ireland & Webb, 2007).

Defining the terms "acting strategically" and "acting entrepreneurially" is a useful first step to becoming more familiar with strategic entrepreneurship. Acting strategically is given through advantage-seeking activities that will enhance a firm's long-term development (Simsek et al., 2017). A firm's long-term development includes several elements, such as scope decisions, resources acquisition and management, and intended sources of competitive advantage, among others. In the most general sense, acting entrepreneurially refers to actions taken to create newness (Ireland et al., 2003). There are different forms of newness, including new products, new processes to produce products, new ventures, and new ways to structure a firm. Although new products are the source of effectiveness because they satisfy a market need, internal organizational and structural resources are the foundation for efficiency as the firm wisely uses them. Later in this section, an examination of internal organizational resources and how they can be used to act entrepreneurially and strategically is offered.

Early conceptual work on strategic entrepreneurship further proposed several elements for acting entrepreneurially and strategically. These elements have been used in several constellations (Hitt et al., 2001; Ireland et al., 2001), including innovation, alliances, networks, international entrepreneurship, strategic leadership, and growth (Hitt et al., 2002). Furthermore, several of these elements have been used to elucidate strategic entrepreneurship's concept and its boundaries, including them in different models. Ireland, Hitt, and Sirmon (2003) were the first to suggest a strategic entrepreneurship model with elements such as entrepreneurial mindset, entrepreneurial culture, entrepreneurial leadership, the strategic management of resources, and creativity. Alternative models have also been suggested, including strategic entrepreneurship as a linear process (Kyrgidou and Hughes, 2010), bidirectionality among the elements of the initial model (Kraus et al., 2011), and viewing strategic entrepreneurship as a complex set of phenomena characterized by fluctuation and irreversibility, nonlinearity, and instabilities (Schindehutte & Morris, 2009). However, the empirical testing of these models has been quite limited (Luke et al., 2011), making it even more challenging to understand strategic entrepreneurship's "black box" (Mazzei, 2018). This thesis examines two elements from the Hitt et al. (2011) model affecting opportunity-seeking and advantage-seeking activities: organizational resources and external embeddedness¹.

¹ The thesis does not aim to test empirically the model because since the concept was originally introduced, there has been an expansion of model boundaries (cf. Wright & Hitt, 2017) and no definitive signs of convergence towards one particular model.

Next, an examination of these elements is offered to understand how they can help firms act entrepreneurially and strategically.

Internal organizational resources

A firm's internal organizational resources can be purposefully designed to facilitate entrepreneurial and strategic activities (Ireland et al., 2009; Tushman & O'Reilly, 1996). The literature identifies several internal organizational resources influencing the success of strategic entrepreneurship, also called strategic corporate entrepreneurship when conducted in large and established firms. Particularly, Hornsby et al. (2002), building on the work of others, operationalized four salient internal organizational resources—management support, work discretion (i.e., decentralized authority), re-wards/reinforcement, and time availability²—using a scale called the Corporate Entrepreneurship Assessment Instrument (CEAI)³. This thesis examines three of these resources: the support from managers, the degree of centralization of authority, and the reward/reinforcements. These organizational resources have been highlighted as essential internal organizational resources for conducting successfully strategic corporate entrepreneurship activities (Antoncic & Hisrich, 2001; Ireland et al., 2009; Hornsby et al., 2009).

Management support plays a key role in encouraging employees to believe that innovation is expected from all organization members. The support from managers is manifested in a range of activities, including championing innovative ideas, recognizing people who articulate those ideas, providing the necessary resources or expertise (e.g., seed money to initiate projects), and institutionalizing entrepreneurial practices within the firm's system and processes (Hornsby et al., 2002). Moreover, management support refers to the employees' perceived trustworthiness of their companies in detecting opportunities and their willingness to develop novel ideas (Stevenson & Jarillo, 1990). Therefore, it has been argued that managers should promote explorative behaviours among employees by encouraging them to solve problems in innovative ways and to seek opportunities proactively while enabling the firm to seek advantage in the marketplace (De Villiers-Scheepers, 2012).

Work discretion (i.e., decentralized authority) refers to the extent to which employees perceive they are empowered. In entrepreneurial organizational environments, employees are encouraged to make decisions about their work

² Given that the reliability of the factor "time availability" did not meet the .50 threshold (Nunnally, 1978), this variable was dropped from the analysis. More information is offered in the paper.

³ As most authors agree about the supportive organizational architecture (Covin & Slevin, 1991; Zahra, 1991; Antoncic & Hisrich, 2001; Kuratko et al., 2005; Ireland et al., 2009) necessary for firm-level entrepreneurship, this instrument was considered suitable to assess internal organizational resources and antecedents to strategic corporate entrepreneurship activities.

procedures and practices and are not criticized for making mistakes when innovating (Hornsby et al., 2002). Furthermore, an internal organizational climate that is perceived with certain levels of autonomy can retain and exploit the innovative talent of employees because a strong entrepreneurial motivation often provides employees with a certain degree of freedom (Kuratko et al., 2005). Autonomy decentralizes decision-making power to lower levels and promotes proactive behaviors among employees to solve problems and identify opportunities (Ireland et al., 2009).

Additionally, the factor reward/reinforcement has also been identified as an internal organizational resource directly related to strategic corporate entrepreneurship practices (Kuratko et al., 1990). When structured appropriately, it can motivate employees to engage in innovative, proactive, and risk-taking behaviors (De Villiers-Sheepers, 2012; Hornsby et al., 2009; Monsen et al., 2010). Using appropriate rewards/reinforcements, firms can enhance employees' willingness to assume the risks associated with entrepreneurial activity, offer challenges, increase responsibilities, and promote innovative people's ideas throughout the organization (Hornsby et al., 2009). Time availability represents another important factor expected to facilitate entrepreneurial activities. It refers to the sufficiency of time to develop novel ideas and implement projects within the organization (Kuratko et al., 2005). For new and innovative ideas to thrive, employees should have time to incubate their ideas.

Paper II builds on and extends past theorizing by suggesting that strategic corporate entrepreneurship is exhibited in organizations in a heterogeneous manner. That is, strategic corporate entrepreneurship activities pursue a combination of opportunity identification and competitive advantage (Ketchen et al., 2007). The different types of strategic corporate entrepreneurship activities are rooted in Covin and Miles's (1999) theoretical study and they are stated as sustained regeneration, organizational rejuvenation, strategic renewal, domain redefinition, and business model reconstruction (Morris et al., 2008). It is also advocated that the influence of internal organizational factors may vary depending on the two natures of the above-mentioned activities, i.e., –discontinuous and incremental (Ireland & Webb, 2007).

Discontinuous strategic corporate entrepreneurship involves significant alterations within the company along multiple dimensions concerning their products and services, organizational processes, structures, etc. It implies “acting entrepreneurially” since it involves newness, novelty, and actions directed at discovery and experimentation, enhancing the firm's efforts to identify entrepreneurial opportunities and pursue innovation (March 1991; Shindehutte & Morris, 2009; Kyrgidou & Petridou, 2011). Incremental strategic corporate entrepreneurship activities involve a series of regular minor adjustments in a firm's products and services, organizational processes, structures, etc. It im-

plies “acting strategically” since through these minor adjustments, firms attempt to maintain and update their current competitive advantages to address new market demands⁴ (Ireland & Webb, 2007).

The most successful firms combine their efforts to explore tomorrow’s opportunities while exploiting today’s competitive advantages (Ireland & Webb, 2007). Appropriate⁵ internal organizational resources are needed to pervade the different forms and nature of strategic corporate entrepreneurship activities. Developing a finer-grained understanding of how firms in heavily regulated sectors cultivate and use their internal organizational resources can illustrate how they use their internal capabilities to act entrepreneurially and strategically while navigating the difficulties inherent in heavily regulated sectors. Opportunity seeking and advantage-seeking activities demand different behaviors, which are facilitated by a firm’s internal organizational structure and culture. Indeed, the internal organizational resources required to support opportunity-seeking activities differ from those needed to support advantage-seeking activities (Ireland & Webb, 2007). For example, decentralization of authority enhances the potential effectiveness of a firm’s opportunity-seeking behaviors because certain levels of autonomy can retain and exploit the innovative talent of employees, powering proactive behaviors among them to solve problems and identify opportunities (Tatikonda & Rosenthal, 2000). In contrast, the centralization of decisions can benefit a firm’s advantage-seeking efforts, given that the development of those activities involves a need for greater certainty among employees regarding tasks and outcomes. The focus here is meeting short-term goals and a commitment to maintaining and exploiting existing competitive advantages (Ireland & Webb, 2007). Therefore, this thesis examines how several internal organizational resources can facilitate opportunity-seeking and advantage-seeking activities in large and established firms. This is important in that superior firm performance can be reached through a firm’s ability to design an appropriate internal organizational environment combining and potentially balancing the exploration of tomorrow’s opportunities (acting entrepreneurially) and the exploitation of today’s competitive advantages (acting strategically).

⁴ It is important to highlight that the line between discontinuous/acting entrepreneurially and incremental/acting strategically is blurry, and the thesis makes this distinction to facilitate the analysis.

⁵ “Appropriate internal organizational resources” refers to a firm’s and/or manager’s identification of the conditions that enable the design of an organizational structure that facilitates both types of activities.

External Embeddedness

It has been theoretically and empirically established that entrepreneurial and strategic activities are embedded in contexts that significantly impact the performance of organizations (Dacin et al., 1999, Thornton 1999). Several streams of research have identified contextual phenomena, including embeddedness, where an actor's contextual ties facilitate access to contextually bound resources; and bridging, where actors establish ties outside of a particular context, opening access to new resources (Korsgaard et al., 2015). Opportunity-seeking and advantage-seeking interactions are contextualized, emphasizing the multi-level nature of strategic entrepreneurship (Thornton 1999, Zahra 2007). The literature on entrepreneurship has contextualized descriptions of embeddedness in specific contexts. Studies of family entrepreneurship (e.g., Alsos et al., 2014; Arregle et al. 2015), academic entrepreneurship (e.g., Rasmussen 2011; Wright 2014), social entrepreneurship (e.g., Dacin et al., 2010; Vannebo & Grande 2018), community entrepreneurship (e.g., Haugh 2007; Johannisson 1990; Vestrum & Rasmussen 2013), and entrepreneurship in emerging economies (e.g., Pasillas et al., 2017) among many others have illustrated the importance of context and increased our understanding of its particularities. However, there is a lack of studies examining opportunity-seeking and advantage-seeking activities conducted by firms operating in heavily regulated sectors and their embeddedness in this challenging setting. In heavily regulated sectors, firms face successive changes in regulations that can affect their business activities. The regulatory framework can hinder or facilitate access to resources, condition the support of important stakeholders, and/or shape the nature of competitive interactions. Furthermore, in heavily regulated sectors, firms operate in a particular multi-actor marketplace where various systems' interdependencies can complicate the development of their new ventures in particular and the firm's growth in general.

One important instrument used by firms to act entrepreneurially and strategically in this challenging setting is decision-making (Alvarez & Barney, 2005; 2007). In this thesis, decision-making is analyzed as a context-dependent activity (Alvarez & Barney, 2005; 2007) conducted by startups during the creation and development of their new ventures. It involves defining a problem, generating and evaluating alternatives, selecting a course of action, and implementing and evaluating results (Gustafsson 2006). Given that a heavily regulated context changes over time, startups are likely to shift the emphasis from one decision-making mode to another or combine them (Read & Sarasvathy, 2005). In her ground-breaking research, Sarasvathy (2001, 2009) deepened our understanding of the new venture creation process by describing two

distinct modes of decision-making: causation and effectuation. Based on Sarasvathy's (2001) defining principles⁶, this thesis differentiates causation from effectuation in (1) the basis for taking action (selecting between the effects related to the given means vs. driven by a pre-determined goal); (2) the view of risk and resources (affordable loss principle vs. maximizing expected return); (3) the attitude toward outsiders (cooperative strategies through strategic alliances and partnerships vs. competitive strategies); and (4) the attitude toward unexpected events (exploiting contingencies vs. pre-existing knowledge).

Effectual principles are related to acting entrepreneurially since they involve a proactive way to act accompanied by non-predictive control of the environment. Effectual principles also involve exploration of opportunities within a set of means at hand, and the experimentation with these means to find out what goal fits best (Sarasvathy, 2001, 2009). In other words, effectuation implies experimenting with selecting business opportunities, limiting potential losses to an affordable level, and attracting committed partners. In contrast, causation is related to acting strategically since it comprises elements of strategic planning for achieving predetermined goals. It guides action by setting objectives, the achievement of which is contingent upon predetermined plans and through planned analyses. By applying causal principles, strategic endeavors are involved since structures and processes are outlined, and information on competitors, industry dynamics, and the marketplace are collected.

Previous literature in decision-making has explored different issues such as entrepreneurial experience (Baron & Ensley, 2006; Ucbasaran et al., 2009), failure experience (Behrens & Patzelt, 2016), entrepreneurial self-efficacy (Shepherd et al., 2013), and emotions (Klauckien et al., 2013; Mitchell & Shepherd, 2010). However, there is a lack of studies emphasizing the dynamics of startups' decision-making in heavily regulated sectors and how firms use their external embeddedness to act entrepreneurially and strategically through decision-making. Furthermore, longitudinal studies examining the development and potential shifts in the use of effectual and causal decision-making over time have been somewhat overlooked in the literature (except for Reymen et al., 2015; Maine et al., 2015 and Galkina et al., 2021). In this regard, this study provides evidence of how startups frame and shift their decision-making, assessing the contingencies associated with the regulatory framework where their ventures develop. By emphasizing and analyzing startups' decision-making in such a heavily regulated sector, this study opens new research avenues to investigate how startups act entrepreneurially and strategically through decision-making dynamics. Such a perspective also addresses the call for more

⁶ It is important to note that the precise nature of these four principles may vary (e.g., Brettel et al., 2012; Chandler et al., 2011; Dew et al., 2009; Fisher, 2012; Sarasvathy, 2001).

research on the relationship between startups and the (changing) context where they create and develop new ventures (Shepherd, 2015).

External embeddedness also includes relationships in the business network of external actors (Andersson et al., 2002) that firms develop in the local context. Through embedded relationships with external actors, firms may have an easier time identifying opportunities, accessing resources, and securing competitive advantages. However, the mere access and acquisition of resources do not guarantee better performances. The firm also needs to manage these resources efficiently to conduct and combine opportunity-seeking and advantage-seeking activities. Previous studies examining startups have focused on issues such as individual entrepreneurs (e.g., Nielsen et al. 2012; Read et al., 2016), the firm (e.g., Clarysse et al., 2011; Mustar et al., 2006; Wright et al., 2007), the institutional structures (e.g., Shane, 2003), business models and new venture creation (Meyer & Crane, 2014). In contrast, this thesis includes a study that takes a process analytical focus on startups' business relationships when creating and developing new business ventures. The study differs from most published studies analysing business relationships of startups as it turns the focus from the individual entrepreneur to the contextual setting where the firms operate. Rooted in the argumentations of Gartner (1985), the study turned the focus on the individual entrepreneur to a business relationship perspective. Gartner's argument highlighted the importance of explaining why and how new businesses develop but examining instead the process of organizing and integrating resources and the firm's external embeddedness when creating and developing new business ventures. This approach led to calls for a process-oriented focus on new venture creation (Landström et al., 2012). Networks imply developing relationships that can serve as sources of information and access to fundamental resources that facilitate the identification of potential opportunities (Ciabuschi et al., 2012). Through networks, firms use their external embeddedness to identify and reach new opportunities. That is, firms create newness not only by acquiring unique resources from other actors but also by providing resources that were not available in the network. Therefore, networks represent an essential activity for firms to act entrepreneurially, reducing uncertainty through external embeddedness and maximizing the possibility of positive contingencies and unintended discoveries. In the new venture creation process, the genesis of a new organization or venture depends on the resource interflow (Hung, 2006:363). As Katz and Gartner (1988) suggest, resource orchestration determines the scope of a new venture.

One of the most outstanding values of networks is providing resources and capabilities needed to compete effectively and obtain a competitive advantage (McEvily & Zaheer, 1999). Therefore, firms also act strategically through networks by accessing, mobilizing, and deploying several resources to exploit their spotted opportunities. Especially in heavily regulated and professionalized sectors such as healthcare, resources such as regulatory knowledge and legitimacy can be used strategically, for example, to create and/or maintain

competitive advantage through patient accessibility and cost-efficiency. Paper IV of this thesis examines the process of moving from an outsider position to becoming an insider in relevant business networks in the Swedish primary healthcare sector. The new business formation is viewed here as a process where firms reach an increased level of insidership by forming relationships and interacting with relevant network actors and therefore accessing essential resources such as knowledge and legitimacy (Johanson & Vahlne, 2009). The processual phenomenon of insidership and outsidership normally applied with an international angle is applied here in a domestic and public sector market, creating opportunities to uncover new insights and add new knowledge to the existing literature on networks.

Heavily regulated sectors

Policymakers and scholars have turned to the regulatory environment as a mechanism through which entrepreneurial and strategic endeavors can be encouraged and grown to harness economic benefits (Stenholm et al. 2013; Ciccone & Papaioannou 2006). Regulation can motivate or deter a range of economic outcomes. The combination of entrepreneurial (opportunity-seeking) and strategic (advantage-seeking) actions can positively affect job creation, wealth, income, innovation, and industry competitiveness (Braunerhjelm et al., 2015). However, the effect of regulatory conditions on strategic entrepreneurship is not well understood and can be nuanced given the broad range of regulatory mechanisms and possible areas of impact.

Policymakers can use the complexity of the regulatory environment as currency to encourage entrepreneurial and strategic action, enhancing the business environment. The investigation regarding how firms can act and combine entrepreneurial and strategic action in heavily regulated sectors is important from the view of scholarly policy and practitioners. Given the importance of strategic entrepreneurship in driving economic growth and generating important social and economic welfare gains, the regulatory set-up that governs entrepreneurial and strategic endeavors is decisive. Although several studies consider the regulatory framework such as entry regulation (Stenholm et al. 2013; Klapper et al. 2006) as a driver of entrepreneurship (Ciccone & Papaioannou 2006; Acs et al. 2008; Ardagna & Lusardi 2009; Djankov et al. 2002), the literature on regulations and strategic entrepreneurship is still underdeveloped. More in-depth examinations considering heterogeneity across multiple levels are needed (Audretsch & Walshok, 2013) as well as more studies that examine different types of entrepreneurial outcomes (Stenholm et al., 2013) such as new firm formation (see Estrin et al. 2013). In addition, the extent of regulation can also have a considerable direct or indirect impact on incremental and discontinuous innovations within large financial services firms (Das et al., 2017).

This thesis comprises a set of contributions particularly concerned with a firm's ability to conduct and combine entrepreneurial and strategic actions in heavily regulated sectors such as the financial and healthcare sectors. The intention is to shed light on several important questions likely to be relevant for future research on strategic entrepreneurship in heavily regulated sectors.

Summarizing the frame of reference

Acting strategically is concerned with a firm's long-term development and includes different elements such as diverse types of decisions, e.g., regarding scope, acquiring and managing resources, and developing competitive advantages (Simsek et al., 2017). As previously explained, entrepreneurship is, in the most general sense, concerned with actions taken to create newness (Ireland et al., 2003). Thus, strategic entrepreneurship involves actions taken to exploit the innovations resulting from a firm's efforts to continuously explore new opportunities (e.g., new organizational forms, new products, and new processes). In other words, firms rely on newness and its exploitation as the source of sustainable competitive advantages. Newness includes new products and services, new techniques used to develop new products, and new ways to structure a firm to facilitate innovation. Both actions are products of a series of decisions made on various issues and phenomena (Miller & Ireland, 2005). Strategic entrepreneurship activities result in a firm acting entrepreneurially through opportunity-seeking behaviors and acting strategically through advantage-seeking behaviors (Ireland et al., 2003).

Acting entrepreneurially and strategically is preceded by individual cognitions and a supportive internal organizational climate. Firms can foster internal organizational resources that facilitate the development of opportunity-seeking activities on the one hand and advantage-seeking on the other hand. That is, appropriate organizational resources are needed to face the tensions that surface as firms try to emphasize what they already do well (maintaining and exploiting current competitive advantage) while exploring new opportunities. To answer the first research question (RQ1), different internal organizational factors were examined (those presented above in the frame of reference). This examination enabled a deeper understanding of how firms can use their internal organizational resources to act entrepreneurially and strategically.

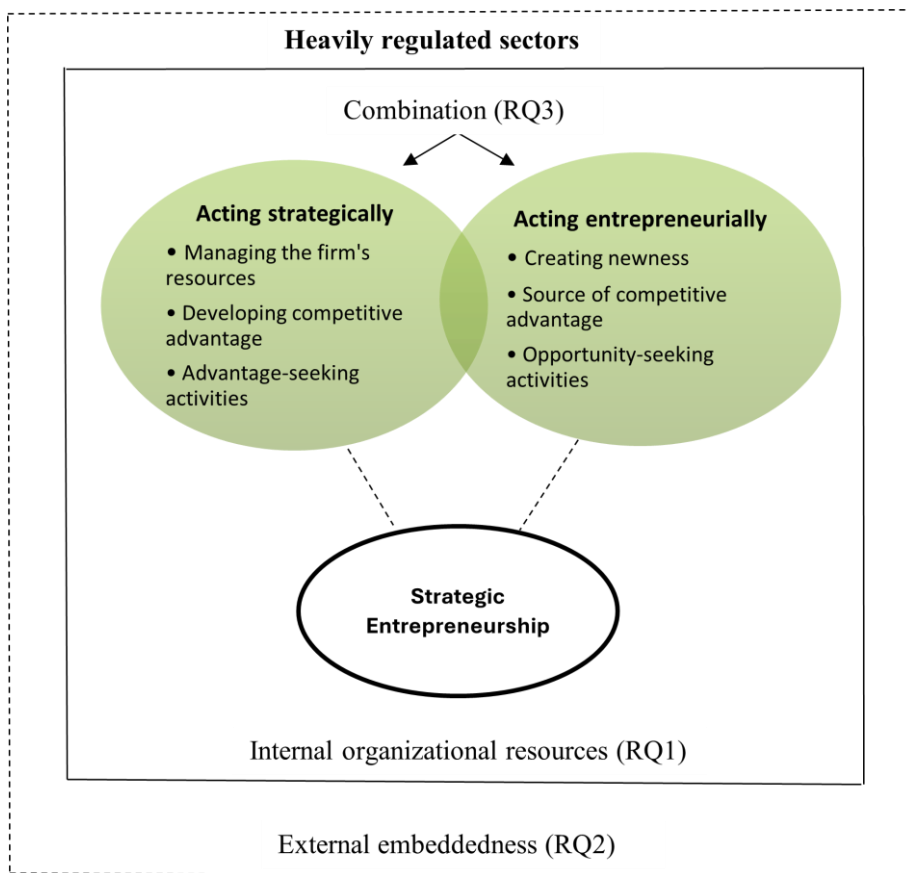


Figure 1. Strategic Entrepreneurship foundations (adapted from Ireland and Webb, 2007).

Especially in the case of established financial services firms, their entrepreneurial capacity for innovativeness, risk-taking, and proactiveness is often constrained by internal organizational structures, systems, and processes instituted during the formalization and growth of the firm, which are often aimed at achieving efficiency and meet regulatory requirements. An examination of the appropriate design of internal organizational resources offers important information and new insights for established firms operating in heavily regulated sectors. Using this information, firms can build internal systems and processes that allow entrepreneurial and strategic activities while avoiding stagnating inertia created by regulatory pressures. Previous studies on organizational inertia further supports this reasoning by highlighting that those investments in an organization's formal and informal structures bring stability and continuity (Hannan & Freeman 1984). Thus, a deeper understanding of the ability of these firms to design and use appropriate internal organizational

resources appears to play an important role to act entrepreneurially and strategically. A firm's capacity to anticipate and then adapt its response to environmental change is one of the important outcomes of effective strategic entrepreneurship (Ireland & Webb, 2007).

To answer the second research question (RQ2), an examination of decision-making and network dynamics was conducted. This provides a deeper understanding of how firms can use their external embeddedness to act entrepreneurially and strategically. As both decision-making and networks are embedded activities, they are often conducted in interaction with the context, which can enable and/or constrain those activities. In the case of decision-making (both causal and effectual), the investigation of its underlying dynamics in response to environmental contingencies provides new insights and a better understanding of how firms can use their external embeddedness to act entrepreneurially and strategically through decision-making. The analysis of the interplay between the environment and both decision-making modes offers a deeper understanding regarding when and how firms adapt their responses and actions (entrepreneurial and strategic) to the environment. In addition, the role of external factors, in this case regulations, explains shifts from effectuation to causation or vice versa. When it comes to network dynamics, it is well known that the success and survival of firms, especially startups, often depends on how well they succeed in establishing fruitful collaboration with other actors in the environment. Through networks, startups can increase their chances of identifying new opportunities and access information, resources, and knowledge (entrepreneurial action). Furthermore, through networks, startups can provide, mobilize, and deploy several resources to exploit their identified opportunities (strategic action).

Yet, strategic and entrepreneurial activities can be at odds with each other. Too much advantage-seeking activities can cause firms to grow their capabilities in a rigid state, losing their ability to identify new opportunities. Too much opportunity-seeking can cause firms to become unsustainable, trapped in a never-ending search for opportunities but little market development (Levinthal & March, 1993). A potential solution lies in combining both activities. However, no consensus exists about whether and how the combination of strategic and entrepreneurial actions is manifested, especially in the creation and development process of new ventures. A combination of both types of activities represents a firm's ability to be aligned and efficiently manage today's business demands while adapting to changes in the environment. The third research question (RQ3) explores how this combination is manifested, and it aims to elucidate different aspects of the interdependence of both activities. Furthermore, it can contribute to the current debate and lack of consensus on the factors that trigger these activities.

It is important to highlight that the variety of concepts and approaches included in the frame of reference offered a conceptual breadth that was needed

to reflect my understanding of how the research questions can best be explored, what direction the research must take, and the relationship between the different variables included in the study. This breadth and varied frame of reference guided the research through a system of concepts, variables, constructs, and assumptions, creating a structure that best explains the phenomenon that is being studied, in this case, a firm's entrepreneurial and strategic action.

Methodological Considerations

An overview of the related research activities conducted, and choices made are provided below. This section is organized in five parts: Research design and motivations, Research ontological and epistemological stance, Methodological choices, Data collection and analysis, and Research quality.

Research design and motivations

This section explains the methodological choices underlying the research in this thesis. Each study uses a different research strategy. In this respect, it has been argued that “the flaws of one method are often the strengths of another; and by combining methods, observers can achieve the best of each while overcoming their unique deficiencies” (Denzin 1989, p. 244). The research, which began five years ago as part of my Licentiate thesis, aimed to expand current knowledge on the development of corporate entrepreneurship and to contribute new theoretical and empirical insights into strategic entrepreneurship. First, a review of the field of corporate entrepreneurship research was conducted, which revealed a general lack of research on the related field of strategic entrepreneurship. The strategic entrepreneurship field was then and is still in its formative years, and by that time, there was a general lack of empirical studies that probed its theoretical conceptualizations, organizational drivers, and forms in which it is manifested. This was the starting point for the second paper of my licentiate. A survey study was conducted to test further empirically existing frameworks and constructs in the strategic entrepreneurship literature⁷. The sampling consisted of employees at a major Swedish insurance company that, through contacts with-in the Centre for Research on Economic Relations (CER) at Mid Sweden University (where I was a member), the company had expressed great interest in participating in the research. The fact that the insurance company belongs to and operates in the financial sector represented a unique opportunity to explore how strategic entrepreneurship can be conducted in sectors as heavily regulated as the financial sector.

Moreover, the review revealed a general lack of research in contexts other than manufacturing and technology-intensive industries. Therefore, access to

⁷ The Licentiate thesis is available in the following link: <http://www.diva-portal.org/smash/get/diva2:1261730/FULLTEXT01.pdf>.

the company represented an excellent opportunity to examine this largely unexplored sector in terms of different factors facilitating entrepreneurial and strategic action. When I started at Uppsala University in 2019, I was interested in continuing my research on the above mentioned issues. However, the healthcare sector was the new project's focus rather than the financial sector. For this reason, I found it beneficial to adapt the previous research to the new project. The papers included in the Licentiate thesis were almost entirely re-done, allowing me to align the investigation to the new project's demands. The review paper about corporate entrepreneurship was replaced by the review of the strategic entrepreneurship field, which led to Paper I included in this thesis. The second paper of the Licentiate was almost entirely reformulated. The data come from the survey study, and the theoretical/conceptual framework is almost the same, but the statistical methodology used and the variables tested were different.

One interesting coincidence in both projects was that the sectors examined (i.e., the financial services sector and the healthcare sector) are heavily regulated. These sectors were interesting settings for investigating opportunity-seeking and advantage-seeking activities as they present several challenges that can make a significant difference in the availability of firms when identifying opportunities and exploiting them (Aldrich, 1999; Baumol, 1996). In these settings, a firm's successful development and growth mainly depend on their ability and flexibility to respond to a changing regulatory environment (Alvarez & Barney, 2005). Consequently, the research was redirected to investigate how firms act entrepreneurially and strategically (i.e., exploring opportunities and exploiting current advantages) navigating the difficulties of their given environments. In this respect, strategic entrepreneurship fulfilled this purpose because it aims at resolving a persistent challenge among different types of firms such as startups and established firms: identifying and pursuing new business opportunities while securing a competitive advantage (Morici & Zander, 2020). Thus, the research at Uppsala University started with reviewing the extant literature on strategic entrepreneurship to track the development of this new field of research, which allowed me to know more about the areas that still had room to contribute to the field.

Paper I

The choice of conducting a literature review was based on the several advantages that this type of study presents. First, a literature review identified areas where further theoretical, conceptual, and empirical studies would be particularly needed and fruitful, providing a building block for the subsequent studies. Second, through the review, it was possible to integrate findings and perspectives from many authors and studies, which provided a foundation for the analysis and development of the study. Third, systematic reviews have been referred to as the gold standard (Davis et al., 2014) as they synthesize

research findings systematically, transparently, and reproducibly. Systematic methods can minimize bias and therefore provide reliable findings from which conclusions can be drawn (Lasserson et al., 2019). Accordingly, the literature review was important for mapping the field of research, synthesizing the state of knowledge, creating an agenda for further research, and providing an overall picture of the evolution and developments in the field of strategic entrepreneurship.

Paper II

The literature review revealed that the analysis of different types and dimensions of strategic corporate entrepreneurship and the examination of their organizational antecedents is still limited. This was the primary motivation for the design of the Paper II, which led to the testing of relationships through a series of hypotheses. Paper II examines the role of organizational factors when developing incremental and discontinuous strategic corporate entrepreneurship practices and employs a sequential exploratory design where the collection and analysis of qualitative data precede the collection and analysis of quantitative data. A pilot study was used to collect qualitative data followed by a survey that was used to collect quantitative data.

The semi-structured interviews conducted in the pilot study were necessary to explore the company's and employees' perspectives on their work environment. This allowed me to evaluate the role of certain organizational factors and how employees identified organizational systems and structures that may be consistent with or represent obstacles to developing strategic corporate entrepreneurship practices within the company. The second stage consisted of the distribution of a questionnaire. The choice of conducting a survey was based on the appropriateness of this instrument to test causal relationships between a set of variables using a hypothetic-deductive methodology (Dana & Dana, 2005). Furthermore, the financial sector was an interesting setting for investigating these issues. Since the 2008 financial crisis, it has been difficult for large and established financial services firms to improve the quality of services through innovation and entrepreneurship (Das et al., 2017). In this respect, although the vast literature has generally focused on traditional technology and manufacturing firms, there is a lack of research that identifies organizational factors that facilitate entrepreneurial practices in this type of firm.

Paper III

The literature review also revealed a lack of qualitative studies that empirically examine the combination of opportunity-seeking and advantage-seeking activities. Coding was considered the most appropriate technique because coding is a process that allows data to be extracted, grouped, and connected to grasp their meaning (Grbich, 2007; Saldana, 2009). Therefore, codes were

first developed to recognize causation and effectuation in the data. Two types of coding have been distinguished: those defined a priori and those that emerge from the data (Lichtman, 2013). In Paper III, the existing conceptualization of effectuation principles (means orientation, affordable loss, co-creation partnership, and leveraging contingency) and causation principles (goal orientation, expected return, competitive analysis, and avoid contingency) (see Dew et al., 2009; Sarasvathy, 2001, 2009) provided the theoretical foundation to employ an a priori coding strategy. All key events and decisions were first placed chronologically in event tables. Event tables were used to enhance the exploration of effectual and causal decision-making dynamics and their potential influencing conditions. An event-sequence graph for each case was created to investigate change points and temporal patterns in effectuation and causation decision-making modes. Then, a more quantitative approach was developed, calculating the moving average of the number of effectuation and causation dimensions coded per decision event for each case. Finally, content analysis was applied to explain and interpret the primarily quantitative findings. Therefore, the combination of both approaches facilitated and enriched the discussion of the results.

Paper IV

To grasp the new business venture formation process, Paper IV develops process-focused explanations following suggestions by scholar as Langley (1999), Pettigrew (1997), and Van de Ven (1990). A longitudinal case study was conducted by following several procedures to build theory on the new business venture formation process and network dynamics. In this regard, it has been argued that an adequate analysis of new business venture formation must consider how it would affect other businesses over time (Snehota, 2011). Furthermore, a longitudinal approach allows the observation and description of the phenomenon of new business formation so that the process can be identified and empirically documented (Miller & Friesen, 1982; Dunkerley, 1988). This longitudinal design was especially appropriate for Paper IV because it enabled the examination of a sequence of events in terms of some underlying mechanisms (i.e., startups' relationships) and the circumstances or contingencies within which these mechanisms operated (Van de Ven, 1990). Hence, this methodology allowed mapping the activities and learning about different actors' roles as the process unfolded over time.

Additionally, since the study is based on a real-life phenomenon, the case study method was a suitable research design (Riege, 2003) where the new business venture formation process is the case. The case study design enabled the formulation of new explanations and interpretations about unknown issues of the new business venture formation process by exploring relationships and connections between different actors involved in the process. This approach

enabled a holistic and in-depth understanding of the case (i.e., the new business venture formation process over time) and contributed to an empirical understanding of the phenomenon (Yin, 2009) and new theoretical insights to existing theories (Dubois & Gadde, 2002; Eisenhardt, 1989). The stepwise methodological activities mentioned in the above sections are presented more comprehensively in a later section below.

Methodological choices

Mixed methods

A mixture of qualitative and quantitative approaches provides a more comprehensive understanding of the research questions (Tashakkori & Teddlie, 2003). A mixed-methods approach (in both data collection and analysis) was chosen as some research questions required more deductive (quantitative) approaches and others required more inductive (qualitative) approaches. The application of mixed methods resulted in divergent views and findings and sometimes amalgamating statistics and quantitative perspectives. Several authors defend using a variety of quantitative and qualitative methods in entrepreneurship research (Gartner 2001; Ucbasaran et al., 2001; Brush et al., 2003). Moreover, many researchers explicitly call for integrated methods in the entrepreneurship field (Hoang & Antoncic 2003; Coviello & Jones 2004; Ritchie & Lam 2006). This is not surprising as entrepreneurship is a multifaceted and complex area of research where the application of a narrow methodological approach would only show a small part of the phenomenon (Molina-Azorín et al., 2012).

Examinations of heavily regulated sectors such as those analyzed in this thesis can benefit from a mixed-methods approach. Evolving problems faced by firms operating in these sectors inherently demand dynamic perspectives from diverse methodologies. Qualitative and quantitative approaches have been combined to build on their “complementary strengths” and weaknesses (Morgan, 2007). For example, although quantitative research alone may not be adequate for understanding the context where firms act entrepreneurially and strategically, qualitative research alone can invoke subjectivity. Furthermore, the choice of a mixed-methods approach is aligned with my philosophical positioning. Using both inductive and deductive reasoning allows activating a wide range of research methods in producing valid knowledge claims (Creswell, 2008). This provided opportunities for multiple perspectives to examine entrepreneurial and strategic endeavors developed by established firms and startups in heavily regulated sectors.

Data collection and analysis

In the following subsections, I present the mixed-method techniques used for data collection and data analysis. Table 2 and 3 provides a summary of the techniques used to collect and analyze the data.

Tabell 2. Data collection

Data collection			
Paper I	Paper II	Paper III	Paper IV
Literature Review	Qualitative and Quantitative	Quantitative and Qualitative	Qualitative
1. Use of the search engines offered on the respective journal home	1. Pilot study consisting of four semi-structured interviews	1. A total of 1007 digital newspapers, primarily collected from Retriever (Mediearkivet) database	1. A total of 399 digital newspapers, primarily collected from Retriever Research (Mediearkivet) database
2. A manual search through-out all journal issues	2. A 7-point scale survey was conducted in November 2017 in three waves, each about two weeks apart.	Total articles included: 1007	2. Press releases: 87
Final sample: 131 articles	Final sample: 182	2. Press releases: 158	3. Interviews found the media articles: 54
		3. Interviews found in the digital newspapers: 102	4. The firms' annual reports were collected from Retriever Research (Mediearkivet) database.
		4. The firms' annual reports were collected from Retriever Research (Mediearkivet) database.	

Tabell 3. Data analysis

Data analysis			
Paper I	Paper II	Paper III	Paper IV
<p>1. A first analysis concerning year and journal of publication, type of paper (conceptual, empirical, review, etc.), methodological approach (qualitative, quantitative, simulation, etc.), and scope of managerial implications</p> <p>2. A second analysis with keywords to detect topics and areas of research on strategic entrepreneurship</p> <p>3. Content analysis of a sub-sample of 37 articles representing the core of the field</p>	<p>1. Exploratory Factor analysis</p> <p>2. Harmon's Single Factor Test</p> <p>3. Structural Equation Modelling</p>	<p>1. List of key decision events: coding for effectuation and causation decision-making, differentiating them in four dimensions</p> <p>2. Identification of change points: an event-sequence graph created to calculate the moving average of the number of effectuation and causation dimensions coded per decision event for each case</p> <p>3. Content analysis</p>	<p>1. After an initial reading and analysis of the collected data, we created chronological narratives, including one overall narrative and additional narratives based on each of the participating start-ups.</p> <p>2. During the first-order coding, a list of relationships was constructed, divided into the main categories privately owned actors or publicly owned actors.</p> <p>3. The second-order coding was based on two main theoretical concepts of empirical and theoretical importance: legitimacy and knowledge</p>

Paper I

A systematic search for articles published between 2001 and 2019 in leading entrepreneurship and strategic management journals was conducted to examine and outline the evolution and contents of strategic entrepreneurship research. We identified articles in two steps. First, we searched "strategic entrepreneurship" in the title or abstract through the search engines offered at the respective journal home pages. Then, to avoid the often unreliable indexing, a manual search throughout all journal issues was conducted. This procedure aimed to identify articles that specifically purported to contribute to the strategic entrepreneurship conversations (for further details about the selection

process, see Appendix 1 in Paper I). The search and examination of papers generated a sample of 131 articles.

These articles were analyzed based on the year and journal of publication, journal outlets, and research topics. In a second analysis, keywords representing the main topic examined in each article were assigned. This analysis identified several issues. First, it was useful to detect areas where research on strategic entrepreneurship has been especially concentrated. Second, it helped identify whether the field had been growing and moving towards a more clearly defined paradigm (Ireland, 2007). Third, it uncovered whether the research conducted in the field had forged closer links between the fields of entrepreneurship and strategic management as it had been promised. To obtain a sense of the relative weights of main topics over time, we calculated the Herfindahl-Hirschman Index (HHI), which captures the dispersion of research across the identified main topics over successive five-year periods. Finally, we performed a content analysis (Krippendorff, 2004), extracting articles that referred to “strategic entrepreneurship” in the title, abstract, or introduction. This more focused sub-sample of 37 articles represents the core of the field where authors specifically state an ambition to contribute to the field. This analysis reinforced the notion that the field is still developing, illustrating its lack of clear lines of progress.

Paper II

The method used to collect data for the Paper II was a pilot study followed by a survey. As a starting point, four pilot interviews were conducted in November 2016 at one of the company offices to obtain preliminary picture of the company’s and employees’ perspectives about their work environment. The semi-structured questionnaire and the subsequent questionnaire were based on the Corporate Entrepreneurship Assessment Instrument (CEAI). The pilot study provided a preliminary evaluation of whether my proposal was workable. Moreover, it enabled me to assess the company’s current situation, particularly how employees identified internal organizational factors that may be consistent with or represent obstacles to developing strategic corporate entrepreneurship practices within the company.

A quantitative analysis followed the pilot study to confirm and test the proposed relationships statistically. Between November 1 and November 22, 2017, two company representatives e-mailed the potential respondents a link to the survey. The respondents were asked to answer a 7-point Likert scale (1 = strongly disagree and 7 = strongly agree). As mentioned above, the items included in the survey addressed measures in the CEAI. The survey’s content, construct, and convergent validity was assessed by its creators (Hornsby et al., 2013). The assessment supported the existence of four of the five originally proposed factors (i.e., management support, work discretion, reward/rein-

forcement, and time availability), where only 18 of the 48 original factors remained. Following the recommendation of Hornsby et al. (2013), these 18 items were included in the questionnaire. Since a valid instrument was not found in the literature that separately captures strategic corporate entrepreneurship practices, the survey also included other items to capture employees' involvement in such practices. A complete but preliminary version of the survey was presented in a seminar at Uppsala University. A group of researchers with expertise in the corporate entrepreneurship field helped shape the survey's contents and evaluate its appropriateness. As the first step of data analysis, exploratory factor analysis was conducted to ascertain whether the items loaded appropriately in each component (dependent and independent variables). Then, as the survey was based on self-reported information, common method variance was investigated using Harmon's Single Factor Test to address this issue. Additionally, the raw data (including the dependent variables) were analyzed through exploratory factor analysis and inspection of the unrotated factor solution (Podsakoff et al., 2003). Finally, to test for associations between the internal organizational factors and strategic corporate entrepreneurship practices, the Structural Equation Model was performed using LISREL 8.80 (Jöreskog & Sörbom, 2007). This statistical analysis was chosen because it simultaneously models and tests complex relationship patterns, including several hypotheses.

Paper III and Paper IV

These two papers concentrate on the use of archival material as the primary data source. Unfortunately, it was not possible to conduct interviews. After several attempts to contact the actors involved without a positive response, I decided to conduct the study with archival data as a primary source. The archival material consists of digital newspapers collected from Retriever (Mediarkivet) database. The Retriever database includes approximately 25 million news articles in full-text dating from 1981 from approximately 500 news sources such as newspapers, magazines, and news agencies. To collect an exhaustive and relevant number of digital news articles, I followed the guidelines for electronic data gathering suggested by Schafraad et al. (2006) to obtain a valid, reliable, and reproducible corpus for the subsequent content analysis⁸. The final selection contained 1007 articles, 102 interviews, and 158 press releases. This sample was downloaded as a PDF and later introduced in NVivo to organize and code the selection. The vast amount of data obtained revealed the advantages of this data collection technique as it provides a much broader

⁸ A detailed description of data gathering, and the protocol followed to collect the data are presented in the section sample selection. A detailed list of the interviews and digital media articles included is in Appendix 1 of this document.

picture of the phenomenon of interest than other techniques. This data collection technique resulted in more extensive data and therefore produced a much more representative set of data for analysis. Therefore, the analysis of archival material also counters the concerns related to reflexivity (or the lack of it) inherent in other qualitative research methods such as interviews. Reflexivity refers to the awareness of the researcher's contributions to the construction of meanings attached to social interactions and the acknowledgment of the possibility of the researcher's influence on the research. As archival data contain information that has been recorded without the intervention of the researcher, the researcher's presence does not alter what is being studied (Bowen, 2009).

Another important advantage of archival data, especially digital media articles, is that it has a massive volume where each article itself delivers a sub-level of additional information. The data multiply manifold, breaking the articles down into paragraphs, sentences, or just sheer word counts. Furthermore, they cover various topics aimed at different target groups and varying political spectra (von Bloh et al., 2019). Additionally, the digital media articles show signs of indexicality (each article is unique and has a known source, time, and date), relationality (each article is matched with other data sources), scalability, and veracity. News data are also valuable because they contain many layers of information (Mayer-Schonberger & Cukier 2013, Dodge & Kitchin 2005).

Although conventional survey data on entrepreneurship have enabled new insights into the phenomenon, there is a need for fresh approaches using modern data sources such as digital news data (von Bloh et al., 2019). Until now, it has been unknown whether archival material embodies valuable contributions for entrepreneurship research and whether it performs better or worse than conventional approaches. There are several reasons for this issue. Empirical or evidence-based research on entrepreneurship has increased within the field of entrepreneurship research in recent decades (see Audretsch 2012). Consequently, the leading source for quantitative data on entrepreneurship has been large-scale surveys (see Coviello & Jones 2004), which require significant effort and resources. Therefore, searching for less expensive and easier methods to collect data on entrepreneurship will help advance the research in the field, especially considering new methods and availability. However, cost and accessibility of data are not the only issues that motivate the search for new sources. Although the entrepreneurship field has gained much from exploiting quantitative methods, many new findings seem to be small increments building on the existing knowledge base (von Bloh et al., 2019). Hence, the methodology used until now in the entrepreneurship field needs to be revisited and modernized. Due to digitalization and internet-based platforms, digital news data, as used in this thesis, allow for several new opportunities to quickly create unique and specific databases. Accordingly, this thesis contributes to the field by using new and promising data sources to unveil novel insights into entrepreneurship.

Despite the numerous advantages of using archival data, several methodological limitations need consideration. Using archival data could make it difficult to determine whether the data represent the population of interest. To avoid this problem, we followed the guidelines for electronic data gathering suggested by Schafraad et al. (2006) to obtain a valid, reliable, and reproducible corpus for the subsequent content analysis. The corpus was checked following several criteria such as topic relevance by controlling for possible included duplications where irrelevant articles (those containing opinions or debates) were discarded. Moreover, we excluded articles where the selected keywords used to collect the data dealt with issues that were not related to primary healthcare as well as articles with identical information.

Another methodological limitation is that the researcher had no control over the rigor of the interviews done by the journalists since the interviews were not specifically designed and created by the researcher, who could adopt a specific research design for the questions (Welch, 2000). However, the fact that the interviews were not designed or conducted by the researcher does not detract from the content relevance of the responses to the research. Since the questions have been conducted by a journalist, who presumably is an expert in conducting interviews, gives even more validity to the information contained in the interviews. Furthermore, the researcher's interactions with respondents when conducting interviews can be obtrusive and reactive (Miyazaki & Taylor, 2008). Therefore, several issues involved when conducting interviews such as those related to the distortion of the respondents' responses were avoided. Additionally, the archival material allowed us to discover many details that, when it had been possible to interview the informants, they probably would not be able to remember those details at the time the study was conducted. This does not mean that archival documents are necessarily more objective or factual than interviews but that the data are likely to yield a different view of the actors' dynamics. For Papers III and IV, this extensive data gave us detailed knowledge of how actors interacted when forming a new business and their reasoning about these interactions. Furthermore, the large amount of data collected facilitated the longitudinal analysis, which would have otherwise been difficult to collect due to scale. It provided rich information on the context where the new venture creation and development process unfolded, which was particularly important for analyzing the issues explored in the Papers III and IV.

The analytic procedure entailed finding, selecting, appraising (making sense of), and synthesizing data (excerpts, quotations, or entire passages) contained in the digital media articles and documents, which were then organized into major themes, categories, events, and case examples through content analysis (Labuschagne, 2003). Particularly for Paper III, the first step was to analyze the data to identify key events and decisions, which were later chronologically matched in event tables. These sequential event tables included dates, key decisions or events, and supporting quotations from interviews,

which facilitated categorization, comparison, and analysis (Eisenhardt & Graebner, 2007). Initially, two categories were created representing effectuation and causation decision-making. Then, based on Sarasvathy's (2001) principles, four dimensions were included in each category: (1) basis for taking actions; (2) attitude toward outsiders; (3) attitudes toward unexpected contingencies; and (4) predisposition toward risk and resources. Therefore, eight dimensions were created in an initial list of empirical indicators, iterating between the literature (especially Read et al., 2009; Reymen et al., 2015; Dew et al., 2009; and Sarasvathy, 2009) and the empirical data. This allowed me to further investigate change points in the use of effectuation and causation. See Paper III (page 13) for a detailed explanation of the data analysis procedure.

In Paper IV, the data were analyzed based on two starting points: the empirical phenomenon of digital healthcare including the changes in the overall market for healthcare due to this movement and, the process of moving from an outsider position to an insider position in relevant business networks. The latter starting point allowed for the study of startups' new business venture formation from a relationship and business network perspective. Based on these starting points, the study takes an abductive approach, constantly moving between theory and empirics (Dubois & Gadde, 2002). The coding process followed the procedures presented by Gioia, Corley, and Hamilton (2013), advocating a mix between empirically- and theoretically-based coding and re-coding.

A list of relationships was constructed during the first-order coding. The first-order coding revealed that the process was divided into three distinct phases based on the actors' argumentation and actions. The empirically-based first order coding directed the analysis towards the literature on startups, SME's internationalization processes, relationships, networks, and healthcare markets, in our case applied to the home-market of the startups. The initial part of the coding process—the first order coding—was followed by a second-order coding based on two main theoretical concepts—i.e., legitimacy and knowledge. The concept knowledge was coded as different forms of knowledge relevant within the business formation process. It was divided into two main categories: knowledge gained by the startups through relationships and knowledge added by startups to the relationships. The main theoretical categories, which were divided into subcategories, constituted a coding tree that guided the analysis.

Research ontological and epistemological stance

The thesis follows a pragmatic ontological and epistemological stance. My main concern was applying research methodologies that best addressed the research problem and the research question of each study (Tashakkori & Ted-

dlie, 2003). In methodological terms, according to the pragmatic stance, a researcher should choose the procedures and research designs that are most suitable for the research question(s). This is not to say that “every-thing works,” but it is a question of understanding how research questions may best be addressed (Hofer & Bygrave, 1992).

A pragmatic stance presents the main advantage of combining methods based on their practical utility and is not intrinsically linked to specific philosophical positions. Accordingly, pragmatism does not force a choice between interpretivism and positivism but allows multiple approaches (Tashakkori & Teddlie 2003; Creswell & Creswell 2005). Therefore, this thesis includes different approaches and perspectives where qualitative and quantitative methods are combined. For example, some studies of this thesis present more deductive reasoning using inferential and descriptive techniques to test relationships, whereas others have a more interpretivist approach, encompassing inductive reasoning, context-specific qualitative data (Ketokivi & Mantere, 2010), and narratives (Creswell & Tashakkori, 2007). Consequently, the thesis includes a wide range of theoretical and empirical explanations at different levels of analysis, painting a more complete picture of the opportunity-seeking and advantage-seeking activities conducted by firms in heavily regulated sectors.

The rationale behind the chosen sectors

As this thesis examines entrepreneurial and strategic endeavors in heavily regulated sectors, the financial and healthcare sectors were ideal for conducting the research. The susceptibility of opportunity-seeking and advantage-seeking activities to contextual influences has long been identified as a pertinent issue (Schendel & Hitt, 2007). As previously noted, my licentiate project surveyed companies in the financial sector, a sector that was affected by several changes in its regulatory framework such as new legislation resulting from the 2008 global financial crisis. For example, new legislation such as the Payments Service Directive aimed at modernizing cross-border EU-wide payments and Basel III was designed to improve the banking sector’s stability, risk management, and transparency, which forced established financial services firms to revisit their internal capabilities, competencies, and operations (Allen et al., 2012). Additionally, new technologies and digital service providers have affected the whole sector, taking over some of the traditional financial firms’ operations and tasks by providing innovative services such as online payment platforms (e.g., PayPal) and alternative financing methods (e.g., crowdfunding). Consequently, many financial services firms became aware of the need to act entrepreneurially and strategically not only to renew and adapt their products and service offerings and their current organizational instruments to the changing environment in which they operate but also to maintain their competitive advantages.

The healthcare sector was based on the project conducted at Uppsala University. This sector has also faced several regulatory changes in the last decades, especially in Sweden. In 2007, the Swedish National Choice of Care Reform was initiated to improve performance and strengthen the role of primary care, providing freedom of choice, new reimbursement models, and an opening for private and non-profit actors to compete. In addition, Swedish primary care went through a significant reform of the patient's law (Patient Act, 2014), which entered into force on January 1, 2015. This reform gave patients the right to seek healthcare anywhere in Sweden even outside their home county. Several startups, aware of the poor access to primary healthcare in Sweden (World Health Organization, 2017), started to develop different digital solutions that promised to increase access to primary healthcare. After the new patient's law went into effect, the public primary healthcare center Bra Liv opened the first publicly-owned digital primary healthcare center in Sweden based on the cooperation with the startup KRY. This collaboration became crucial since KRY was the first private digital actor collaborating with a publicly funded healthcare center, opening legal opportunities for other startups to become part of publicly financed primary healthcare. Before this collaboration, they could only operate outside the Swedish public healthcare system and outside public funding. This scenario was ideal for examining how startups use their external embeddedness to act entrepreneurially and strategically in the heavily regulated healthcare sector. A detailed description of the sample selection is offered below.

Sample selection

Established firms operating in the financial sector

The sample used to examine strategic corporate entrepreneurship practices were collected from employees at a large insurance company in Sweden. The company offers services based on different combinations of non-life insurance, accident and medical insurance, life insurance, pension saving plans, and various banking services. The insurance company was selected for several reasons. When I was working on my licentiate thesis at Mid Sweden University, I became a member of the Centre for Research on Economic Relations (CER), a network where research and business activities are conducted with representatives from private companies and public organizations operating in different sectors. In this network, I met several representatives of the insurance company who expressed interest in participating in the research; specifically, they wanted to learn how to improve their internal organizational resources to facilitate the flow of new ideas and the development of opportunity-seeking and advantage-seeking activities.

Another reason to choose this sample was my interest in examining entrepreneurial and strategic endeavors in settings other than the well-known manufacturing and technology-intensive settings. In line with this, the susceptibility of entrepreneurial and strategic action to external influences has long been identified as a pertinent issue (Schendel & Hitt, 2007). These established and large financial services firms operate under a very dynamic and heavily regulated sector. Additionally, a growing number of new global actors (e.g., financial startups) are now offering financial services that were traditionally exclusively offered by established firms (Das et al., 2017). This has forced established and large financial services firms to innovate and renew their traditional products and service offerings. Especially since the 2008 financial crisis, established financial services firms have faced several new legislations (e.g., Payments Service Directive and Basel II) that demanded revisiting their current strategy and operations to comply with the latest regulatory requirements. Therefore, financial services firms have been operating under a tight regime that has hindered the flow of new and innovative ideas within firms. These regimes created organizational inertia (Das et al., 2017) and particularly hindered opportunity-seeking activities. Therefore, access to this type of firm was a unique opportunity to explore how they use their internal organizational resources to act entrepreneurially and strategically.

Startups operating in the healthcare sector

Looking at heavily regulated sectors as an empirical setting, I examined startups operating in the healthcare sector. Based on the concept introduced in the first European Startup Monitor (Kollmann et al., 2016), this study defines startups as being younger than ten years, featuring highly innovative technologies, and striving for significant employee and/or sales growth. This definition⁹ differentiates startups from conventional businesses and small to medium-sized firms (SMEs) that do not promote innovative products/services or business models. In contrast, startups are considered “gazelle companies”—growing young ventures built to create wealth. Startups that grow fast and become “large” are often market disruptors taking advantage of undefined or unclear regulatory areas (Tusk, 2018). Therefore, until well-defined regulations are established to govern the production, distribution, and consumption of the new technologies and/or new markets, the activities resulting from startup decision-making and their entrepreneurial and strategic partnerships can potentially modify the sector’s regulatory framework. Some startups have even been described as engaging in “regulatory entrepreneurship” (e.g., Uber, Airbnb) because they interact with regulations by mobilizing their consumers

⁹ Although this definition of startups has often been used in the field of digital economy, it also includes startups from other industries such as healthcare/biotech and finance/fintech (ESM, 2015).

and operating despite market-specific regulations (Pollman & Barry, 2017; Tusk, 2018).

The sample, which includes startups operating in the healthcare sector, was selected for several reasons. First, their entrepreneurial and strategic endeavors pioneered the digitalization process in the primary healthcare market in Sweden. Between 2016 and 2017, several startups launched their respective new business ventures, including digital visits to doctors. They acted entrepreneurially and strategically through decision-making dynamics and networks. They understood the needs of the primary healthcare sector, interacting with it, and identifying its threats and opportunities. The frenetic entrepreneurial and strategic action of startups provided an interesting setting to explore how they use their external embeddedness to act entrepreneurially and strategically and at the same time succeed with their new ventures in a heavily regulated sector such as healthcare.

Second, these startups were founded by independent entrepreneurs not as part of a large and established organization. This is relevant because startups' entrepreneurial and strategic actions might differ from the established and large firms' entrepreneurial and strategic actions. Although companies of all sizes must deal with similar challenges, startups have specific challenges that established companies are not burdened with. For example, startups must deal with limited resources, especially in the early stages, as startups often lack the money, staff, and infrastructure that an established firm has at its disposal. In addition, startups and established firms face different types of managerial challenges. Moreover, most established and large firms sometimes present complex internal bureaucracies that can slow their decision-making dynamics. This might influence and differentiate how startups and established firms act entrepreneurially and strategically but also how they interact and adapt to their environment. The third reason to study startups in the healthcare sector was the specific situation regarding regulatory changes that the primary healthcare market in Sweden has undergone in the last years. The startups analyzed in this thesis became available as a public welfare service as they are private providers. With some exceptions, patients in Sweden pay a small fee but the taxpayers support the main cost. As these startups became more popular, demand for primary healthcare, and consequently costs, increased dramatically.

Research quality

This section describes the steps taken in data collection and data analysis to increase the validity and reliability of the four studies reported in this thesis and their limitations.

Paper I

Unlike traditional narrative reviews, systematic reviews aim to minimize biases in the process of locating, selecting, coding, and aggregating individual studies (Börner et al., 2003). In both structural and conceptual ways, the process of delimiting the strategic entrepreneurship research involved several consecutive steps to ensure the validity and reliability of the study. To avoid source-dependent selection bias, the process that generated the empirical content of the literature review involved two rounds of article identification. In the first round, we used the search engines offered on the home pages of the journals to identify all published articles that included the term “strategic entrepreneurship” in the title or abstract. In the second round, we performed manual searches of all issues in each journal. This round was conducted to avoid problems related to journal indexing, which often presents ambiguities, and to deal with the use of alternative terminology (e.g., ambidexterity and exploration versus exploitation). For further details about the selection process, see Appendix 1 in Paper I.

Moreover, biases in scope were minimized or made explicit with the consistent application of clearly expressed inclusion criteria (i.e., articles with the term “strategic entrepreneurship” in the title or abstract). Finally, temporal constraint biases were also avoided because the review equated the formal beginning of research in the field with the publishing of two foundational articles by Hitt et al. (2001) and Ireland et al. (2001). This reasoning suggests that no studies on the field were published before the identified beginning of strategic entrepreneurship research, which omits the likelihood that treatments of and contributions to conceptualizations of strategic entrepreneurship existed before the period investigated.

Paper II

In Paper II, a pilot study was conducted in preparation for a larger-scale study. A pilot study helps identify unclear or ambiguous statements, potential problems, and biased data as the result of participants misunderstanding the questions (Sekaran, 2003). In addition, a pilot study can identify what interviewees know about the concepts in question, which also increases the validity of the final survey (Chenail, 2011). Furthermore, an interview protocol was developed to set the guidelines when conducting the interviews, which included allowing adjustments during the interviews. The four respondents received a formal presentation of the research project in an introductory letter. The letter included explanations concerning the procedural remedies recommended by Podsakoff et al. (2003), such as assuring respondent anonymity, providing contextual information, explaining definitions to reduce ambiguity, and informing them that there were no right or wrong answers. The interviews lasted approximately 45–60 minutes.

Furthermore, because all items intended to capture internal organizational factors that have already been extensively discussed and tested by researchers (Hornsby et al., 2013), a high degree of validity was expected regarding the primary independent variables (i.e., management support, work discretion, and reward/reinforcement). Moreover, as no comparable strategic entrepreneurship measurement was available for use (i.e., instruments that separately capture the various forms in which strategic entrepreneurship is manifested), the questionnaire also included new items that captured employees' involvement in the three forms of strategic entrepreneurship: the introduction of new products or services, organizational rejuvenation, and strategic renewal. To assess the validity and reliability of these items, several procedures were followed. First, exploratory factor analysis was conducted to ascertain whether the items loaded appropriately in each component (dependent and independent variables). The raw data were analyzed using exploratory factor analysis and inspection of the unrotated factor solution (Podsakoff et al., 2003). No single factor emerged in isolation, which suggests that common method bias did not significantly affect the results. As the questionnaire was based on self-reported information, common method variance was investigated using Harmon's Single Factor Test¹⁰. Although the measures applied were straightforward in their formulation and concepts were described and explained in the formal presentation of the research, certain variations were expected in the respondents' interpretation of the meanings of sustained regeneration, organizational rejuvenation, and strategic renewal in their incremental and discontinuous forms. Nevertheless, the items included in each of these constructs were formulated to meet the theoretical concepts and designed to avoid complex and vague wording, ensuring a consistent understanding for all the respondents (Fowler & Cosenza, 2009). For a detailed description of the steps followed to ensure validity and reliability, see Appendices 1, 2, and 3 in Paper II.

The steps followed to ensure the quality and validity of the data used for Papers III and IV are explained jointly because the same data were used for both papers although differently. Media coverage in the form of digital news helped assess how startups used their external embeddedness to act entrepreneurially and strategically. Since archival material is independent of the researcher, it becomes central to track and show a rigorous and multisource base for interpretation (Gartner & Teague, 2020). Furthermore, this data presented less dependence on the context of the collection method. Therefore, several

¹⁰ Harmon's Single Factor Test is a diagnostic technique for assessing the extent that common method variance poses a problem. If only one factor emerges from factor analysis and that factor accounts for all variance in the items, then it is reasonable to conclude that common method variance is a major problem. In the data used for this study, factor analysis generated four factors; the first and second accounted for less than half of the covariance among the measures. That no single factor emerged in isolation and that no one factor accounted for most of the covariance suggest that common method bias did not significantly affect the results.

problems related to how the interviews were conducted were avoided, such as the distortion of the interviewees' responses. To collect an exhaustive and relevant corpus of data, the guidelines for electronic data gathering suggested by Schafraad et al. (2006) were followed to obtain a valid, reliable, and reproducible corpus for the subsequent content analysis. The empirical information about public and private actors and the context where they operate the new business formation process included in the data were important inputs for selecting the keywords. The steps followed to ensure the quality, validity, and reliability of the data are described below.

Paper III and Paper IV

The steps followed for the collection of an exhaustive and relevant corpus of archival material were:

1) Selection of keywords

The first step was to create a keyword list used to search digital media articles from the Retriever database. The empirical information about public and private actors in the sector, such as digital providers and legislators, was the starting point to select the keywords. The following keywords were used: KRY, MinDoktor, digital primary healthcare, new patient law, and SKL/SKR (Swedish abbreviation of SALAR). The goal was to develop a keyword list that produced an exhaustive corpus of all relevant information.

2) Selection of dates

The period selected, 2012–2019, was based on the starting point of the empirical phenomenon—i.e., the digitalization process of primary healthcare. The first information found was in 2012 when two startups (Minutklinikerna and MinDoktor) initiated their first activities. In Paper IV, the end date was determined using Blank and Dorf's definition of startups (2012): startups are temporary entities working to find a repeatable, scalable business model that solves a compelling problem. Only after the problem and business model are established in the market can a startup be considered a company. Given that Paper IV examines new venture formation process, the period finished in 2017 because after this year startups were no longer regarded as such, mainly because they operated under a completely different condition than at the beginning of the process in terms of size, knowledge, position in the market, and resources owned. In Paper III, the end date was 2019 because the paper focuses on decision-making that allowed to consider and analyze a longer period. Moreover, after 2019 the startups' activities decreased dramatically due to the COVID-19 pandemic.

3) Review of the rough selection to delete irrelevant digital media articles

Next, a search was conducted of press release articles published on relevant actors' websites such as KRY, MinDoktor, and SALAR. Although press releases by their very nature, may be biased as they attempt to present companies in their best light, they were included mainly to compare the information with the digital news. Furthermore, press releases have been highlighted as prominent tool that provides journalists with their raw material that is regular, reliable, and usable information (Walters & Walters, 1992).

4) Coding and analysis of the resulting rough selection

The final selection included 997 digital media articles of which 109 interviews with relevant actors and 164 press releases were found. These data were then downloaded as a PDF and later introduced in NVivo to organize and code the selection. Appendix 1 in Paper III and Paper IV presents a detailed list of the interviews, articles, and press releases. The meticulous data collection procedure presented above resulted in an exhaustive corpus with all relevant information related to the analyzed phenomena, such as event details, precise dates, and changes in the regulations. Such a data collection method is like "relevance sampling" (Krippendorff, 2004: 118), "theoretical sampling" (Alasuutari, 1995:155), or "purposive sampling" (Riffe et al.,1998: 86). Furthermore, in addition to this detailed explanation of data collection procedures, the description of selection criteria helps to strengthen the arguments and conclusions of the research, and therefore, it increases accountability, reliability, and the validity of the data collection (Krippendorff, 2004: 319).

As both studies rely on archival material, several remedies were taken to limit retrospective bias. In general, while retrospection could affect data, it typically leads to more sanitized and rationalized versions of history (Brückner & Mayer, 1998). First, issues of temporal precedence were addressed by selecting an archival database such as Retriever that structures data obtained at multiple time points with a clear indication of the chronology of events. Second, articles and documents were examined carefully and with a critical eye (Bowen 2009), examining particularly significant decision events (Chell, 2014). which were organized chronologically in event lists (Belli, 1998). Therefore, when collecting the data and conducting the content analysis, the data were assessed for completeness with respect to comprehensiveness (covering the topic completely or broadly) with an eye on study's original purpose. Furthermore, it was determined whether the article (or document) was written from first-hand experience or from secondary sources, whether it was solicited or unsolicited, edited or unedited, and anonymous or signed.

The literature describes different tests and techniques to address the scientific worth and rigor of qualitative research. Four design tests were incorporated to enhance quality: construct validity, internal validity, external validity,

and reliability (Reige, 2003; Denzin & Lincoln, 2008). Construct validity was assessed through “confirmability”—i.e., a chain of evidence was established and key informants’ accounts about the empirical phenomenon were reviewed. Furthermore, the internal validity was assessed through “credibility”—i.e., several techniques such as explanation building and assuring were used to determine whether the internal coherence of findings and concepts were systematically related. External validity was determined through “transferability”—i.e., defining the scope and boundaries of analytical generalization and comparing evidence with the extant literature. Finally, reliability was obtained through “dependability”—i.e., assessment was conducted by giving a complete account of theories and ideas, assuring congruence between research issues and features of the study design, the involvement of several researchers, and the development of the study database (Reige, 2003). Table 4 summarizes the tests and techniques for establishing validity and reliability.

Tabell 4. Test and techniques applied for the assessment of validity and reliability (adapted from Reige, 2003)

Design test	Techniques	When occurs
Confirmability	<ul style="list-style-type: none"> - Establishment of an evidence chain - Review of key informant accounts about the phenomenon 	<ul style="list-style-type: none"> Data collection Data analysis
Credibility	<ul style="list-style-type: none"> - Explanation building - Assuring internal coherence of findings and concepts are related 	<ul style="list-style-type: none"> Data analysis
Transferability	<ul style="list-style-type: none"> - Definition of scope and boundaries of analytical generalization - Comparison of evidence with extant literature 	<ul style="list-style-type: none"> Research design Data collection Data analysis
Dependability	<ul style="list-style-type: none"> -Description of theories and ideas -Assuring congruence between research issues and features of study design -Multiple researchers - Peer review/examination -Assuring parallelism of findings across data 	<ul style="list-style-type: none"> Research design Data collection Data analysis

Examining Findings and Discussing Implications

In this section the findings and implications about how firms use their internal organizational resources and their external embeddedness to act entrepreneurially and strategically in heavily regulated sectors are discussed. To address this overall aim, several types of activities and organizational resources were examined. The foundation for reaching a combination of opportunity-seeking and advantage-seeking activities lies in the effective analysis of external and internal “environments” (Ireland & Webb, 2007). Next, it is discussed how the internal organizational resources of firms, if well designed, are a source of strength and facilitate both types of activities. Moreover, it is also illustrated how external embeddedness of firms was needed to share essential resources and scan current and emerging trends in the technological, sociocultural, economic, and legal arenas where the firms compete.

Internal organizational resources

The established financial services firms examined in this study conducted their entrepreneurial and strategic activities supported by the adaptation and reconfiguration of their internal organizational resources through the design of organizational factors that facilitated the development of incremental and discontinuous strategic corporate entrepreneurship activities. In other words, these firms integrated bundles of competencies drawn from their organizational resources. Through an appropriate organizational design, firms developed discontinuous activities such as products and services that were often pioneering and new to the market, radical changes in the way they work, and the replacement of the existing firm strategy. Certain organizational resources facilitated the development of opportunity-seeking activities with a discontinuous and explorative nature (i.e., new products and services, new organizational systems, and new strategies). Likewise, certain organizational resources also facilitated advantage-seeking activities with an incremental nature. Activities such as the improvement of an existing product and service portfolio, minor changes in the way they work, and minor adjustments in the current strategy were channelled into securing future revenues and maintaining current competitive advantages (Ireland & Webb, 2007).

The findings support the argument about the need for and importance of creating an “organizational climate” that facilitates the development of both opportunity-seeking and advantage-seeking activities (Ireland & Webb, 2007). Although some internal organizational factors are drivers of opportunity-seeking activities, others are facilitators of advantage-seeking activities. This was especially reflected in the organizational resource called work discretion (decentralized authority). When developing and conducting strategic corporate entrepreneurship activities of a different nature (i.e., discontinuous and incremental), firms have the difficult task of creating an organizational design aimed to facilitate two opposite but complementary objectives. Employees must have a certain level of autonomy to make decisions about performing their work in the way that they believe is most effective. This leads to proactive behaviors aimed at solving problems, pursuing opportunities, and encouraging creativity, exploration, and opportunity-seeking activities (Ireland & Webb, 2007). However, it is also required some degree of standardization and fixed processes that reduce employees’ autonomy and enhance stability to prioritize future revenues, maintain their current competitive advantages through advantage-seeking activities, and allow regulatory readiness. Additionally, the findings revealed a correlation between management support for incremental activities (advantage-seeking) stronger than for discontinuous activities (opportunity-seeking). This can be explained by the fact that incremental practices are more common than those of more discontinuous nature, particularly in established financial services firms. For decades financial services firms could rely on mere incremental improvements of their service offerings (Berry et al., 2006). In this respect, managers and their supporting behaviors toward incremental activities could empower the whole organization to cope with changes as they occur, facilitating the accumulation of small adjustments leading to major transformations in the long run.

The results further highlight the use of different sources of rewards and reinforcements as a driver of both discontinuous and incremental activities. Overall, these managerial dynamics represent an important piece of information for financial services firms characterized by inflexible and inappropriate management systems where a focus on policy and compliance dominates the firm’s managerial thinking (Naylor, 2017). Therefore, established financial services firms can act entrepreneurially and strategically and navigate regulatory pressures by designing appropriate internal organizational resources that facilitate the development of opportunity-seeking and advantage-seeking activities. This also provides the ability to incorporate new routines and processes for facilitating change in the firm’s structural inertia (Amburgey et al., 1993). High levels of organizational flexibility coupled with a culture prepared to address change are perceived to be even more critical when the forces driving the change are intensified (Grewal & Tansuhaj, 2001). Accordingly, financial services firms can handle the next regulatory changes more effectively than the previous ones by acting entrepreneurially and strategically

through an appropriate design of their internal organizational resources such as those examined in this thesis.

External embeddedness

When examining how firms used their external embeddedness to act entrepreneurially and strategically, the thesis examined two activities conducted in interaction with the context: decision-making and network dynamics. For decision-making, the entrepreneurial component is reflected with and related to effectual decision-making. Effectual decision-making involves opportunity-seeking activities based on creativity and experimentation. This connection is reflected in entrepreneurial activities. Acting entrepreneurially involves taking affordable risks (Sarasvathy, 2001) that despite resulting in failure could be endured. The gradual construction of shared goals among actors included in effectuation is also a key element of acting entrepreneurially (Mainela & Puhakka, 2009). Acting entrepreneurially also implies the acceptance of unexpected events and seeing them as possibilities (Sarasvathy, 2004; Van de Ven & Engleman, 2004). When applying effectual decision-making, startups' goal, and often their initial situation, was not clear but instead were determined along the new venture process. Genuine entrepreneurial action involves the identification of opportunities where both the initial and the end situation are largely unknown (Sarasvathy et al., 2003). Particularly at the beginning of the process, there was no feasible way for the startups to calculate an expected return for a given course of action or make business planning and competitive analyses to predict the future. Consequently, startups used effectual decision-making, eschewing predictions and rethinking possibilities. Goals were constantly changed as startups went along the new venture process. They also acted strategically through causal decision-making. Decisions made under causation principles were observed when the regulatory framework was stable i.e., when the previously introduced reforms in regulations became an accepted part of their environment/context. The decision-making dynamic became more rigid, less resilient, and less experimental. Their decision-making and activities were then channelled to maintain their competitive advantage through advantage-seeking activities such as predicting market information, establishing predetermined goals, and exploiting pre-existing capabilities and resources. Overall, the thesis shows that acting entrepreneurially requires tasks and procedures with more effectual thinking (e.g., new product development), whereas acting strategically demands other tasks with more causal reasoning (e.g., maintaining the existing customer base and competitive advantage).

In addition to decision-making, the thesis examined how firms used their external embeddedness through network dynamics to act entrepreneurially and strategically. Finding partners is crucial to creating understanding and to

collectively bear unexpected events (Sarasvathy, 2001; 2004; Sarasvathy et al., 2003; Sarasvathy & Kotha, 2001). With access to and knowledge in digital technology, the startups developed digital primary care forming relationships with different actors already established within the national healthcare network. In the first phase of the new business venture creation process, startups mainly acted entrepreneurially through opportunity-seeking activities such as collaborations with private actors, primarily pharmacies and insurance companies. These collaborations provided them with the most important resource at that time: the patients. This was an opportunity-seeking activity leading to “unintended discoveries” (Dew, 2009) as the startups sought to reduce uncertainty through networking and therefore maximize the possibility of positive contingencies.

The technical knowledge of startups made them an important actor in the network because this resource was the main public healthcare actor’s incentive to initiate collaborations based on their need to access this technology. This resource facilitated opportunity-seeking activities leading to the identification of the essential opportunity to become publicly funded through the collaboration with the publicly owned health center in Region Jönköping. Thanks to their technical knowledge and entrepreneurial mindset, startups became subcontractors to the publicly financed healthcare, which allowed them entry into the region’s reimbursement system. This exemplifies how startups can use their external embeddedness to identify a crucial opportunity. The newness/novelty of startups’ digital platforms and technical knowledge made startups “first movers.” Especially in the first and second phases of the new business venture creation and development, they used their external embeddedness to act entrepreneurially, building collaborations with actors willing to commit to the venture as it emerged. Furthermore, their external embeddedness and their opportunity-seeking activities led to the creation of a nascent market within the existing and mature primary healthcare market, opening opportunities for digital actors to be privately owned but publicly financed. Therefore, using their external embeddedness, startups realized opportunities that “fit” the specific needs of the local situation.

In addition, startups acted strategically when they accessed, mobilized, and deployed resources to exploit their spotted opportunities. In the first phase of the business venture process, they acted strategically using their regulatory knowledge. Their extended knowledge of the healthcare regulation system constituted a crucial resource used strategically to enter the publicly funded healthcare system. The regulations were developed before digitization and they were stated to solve politically sensitive problems such as patient empowerment, patient accessibility, increased cost efficiency, and increased competition in the primary care market. The start-ups’ knowledge advantage concerning regulatory requirements, in practice, created access to the publicly

funded part of the network. Legislators did not foresee the digital development, particularly not the market opportunities that came from combining regulations aimed at solving different healthcare challenges¹¹.

Thanks to their regulatory and technical knowledge, startups identified opportunities and gained competitive advantages with two essential resources: patients and public funding. Furthermore, they acted strategically to secure legitimacy from patients and the network where they were embedded. This is particularly evident as the arguments differ considerably depending on the target audience. When the argumentation is aimed at investors, the startups emphasized a potentially favorable financial development and future returns on investments, an argument that would have reduced legitimacy if directed to, for example, politicians or patients. When the argumentation was aimed at society (i.e., taxpayers) in general and the politicians in particular, the startups stressed their ability to improve cost efficiency by implementing and using digital services to ensure a more efficient use of healthcare resources. When aimed at the medical profession, the main argument pivots to the services improving the professionals' use of time (i.e., as the digital services mean that the patients will complete parts of the documentation so the medical professionals could optimize their time use). Finally, a powerful legitimacy argument is aimed at the potential patients, claiming that digital services will increase healthcare access, patient participation, and patient empowerment. Through these different arguments, startups aimed at legitimacy and fitting their offerings to the established socio-technical structure of producers and users (Håkansson & Waluszewski, 2007), questioning important statements of the Swedish healthcare sector. Startups' embeddedness and their opportunity-seeking and advantage-seeking activities also led to misfit or tension with the healthcare sector's established norms, practices, and routines. Table 5 summarizes these findings and implications.

¹¹ In 2009, in connection with the choice reform in primary care (see section 2.9.2 Patient choice) a law giving private and public providers equal conditions for establishment was adopted (Act on System of Choice in the Public Sector, 2008). According to the law, freedom of establishment applies to all public and private health care providers that fulfil the requirements decided by the local county council.

Tabell 5. Acting entrepreneurially and strategically using internal organizational resources and external embeddedness

Acting entrepreneurially Opportunity-seeking activities	
How do organizations use their internal organizational resources to act entrepreneurially?	How do organizations use their external embeddedness to act entrepreneurially?
<p>Through an appropriate organizational design. Discontinuous (opportunity-seeking) activities are facilitated by the following internal organizational factors:</p> <ul style="list-style-type: none"> › High employees' autonomy to make decisions about performing their work in the way they believe is most effective (Decentralized decision-making) › Management Support: employees' perceptions about the commitment and support of their managers when innovative ideas are provided › The use of rewards and reinforcements 	<p>Through effectual decision-making and networking</p> <p>Through resource provision and resource acquisition.</p> <ul style="list-style-type: none"> › Leveraging the "newness" of their digital platforms for medical visits (technical knowledge) in the network where they were embedded. › Through collaborations with public and private actors. Especially through the collaboration with the publicly owned health centre in Region Jönköping, they identified the opportunity to become publicly funded.
Acting strategically Advantage-seeking activities	
How do organizations use their internal organizational resources to act strategically?	How do organizations use their external embeddedness to act strategically?
<p>Through an appropriate organizational design. Incremental (advantage-seeking) activities are facilitated by the following internal organizational resources:</p> <ul style="list-style-type: none"> › Low employees' autonomy to make decisions about performing work in the way they believe is most effective. › Management Support: employees' perceptions about the commitment and support of their managers when innovative ideas are provided. › The use of rewards and reinforcements. 	<p>Through causal decision-making and networking</p> <p>Through resource provision and resource acquisition.</p> <ul style="list-style-type: none"> › They used their external embeddedness strategically to deal with legitimacy issues. They applied different arguments depending on the target audience (patients and the network where they were embedded) › Utilizing their extended knowledge of the healthcare regulatory system. They used their external embeddedness strategically to leverage this knowledge and enter the publicly funded healthcare system.

Combining entrepreneurial and strategic actions

This thesis also aimed at examining how the combination of entrepreneurial and strategic actions is manifested. Occasionally, strategic entrepreneurship studies appear to be unclear about the fundamental association between opportunity-seeking and advantage-seeking (Bruton et al., 2013). What is known is that it is insufficient if a firm creates opportunities but fails to exploit them profitably and sustainably and vice versa (Ireland et al., 2003). In the examined financial services firms, organizational resources were allocated between opportunity-seeking and advantage-seeking activities allowing those firms to combine both activities, i.e., exploit existing competitive advantages and explore new business opportunities. Therefore, the combination of both activities was manifested through the design of adapted internal organizational resources that facilitated the development of advantage-seeking and opportunity-seeking activities. In other words, the combination of both types of activities was attained by developing organizational and structural mechanisms to cope with different demands faced by the organization (Gibson & Birkinshaw, 2004; Raisch & Birkinshaw, 2008). Although advantage-seeking activities call for more specialization, managerial focus, and control, opportunity-seeking activities involve search, variation, risk-taking, experimentation, flexibility, discovery, and innovation (Ireland & Webb, 2007). The literature has debated how to combine both types of activities within firms through an appropriate organizational design, particularly how to balance control and autonomy (March 1991; Ireland & Webb, 2009). The combination was challenged by two opposite but complementary organizational resources: top-down managerial control and bottom-up freedom. Specifically, the findings of this study show that organizational structures characterized by a decentralized authority, management support, and appropriate rewards and reinforcements facilitated discontinuous (opportunity-seeking) activities. On the other hand, organizational structures characterized by a centralized authority, management support, and proper rewards and reinforcements facilitated incremental (advantage-seeking) activities.

In the case of the new venture creation process examined in Papers III and IV, the combination of both activities varied depending on changes in the external environment and it was sometimes facilitated but other times challenged by those changes. Furthermore, at certain times, more emphasis was placed on one type of activity than another. This was reflected in causal and effectual decision-making modes and network dynamics. Startups emphasized causal decision-making to ensure the venture's focus and prediction about future outcomes, whereas they used effectual decision-making to respond and adapt to changing circumstances in the environment. Moreover, a predominance of effectual decision-making was noted at the early stages of the new venture's creation and development, with a later increment in the use of causal decision-

making once the new venture and its market matured. This illustrates the ability of startups to configure different combinations of opportunity-seeking and advantage-seeking activities in continuous interaction with the external environment. Startups combined entrepreneurial and strategic activities to respond to their evolving environment, shifting from one decision-making mode to another or combining both.

The configuration of different combinations of opportunity-seeking and advantage-seeking activities was extensive, time-consuming, and resource-intensive for the startups. This was reflected in their network dynamics when they provided to and acquired from the network where they were embedded with essential resources needed for startups to conduct and combine opportunity-seeking and advantage-seeking activities. This is highlighted in Paper IV, where an exchange of resources between startups and established actors in the healthcare sector was crucial for the new business formation process. The rapid development of the business formation began with a frenetic entrepreneurial action. Through the provision of a valuable resource in the shape of technical knowledge, startups were able to enter the network, identifying and reaching opportunities through relationships with established actors. For example, through their collaboration with a publicly owned health center in Region Jönköping, the startup KRY became a sub-contractor of the publicly financed healthcare and, most importantly, entered the region's reimbursement system. Fitting the specific needs of the primary healthcare sector through startups' digital platforms, they became attractive actors to collaborate with, which led to different partnerships with actors willing to commit to the venture as it emerged. This entrepreneurial action was accompanied by a strategic mobilization and deployment of other resources such as startups' regulatory and medical knowledge to exploit opportunities. Startups' knowledge concerning the healthcare regulation system constituted a crucial resource that was used strategically to enter the publicly funded healthcare system. Acting entrepreneurially and strategically through these valuable resources (technical and regulatory knowledge), startups identified opportunities and gained competitive advantages that led to access to more patients and being financed with public funding. In addition, and given that the process unfolds in a highly professionalized, heavily regulated, and politically sensitive context such as the healthcare sector, legitimacy became a fundamental as well as a difficult resource for startups to reach.

Overall, the ability of startups to combine entrepreneurial and strategic action allowed them to become important actors in the sector. Startups mobilized beneficial resources, secure a competitive advantage, navigate the difficulties inherent to heavily regulated sectors, and create a new market within the existing domestic primary healthcare market. Table 6 describes how the combination of both actions was manifested.

Tabell 6. Combination of Opportunity-seeking and Advantage-seeking activities

Combination of Opportunity-seeking and Advantage-seeking activities	
How is the combination of entrepreneurial and strategic actions manifested?	
› In the examined financial services firms, the combination was manifested through the design of adapted internal organizational resources that facilitated the development of both activities.	› In the case of the new venture creation process examined in Paper III and IV, the combination of entrepreneurial and strategic actions varied over time.
› The combination was challenged by two organizational resources: top-down managerial control (centralized decision-making) and bottom-up freedom (decentralized decision-making).	› The combination varied depending on changes in the external environment and it was sometimes facilitated but other times challenged by those changes.

Acting entrepreneurially and strategically in heavily regulated sectors

Policy and regulation can significantly impact the entrepreneurial and strategic action development of both established firms and startups. Especially in heavily regulated sectors such as the examined in this thesis, they are at risk of falling foul of outdated laws or new ones that could harm their business development and growth. However, regulations can also open new opportunities for established firms and startups. The reality is that any organization that wants to conduct opportunity-seeking and advantage-seeking activities in heavily regulated sectors is bound to navigate regulatory and policy pressures. This is particularly the case where, through those activities, the existing regulated sector is disrupted. As the regulatory framework can significantly impact a firm's ability to act entrepreneurially and strategically, it is in the organization's best interest to anticipate threats or opportunities early on. In the case of established and large firms, the analysis suggests that firms can face regulatory requirements designing their internal corporate environment by integrating bundles of competencies drawn from their own resources. This also provides them the ability to incorporate new routines and processes for facilitating change into the firm's structural inertia (Amburgey et al., 1993). Certain levels of organizational flexibility coupled with a culture prepared to address change are perceived to be even more critical when the forces driving the change are intensified (Grewal & Tansuhaj, 2001). Accordingly, financial services firms could handle the next regulatory changes more effectively than the previous ones acting entrepreneurially and strategically through an appropriate organizational design such as the one's examined in this thesis.

Furthermore, startups navigated the difficulties inherent in the heavily regulated healthcare sector, inducing public actors' reactions and forcing conversations. The startups' comprehensive knowledge of the healthcare regulatory system was a crucial resource in this matter. They persisted in the face of regulatory headwinds, remaining viable due to anticipatory steps that positioned them to continue learning about their customers' needs (patients) and generating revenue as they reorganized. Startups also "forced conversations" by creating enough urgency to push public actors and policymakers to clarify where they stood regarding the primary healthcare digitalization. Ultimately, this approach created an opportunity for startups to collaborate with policymakers on a more comprehensive and practical regulatory framework for digital visits to primary healthcare. Acting entrepreneurially and strategically, startups not only accessed important resources such as patients and public funding but also provided a very needed resource to public actors: technical knowledge. Through different entrepreneurial and strategic actions such as decision-making and networking dynamics, startups not only co-created a new venture with public and regulatory actors in the healthcare sector but also defined the market to enter and/or the new market to create.

Overall, the findings suggest that the regulatory framework, particularly certain regulations, can motivate or deter a range of economic outcomes. Moreover, the combination of entrepreneurial (opportunity-seeking) and strategic (advantage-seeking) actions positively affected job creation, incremental and discontinuous innovation, and sector competitiveness. Policymakers, public actors, and private actors navigated the regulatory environment's complexity and used it as a currency to encourage entrepreneurial and strategic actions, which enhanced the business environment.

Contributions

This study makes several contributions. First, the study empirically demonstrates how strategic entrepreneurship unfolds, examining important domains from different models presented in the literature, such as internal organizational resources and firm's external embeddedness (Hitt et al., 2001, 2011). To the best of my knowledge, this study is the first informing how firms subject to heavy regulatory pressures can act entrepreneurially and strategically through combinations of opportunity-seeking and advantage-seeking activities. Moreover, this study offers a novel perspective about how established firms in heavily regulated sectors can overcome the inertia caused by regulations. Established firms can combine incremental and continuous strategic corporate entrepreneurship activities through an appropriate design of their internal organizational resources. Finally, this study brings a longitudinal aspect to strategic entrepreneurship, showing how combinations of opportunity seeking and advantage-seeking activities unfold over time and interact with the environment during the new venture process.

Theoretical

The thesis presents several theoretical contributions. First, the detailed analysis of 37 core articles in strategic entrepreneurship research highlighted a set of interrelated issues about conceptual ambiguity, model boundaries, and inconsistency in the application of conceptual foundations. Therefore, this study contributes to developing a better understanding of what strategic entrepreneurship is, how firms can effectively combine opportunity-seeking and advantage-seeking activities, and how strategic entrepreneurship translates into a sustainable competitive advantage. Moreover, this thesis offers new theoretical insights through the lens of strategic corporate entrepreneurship when conducted by firms operating in sectors other than mono-sectorial manufacturing of high-technology commonly found in strategic entrepreneurship and innovation literature. These insights contribute to the development of more contextually sensitive theories and conceptual models (cf. Hughes & Mustafa, 2017; Kyrgidou & Petridou, 2011; Kantur, 2016), highlighting the boundary conditions of theories and models across different industries and institutional settings.

In addition, the theoretical contributions of this thesis address several decision-making dynamics. First, the investigation presented here suggests that effectual and causal decision-making (through the lens of entrepreneurial and strategic action) are combined over time, a finding that contrasts with studies that assume these are mutually exclusive and/or opposing decision-making modes (e.g., Brettel et al., 2012; Dew et al., 2009). Second, the study addresses recent debates about shaping the future versus predicting the future (Alvarez & Barney, 2007; Dew et al., 2009; Sarasvathy, 2001; Shane & Venkataraman, 2000). In the presence of regulatory changes, startups shaped the future by acting more entrepreneurially through effectual principles. When the regulatory framework was stable, startups predicted the future and operated strategically by applying causal principles. These findings extend and support previous theoretical argumentations (Alvarez & Barney, 2005) regarding the context-dependence of decision-making when creating and developing new ventures. Therefore, this thesis contributes to shaping more differentiated theoretical models regarding the role of regulations when creating and developing new ventures in general and particularly in startups regarding their decision-making.

In terms of networking dynamics, this thesis shows how firms can act entrepreneurially and strategically through networks. Networking was motivated by both types of action, where startups identified new opportunities and maintained current competitive advantages. A significant theoretical contribution is offered by shading light not only on how startups can use their external embeddedness through network dynamics to act entrepreneurially and strategically but also on how these actions and decisions can influence the context where they were embedded. The efforts of startups to navigate regulatory issues forces regulators to act (or react) in different ways, increasing the complexity and dynamics in the sector. This situation, however, creates the potential to develop more contextually sensitive theories and conceptual models, including the regulatory framework as an essential factor affecting startups and the sector where new ventures are created and developed. Additionally, the thesis provides novel theoretical perspectives about how startups engage in new business processes in established domestic markets.

Methodological

From a methodological view, this thesis started the process of clarifying and differentiating strategic corporate entrepreneurship activities by breaking them into three types (i.e., sustained regeneration, organizational rejuvenation, and strategic renewal) and into two modes (i.e., discontinuous, and incremental). Until now, strategic corporate entrepreneurship has been mostly envisioned and empirically tested as a homogenous phenomenon, ignoring the variety of activities that it includes and the nature or modes of these activities. By developing a potential measure of opportunity-seeking and advantage-

seeking activities, this thesis offers an important tool that can help the strategic entrepreneurship field advance stronger and more reliable for its theoretical claims. Moreover, using archival material, this thesis presents a novel approach to data sources in the entrepreneurship field. New and vast amounts of data and data sources for scientific research, such as those used in this thesis, have become available in recent years and seem to be ripe for the taking (i.e., available for analysis). Therefore, this thesis addresses the call for additional methodologies using different data sources such as digital news data (von Bloh et al., 2019).

Due to digitalization and internet-based platforms, digital news data, as used in this thesis, allowed for the creation of a unique database that contributed to unveiling novel insights into several issues concerned with decision-making dynamics, networking, and the creation process of new business ventures. To the best of the author's knowledge, it was quite unknown, for the field of entrepreneurship, whether archival data such as digital news data could provide as valuable contributions as conventional approaches. This issue is important for several reasons. When it comes to entrepreneurship research, empirical investigations have had a major relevance in recent decades (see Audretsch 2012), where the main source of data has been collected through large-scale surveys (see, e.g., Coviello & Jones 2004). This type of data collection requires significant efforts and resources. Archival data such as digital news data are massive, as each article delivers a sub-level of additional information (i.e., paragraphs, sentences, word combinations, etc.), multiplying the data exponentially. Particularly for the field of entrepreneurship, this form of data collection can meet different needs of the field by revising its components and influencing factors (von Bloh et al., 2019). Therefore, archival data from digital news allow for several new opportunities to create unique and specific databases.

Managerial

This thesis ultimately enhances and enriches the strategic and entrepreneurial toolbox for practicing managers and policymakers. First, it provides a deeper understanding of how an appropriate design of internal organizational resources can prepare the ground for entrepreneurial and strategic activities, offering managers a more solid foundation to base their decisions. In this regard, the findings suggest that organizational resources such as management support, work discretion, and rewards/reinforcement play an essential role in empowering employees to conduct both incremental/strategic and discontinuous/entrepreneurial activities. Thus, the study guides corporate managers and leaders of financial services firms interested in motivating their employees to undertake those activities. Specifically, the findings in this thesis represent an important piece of information for financial services firms, which are often

characterized as being inflexible and using inappropriate management systems (Naylor, 2017). In light of this, this thesis highlights that the biggest hurdles to the effective development of entrepreneurial and strategic activities within financial services firms can be given by the lack of support from managers to champion new ideas suggested by employees in a bottom-up manner. Moreover, the differentiated effects of work discretion in incremental and discontinuous practices also represent a critical managerial implication. Although centralization is needed for incremental activities (strategic/advantage-seeking activities) as it defines a clear locus of control and minimizes deviations from rules and procedures by communicating clearly “what to do” (Cardinal, 2001), decentralization is needed for discontinuous activities (entrepreneurial/opportunity-seeking) as it removes restrictions on employees by encouraging employee autonomy, creativity, exploration, and entrepreneurial behaviors, which ultimately provides firms with new opportunities (Ireland & Webb, 2007).

Additionally, the observed dynamics between decision-making and changes in the regulatory framework purport relevant information for managers working in heavily regulated sectors such as healthcare. The proposed model of decision-making offered in this thesis can be a valuable instrument as it informs practitioners about external conditions shaping the new venture process, including the repercussions and outcomes of using a particular decision-making mode. Decision-makers may benefit from exploring the fit of effectuation and more entrepreneurial approaches when changes in regulations are somewhat unpredictable and ambiguous and applying causal principles and more strategic procedures when the regulatory framework is stable. Therefore, the ability of managers to improve on their resistance to external shocks, exploit contingencies through flexibility, and combine both decision-making modes emerges as a critical entrepreneurial capability (Reymen et al., 2015). Managers in heavily regulated sectors need to be flexible and alert to respond to changes in the external environment. This allows managers to respond to unexpected changes and proactively use relationships to avoid problems. Moreover, the combination of entrepreneurial and strategic action seems to be an important mechanism for dealing with the difficulties inherent in heavily regulated sectors. When managers can effectively combine both actions, they develop more entrepreneurial and innovative thinking while focusing on day-to-day business and proper planning to maintain current advantages. Accordingly, advantage-seeking behavior complements and enhances opportunity-seeking behavior (Liao & Gartner, 2008). Overall, the integration of entrepreneurial (opportunity-seeking) and strategic (advantage-seeking) actions seems to be a promising approach for contemporary management and is probably even a necessary approach for coping with a heavily regulated sector. Both perspectives can be regarded as essential, although neither is sufficient on its own.

Limitations and Suggestions for Future Research

As it happens in every study, this thesis has several limitations. When exploring established financial services firms and their internal organizational resources, it has been a limited reflection about how the context (the heavily regulated financial sector) could influence the design of those resources and the combination of entrepreneurial and strategic activities over time. However, it has been shown that new legislation resulting from the global financial crisis of 2008 and the tendencies of the Europe's financial systems towards liberalization and re-regulation required firms operating in the financial sector to reassess their organizational structures, strategies, processes, and operations (Das et al., 2017). This implies that such firms were forced to leverage "new to the firm" capabilities, create adapted organizational structures, and embed processes to enable innovation (Geerts et al., 2010). Consequently, large and established financial services firms cautiously forecasted their role implementing different courses of action to enhance their organizational innovative capacity (Das et al., 2017). Future studies should investigate more deeply how regulatory pressures affect the development of entrepreneurial and strategic activities of these companies and its organizational design.

Another limitation of this thesis may be the employment of conceptual frameworks based on different assumptions. However, simplified explanations of reality (i.e., using only one theory or conceptual approach) may not always offer suitable explanations of the phenomenon of interest because the research is based on a limited set of constructs and relationships (Bacharach, 1989). Theoretical and conceptual assumptions are often built to be straightforward and parsimonious explanations, although they probably are much more complex. Using a comprehensive conceptual framework with different assumptions would approach mitigates the possibility of missing important aspects and/or issues as the result of using a limited set of constructs and relationships. For example, the new business venture formation process in entrepreneurship literature traditionally follows some different market assumptions than in network literature, but a combined approach can make rich theoretical and practical advancements.

The firm size was limited to large and established firms and startups, and the number of firms included was limited. This could pose a limitation for the general applicability of the conclusions. Future studies should include firms

of different sizes to confirm the findings of this thesis to a broader extent, covering different kinds of firms, with a larger number of companies included.

In terms of future research, building legitimacy was a central concern for the startups and their business formation processes. Startups used legitimacy as a valuable resource during the business formation process, where their arguments to reach legitimacy differed considerably depending on the target audience. These issues have been less discussed in the network literature. Therefore, there are ample possibilities to investigate more deeply the importance of legitimacy in networks, especially in highly professionalized and politically sensitive contexts.

Finally, sector regulations and national contexts might have different influences on how large firms and startups act entrepreneurially and strategically. Further explorations of the impact of the sector and country-specific regulatory features can unearth some important sector-dependent and international differences in the activities, resources, processes, and capabilities developed when acting entrepreneurially and strategically.

Concluding Remarks

The overall purpose of this thesis was to investigate how firms act entrepreneurially and strategically in heavily regulated sectors. Through four studies, this thesis has developed a deeper and more empirically grounded understanding of the combination of both types of actions through the lens of opportunity-seeking and advantage-seeking activities. This thesis has empirically shown that firms use their internal organizational resources to act entrepreneurially and strategically by adapting the design of their organizational resources. This facilitated the development of both incremental (strategic/advantage-seeking) and discontinuous (entrepreneurial/opportunity-seeking) activities. These findings confirm the need for an adapted organizational structure with internal organizational resources that facilitate both types of activities (Ireland & Webb, 2007). This was especially reflected in work discretion (decentralized authority). Whereas entrepreneurial activities requires a decentralized organizational design where creativity and innovation are supported and championed, strategic activities need more rigid organizational designs facilitating control, stability, and predictability through a centralized authority.

Moreover, this thesis shows that firms use their external embeddedness to act entrepreneurially and strategically through decision-making and networking dynamics. The heavily regulated sector was a challenging environment for startups as they had to face several difficulties inherent to the sector. However, the external embeddedness of the firms facilitated entrepreneurial and strategic action through the acquisition as well as the provision of essential resources to the sector. Through their external embeddedness, firms acted entrepreneurially and strategically, interchanging resources, exploiting existing competitive advantages, and exploring new business opportunities. When the available information from the external environment was limited or ambiguous, they mostly acted entrepreneurially through effectual decision-making. They provided important resources to the networks where they were embedded, such as technical knowledge (through startups digital knowledge) and an advanced knowledge in regulatory requirements that helped startups enter the reimbursement systems to secure public funding. However, when they accessed relevant information about conditions in the external environment, they mainly acted strategically through causal decision-making. They acquired important resources from the sector and from their partnerships with public and

private actors. Therefore, their external embeddedness facilitated both the paths to identify opportunities and the ability to build and exploit competitive advantages. Accordingly, startups used relationships to gain access to needed resources from partners and then bundled them to identify opportunities and secure a competitive advantage.

The combination of entrepreneurial and strategic activities was manifested in different ways. In the examined financial services firms the combination of both activities was manifested through the design of adapted internal organizational resources. In other words, the combination of both types of activities was attained by developing internal organizational resources that served as the ground for developing advantage-seeking and opportunity-seeking activities. In the case of the new venture creation process examined in Papers III and IV, the combination of both activities varied depending on changes in the external environment and it was sometimes facilitated but other times challenged by those changes. Furthermore, at certain times, more emphasis was placed on opportunity-seeking activities while in others, the combination emphasized advantage-seeking activities.

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