Founding conditions and the survival of new firms

An imprinting perspective on founders, organizational members and external environments

Giuseppe Criaco
Ai miei genitori
La resignación es un suicidio permanente
(José-Manuel Thomas Arthur Chao)
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Abstract

New firms are important sources of new employment, economic growth and innovation. Yet, a large portion of them do not manage to survive their first years of existence. This is often linked to their initial lack of capabilities, resources, routines and legitimacy, which in the literature is commonly referred to as liabilities of newness. Certain favorable conditions at the time of founding may allow new firms to partially overcome these initial shortcomings, and help them survive. For instance, organizational members’ prior experience may provide knowledge and skills to the new firm. However, prior experience may also act as a constraint. It can lead new firms to follow a prescribed way of doing things which may ultimately threaten their survival. Similarly, certain unfavorable conditions of the external environment at founding may paradoxically offer a fertile ground for new firms to nurture their survival. Thus, whether some founding conditions are good or bad for new firms is still an unanswered question.

In this dissertation I investigate how different founding conditions impact on the survival of new firms. At the organizational level, I study founders’ and organizational members’ prior experience. I consider three different types of prior experience at founding: founders’ prior working experience in an incumbent family firm, organizational members’ prior shared international experience and prior industry experience, and focus respectively on three types of new firms: entrepreneurial spawns, international new ventures and high/mid-high tech new firms. To do this, I draw on imprinting theory, as well as different literatures such as spawning literature, family business literature, international entrepreneurship literature and organizational learning. I use a matched employer-employee panel dataset and employ survival analysis techniques to test the effect of different types of prior experience on new firm survival. At the environment level, I propose how population density and the mortality of generalist organizations may affect the survival of new family firms. Here, I build on organizational ecology theory as well as family business literature.

Findings show that new firms whose founders came from an incumbent family firm, i.e. entrepreneurial spawns, survive more than those whose founders came from an incumbent non-family firm. This relationship is strengthened by founders’ tenure in the incumbent firm and by the geographical proximity to the incumbent firm. My dissertation also shows that organizational members’ prior shared international experience has an inverted u-shape relationship with the survival of international new ventures. Moreover, if the international new ventures export to similar geographical markets as the prior international firm, the above-mentioned relationship becomes positive whereas if the international new ventures operate in the
same industry as the prior international firm, the relationship becomes u-shaped. Finally, I find that having organizational members with prior experience in the same industry as the new firm is beneficial for its survival when the technological knowledge within the industry is high in intensity and breadth. On the other hand, prior experience across different industries is beneficial when technological knowledge within the industry is low in intensity and breadth.

This thesis provides several contributions to entrepreneurship literature, imprinting theory and family business research. First, it shows how different founding conditions affect the survival of new firms. Second, it systematically extends imprinting theory to the study of different types of new firms. Third, this dissertation highlights the limits of prior experience, and the importance of ‘fit’ between prior and current context. Fourth, it contributes to family business research by studying the case of family-firm entrepreneurial spawns and by theorizing on how ecological conditions in the external environment may affect the survival of new family firms.
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1 Introduction

This dissertation is about the effect of founding conditions on the survival of new firms. It proposes that certain features of an organization and its external environment at the time of founding, such as the prior experience of founders and organizational members as well as ecological conditions of the industry, are likely to affect the survival of new firms.

The dissertation builds on, and contributes to entrepreneurship literature, organizational imprinting theory, and family business research. I hope the findings of my studies will assist aspiring entrepreneurs when selecting both the people with whom to start their new firms and their entry strategies, as well as policymakers and other stakeholders who are interested in helping or funding new firms.

This chapter is organized into five sections. The first section presents the background of the study, i.e. which observable phenomenon trigged my attention and why this is of general interest. The second section surveys existing literature on new firm survival. The third section builds on the unresolved and contrasting issues present in previous literature to advance the purpose of the study. Section four clarifies the key concepts used in this dissertation. Finally, the chapter ends with an overview of the structure of the dissertation.

1.1 New firms in the economy

New firms play a significant role in all economies in the world as they are the key generators of employment and income, and drivers of innovation and growth (OECD 2013b, 2015). In any given year over the past 3 decades firms less than one year old account for approximately 3% of the total employment in the United States (Haltiwanger et al. 2012). In 2005-2006 Swedish firms less than one year old contributed to over 2% of the total employment (OECD 2011). In neighbor countries such as Finland and Denmark firms less than one year old contributed respectively to over 3% and 4% of the total employment; such ratio doubled and tripled when new firms' employment was assessed respectively 1 and 2 years after founding (OECD 2011). While these numbers slightly decreased during the global Economic Crisis (OECD 2012, 2013a), they increased thereafter in most countries (OECD 2014). The latest available report shows that in 2012 young firms, i.e. firms that have existed for up to three years, account for 4 to 12% of total employment (OECD 2015).
The impact of new firms to the economy is even more meaningful when considering gross jobs creation, i.e. the amount of new jobs created in a given year. In the United States firms less than one year old have created an average of 1.5 million jobs per year over the past three decades, with a peak of 3.5 million net new jobs in 2005. This number represents almost 20% of the yearly gross job creation (Haltiwanger et al. 2012). Thus, one out of five new jobs in the United States is created by a firm that is less than one year old. Statistics are encouraging also in other countries. In the analyzed OECD economies (from 2001 to 2011), young firms, i.e. five years old or younger, contributed to 45% of total gross job creation (OECD 2013b).

Besides accounting for an important portion of new job creation, statistics show that new firms are well-known to be highly innovative. According to OECD (2013b), Swedish young firms file, on average, one patent; in Norway this number increases to 2 while in Finland young firms file, on average, 7 patents (OECD 2013b). The same data also show that in Finland, Japan, Germany, Sweden, Canada and Italy young firms, i.e. under 5 years old, represent 24% of all patenting firms and applied on average for 12% of total patents.

Despite the very encouraging figures illustrated above, new firms are also known for their low survival rates, especially during their first years of existence. OECD (2015) reports that in Sweden, out of all firms created in 2007 only a bit over 60% managed to survive their first five years of operations. In Denmark and Norway this percentage drops down to 40%. Similar results were found in Germany, Finland and the United Kingdom. These dynamics also have an effect on the real, i.e. net, job creation potential of new firms. Haltiwanger et al. (2012), for instance, found that “young firms have very high job destruction rates from exit, so that after five years, about 40% of the jobs initially created by start-ups have been eliminated by exit” (p. 360). The encouraging fact is that new firms still manage to create many more jobs that those that they subsequently destroy (Haltiwanger et al. 2012; OECD 2015). This held true even during the 2007-2009 recession when young and small firms, i.e. fewer than five years old and twenty employees, remained a positive source of net employment growth (8.6 percent) compared to larger firms which destroyed more jobs than those they created (Fort et al. 2013). Finally, statistics show that new firms that manage to survive also grow at a faster rate and contribute more than proportionally to job creation compared to older businesses (Haltiwanger et al. 2012; OECD 2013b).
1.2 The survival of new firms

Realizing that the important functions described above, e.g. job creation and innovation, “can be achieved only if promising ventures survive” (Yang and Aldrich 2012, p. 478), the survival of new firms has been a recurrent research topic in different fields, such as economics, organization studies, entrepreneurship and sociology. Already 3 decades ago, Aldrich and Auster (1986) stated that “the major problem facing […] younger organizations is survival” (p. 193). Since the late 1980s, empirical studies using different samples and cohorts found that between 30% and 70% of new firms fail within the first three to eight years after founding (e.g. Brüderl and Schussler 1990; Cooper et al. 1994; Delmar et al. 2013; Dencker et al. 2009; Geroski et al. 2010; Mata and Portugal 1994; Phillips and Kirchhoff 1989; Stearns et al. 1995; Wiklund et al. 2010). Researchers often related high failure rates of new firms to their liability of newness (Stinchcombe 1965). The concept of liability of newness was firstly introduced by Stinchcombe (1965) and it refers to new firms’ initial lack of resources, wealth, power and legitimacy (Romanelli 1989; Sine et al. 2006) together with the challenges associated with their members’ need to learn new roles and acquire new capabilities (Stinchcombe 1965). Survivability during early years signals a firm’s ability to overcome the liability of newness and thus to be able to compete with more established firms in the industry on equal terms¹ (see Swinney et al. 2011). Moreover, similarly to the statistics reported in section 1.1, researchers have found that new firms that managed to survive their initial years, were observed to grow more compared to more established and mature firms (Audretsch 1995).

Acknowledging the well-established contribution of new firms to the economy as important agents for new job creation and innovation, and recognizing their high failure rates, research has long looked into the determinants of new firm survival. Existing literature on the topic can be clustered around three different but interrelated dimensions. The first dimension relates to the determinants of new firm survival conceptualized at different levels, i.e. macro or micro (cf. Davidsson and Wiklund 2001). The second dimension captures a temporal aspect, i.e. when in the lifetime of the new organization the effect of the determinants on new firm survival is considered, i.e. at a given point in time such as (a) founding², or (b)

¹ The fact that new firms manage to overcome liability of newness by surviving their first years of operations does not imply that such firms will survive forever. Indeed, such firms will still be exposed to survival threats which are, however, different from liability of newness. Thornhill and Amit (2003), for instance, argue that that while failure of young firms can be attributable to deficiencies in resources and capabilities, failure of older firms can be attributable to changes in the competitive environment. Other authors have proposed other types of liability that threaten a firm’s survival which arise as the firm ages (see Henderson 1999 for a review).

² While most ‘static’ models focused on the effects of different determinants at founding, some studies have considered different points in time other than founding. However, such approach mainly derives
contemporaneously (cf. Agarwal et al. 2002). Finally, the last dimension deals with the unit of analysis where survival is conceptualized (or observed), i.e. the firm- or the population-level (cf. Wholey and Brittain 1986). Figure 1 summarizes the framework proposed above around which existing literature will be discussed.

![Figure 1 Determinants of new firm survival: A conceptual model](image)

### 1.2.1 Macro determinants of new firm survival

Studies on the macro determinants of new firm survival have focused on how characteristics of the environment, e.g. industry, location, institutions, affect the survival of new firms. Literature can be classified into two types of studies according to the framework in figure 1: *(a)* studies that have adopted a more static approach, e.g. focused on the effect of determinants at a given point in time, i.e. founding, and *(b)* those that have adopted a more dynamic approach. Within the first stream of inquiry, some studies have focused on the effect of environmental conditions at founding on the survival of new firms. One of the most researched dimensions has been population density, i.e. the number of organizations in a population. Carroll and Hannan (1989) were among the first to propose a general model, also known as the delay density model, which relates density at the time of founding to survival rates of populations of organizations. Authors argue that density at founding leads to two problems new firms in a population need to deal with. First, resources are often scarce in high-density periods and such conditions impact smaller and more fragile organizations in a heavier way. Second, high density may imply a tightly crowded niche, or market, where new entrants are pushed at the boundaries of the established resource space, since they can’t compete directly with...
established organizations. They thus argued for a “delayed effect” of density, i.e. “that organizations founded during periods of high density have persistently higher age-specific rates of mortality” (p. 411), and empirically found so in five different populations. Other studies have tested and supported the delay density model (see Nickel and Fuentes 2004 for a review). Swaminathan (1996) extended the model arguing that resource scarcity results in an initial liability only, but tight niche packing results in a permanent liability for populations of organizations founded under those conditions. The author found evidence for his model in 2 different populations of firms. Dobrev and Gotsopoulos (2010) also studied the effect of density at founding on the survival of populations of organizations. However, unlike previous studies, they focused on the early years of an industry “when clarity about the form and function of a new category of firms is lacking” (p. 1153). The authors argue for a population-level legitimacy vacuum that positively impacts on the failure of new entrants in an emerging industry but also becomes imprinted in their organizational structures and persists even as the industry matures. Other studies have focused on the effect of other environmental conditions (rather than density) at founding on the survival of firms rather than populations of firms. Romanelli (1989), for instance, investigated how market demand and concentration in an industry at founding impact on the survival of new firms. The author found that while market demand at founding positively affects the survival of new firms, sales concentration does not significantly affect the survival of new firms.

The second set of studies has adopted a more dynamic approach when assessing the effect of different environmental conditions on the survival of new firms. The idea behind such an approach is that evolutionary processes change the source of competitive advantage in a given environment, which in turn alter the barriers to entry and the likelihoods of survival in this environment (Nelson and Winter 1982). Accordingly, “[A]lthough cohorts of firms that enter before and after such structural transformations face very different founding conditions, their risks of survival are also likely to vary according to current competitive contexts” which in turn imply “the need for a time-variant approach to investigating relationships between various organizational and environmental characteristics and firm survival” (Agarwal et al. 2002, p. 971). Population ecologists have proposed a density dependence model according to which population density, the number of organizations in a population, induces both legitimation and competitive forces (Hannan 1986). Growth in the number of organizations in a population legitimates the organizational form itself, which decreases the mortality rate. After the population density reaches a “carrying capacity”, competitive pressures overcome the legitimation effects, and mortality rates thus increase (Nickel and Fuentes 2004). Baum and Mezias (1992), instead, found that hotels located in densely populated regions by similar organizational forms in terms of organizational size, geographic location, and price experienced significantly
higher failure rates. Results imply that the more similar a focal hotel was to its competitors, the greater the intensity of competition it experienced and thus the lower the survival. This study focuses on firms rather than populations of firms. The authors, indeed, argue that population-level studies do not account for intrapopulation variation and this may be a limitation when studying dynamics such as competition that is “sensitive to differences among individual organizations” (Baum and Mezias 1992, p.580). This approach can be considered as an ecological-evolutionary approach of organizations (Aldrich 2007). In a similar vein, Pe'er and Keil (2013) have studied time-variant effects of cluster location on the survival of new firms. The authors found that the local level of skilled labor, purchasers, and specialized suppliers enhance, while the local level of competition hinders, the survival of new firms. Industrial economics have also long studied the contemporaneous impact of macro factors on the survival of populations of new firms (Hoskisson et al. 1999). Audretsch (1991), for instance, found that scale economies and a high capital-labor ratio tend to lower the survival rate of firms across a different number of industries. Author uses the concept of technological regimes, i.e. “particular combination of technological opportunities, appropriability of innovations, cumulativeness of technical advances and properties of the knowledge base” (Breschi et al. 2000, p.388), to describe the survival implications of heterogeneity across industries. Audretsch and Mahmood (1995) found very similar results by focusing on firm-level survival rather than population survival rate.

The most comprehensive study on the macro determinants of new firm survival is by Geroski et al. (2010). The authors juxtapose the static versus the dynamic approach asking whether new firms’ survival is affected more strongly by founding conditions or by contemporaneous conditions. The authors focused on different environmental and firm-level characteristics and mainly propose competing hypotheses based on contrasting theoretical perspectives, i.e. economics, organizational ecology, evolutionary and the resource-based. The results indicate that founding effects are important determinants of exit rates. Moreover, for most of the determinants studied, their effect on survival seems to persist with little attenuation for several years following the founding of the firm.

1.2.2 Micro determinants of new firm survival

Studies on the micro determinants have focused on characteristics of the firm, e.g. structure, strategy, resources, human, financial and social capital, and their effect on the survival of new firms. As in the previous section, literature can be classified into two types of studies according to the framework in figure 1: (a) studies that have adopted a more static approach versus (b) studies that have adopted a more dynamic approach.
Within the first stream of inquiry, some studies have argued the importance of some resources at founding for the survival of new firms. Human, technological, social, financial or reputational resources have usually been conceptualized (and assessed) at the founder’s level and then aggregated at the firm level. Human capital of founders has long been proposed to affect the survival of new firms. Bridging human capital theory and organizational ecology arguments, Brüderl et al. (1992) found that founders’ education, working experience and industry experience positively affect the survival of new firms. Similarly results were found by Cooper et al. (1994). Gimeno et al. (1997), instead argued and found that specific human capital, i.e. human capital that creates value in the particular business context of the current firm but does not have relevance in alternative occupations, positively impacts on the survival of the new firm while generic human capital has a null impact on survival because of its joint effect on economic performance of the firm and (personal) threshold of performance. Delmar and Shane (2006), for instance, found new firms whose founders possessed more start-up experience to survive longer than those with lower (or no) prior start-up experience. Aspelund et al. (2005), instead, did not find support for such relationship, but rather found that new technology-based firms survive more if their founding team has a higher degree of heterogeneity in the functional background and if they have a higher degree of technological radicalness at founding. Dencker et al. (2009) found that new firms whose founders have prior experience in the same industry, i.e. prior knowledge of the new firm, experience higher survival. Social resources have also been proposed to affect the survival chances of new firms. For instance, Shane and Stuart (2002) found that new ventures whose founders have direct and indirect relationships with investors are less likely to fail; the authors also found that survival is enhanced by the number of patents at founding. Brüderl and Preisendörfer (1996), instead, found that strong ties, i.e. support from spouse/life-partner, parents, friends, and relatives, increase the likelihood of survival of new firms. Financial resources at founding have also been proposed to affect the survival chances of new firms. Cooper et al. (1994) found that initial financial capital increases the survival of new firms. Studies have also examined the role of reputational resources at founding on the survival of new firms. Shane and Foo (1999) found that new franchisors with external certification are less likely to fail. Other studies have focused on the nature of a new firm (or entrant) pre-entry experience (or nature, e.g. spinout, de novo, diversifying entrant; see Helfat and Lieberman (2002)), and how that may impact on its survival. Agarwal et al. (2004), for instance, found spin-outs to survive more than de novo firms. Other studies have found spin-outs to survive longer than any other type of new firm (see Andersson and Klepper 2013; Dahl and Sorenson 2014; Phillips 2002). The main argument in this stream of research is that

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3 On the other hand, the evidence whether de novo firms survive more or less than diversifying entrants is still mixed and contingent to the environment (see Ganco and Agarwal 2009 for a review).
spin-outs inherit blueprints from their former organization and they use these blueprints to overcome initial liability of newness, thus survive longer (Agarwal et al. 2004; Klepper and Sleeper 2005; Phillips 2002). As a consequence, research has further investigated how heterogeneity in the parent company, mainly in terms of size, entrepreneurial orientation and performance impacted on the survival of spin-outs (Dahl and Reichstein 2007; Dahl and Sorenson 2014; Phillips 2002). Some studies have also assessed how firm ownership at founding impact on the survival of new firms. Audretsch and Mahmood (1995) found that establishments which are a branch or subsidiary of an existing enterprise have significantly higher hazard rates compared to new independent enterprises. Mata and Portugal (2002), instead, found no differences in survival between new domestic and foreign-owned firms.

Some studies have focused on how different time-variant strategies may impact on the survival of new firms. The reasoning behind focusing on ‘dynamic’ strategies may be twofold. First, “strategy provides directional cues to the organization that permit it to achieve its objectives, while responding to the opportunities and threats in its environment” (Schendel and Hofer 1979, p. 516) so by definition it could be considered as adaptive in nature (see also Aldrich and Martinez 2001). Second firms usually need time to implement or develop their strategic posture, thus looking at strategies at founding may be restrictive (cf. Romanelli 1989, p. 380). Romanelli (1989) was among one of the first to investigate how different time-variant strategies affected the survival of new firms. The author found that specialist strategies and aggressive market strategies positively influence the survival of new firms. Through mathematical modeling, Archibald et al. (2002) investigated how inventory strategies may affect the survival of new firms. The authors demonstrated that if new manufacturing firms are more interested in surviving than maximizing their average reward, they should employ more conservative strategies for ordering (thus storing) component parts.

Other studies have focused on how different time-variant resources may impact on the survival of new firms. Wiklund et al. (2010) found that financial resources such as higher liquidity, lower leverage, and higher profitability are all associated with higher probability of survival in new firms. Finally, some studies have focused on how different reputational resources may impact on the survival of new firms. Using an institutional approach, Delmar and Shane (2004) explored the effect of legitimating activities on new firms’ hazard of failure during their first 30 months of existence. The authors found that new firms that undertook activities to generate legitimacy such as completing a business plan and establishing legal entity reduced the hazard of failure (cf. Dencker et al. 2009). Finally, by applying mathematical modeling, Deutsch and Ross (2003) demonstrated that, in the face of a market failure, high-

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4 Other researchers challenge this view both, theoretically and empirically (see Boeker 1989; Feldman et al. 2013).
quality new ventures may be able to credibly signal their type by appointing reputable directors to their boards.

1.2.3 Combined determinants of new firm survival

Few studies have combined macro and micro determinants of new firm survival, mainly proposing interaction effects. Romanelli (1989) investigated under which circumstances of the environment a certain strategy may lead to higher survival for new firms. Romanelli found that generalist new firms survive more than specialists in industries where sales are increasing, whereas efficient organizations have higher likelihoods of early survival (compared to aggressive organizations) in industries where sales are declining. Pe'er and Keil (2013), more recently, investigated how the advantages and disadvantages of cluster location may vary with the resources at hands of the new firm. The authors found that new firms with better quality employees are more likely to survive a competitive local environment; they also found new firms to survive more when located in clusters with high specialized suppliers and customers. On the other hand, new firms with less than average assets were found to survive more when located in a competitive industrial environment.

These studies are insightful as they integrate both macro and micro determinants of new firm survival, thus overcoming the limitation of having either a voluntaristic or deterministic view of organizations (Astley and Van de Ven 1983). At the same time, it becomes challenging to find patterns in favor of either a more dynamic or static approach when trying to understand (and contextualize) when in time the impact of the different determinants on survival is considered (cf. Holcomb et al. 2010). Indeed, the time when macro and micro determinants have been jointly assessed often differs.

1.3 Purpose of the dissertation

Section 1.2 highlights the existing literature on the determinants of new firm survival. While there has been an initial focus on the impact of macro characteristics on the survival of populations of new firms, research has shifted toward micro determinants of a new firm’s survival. This implies a change from macro to micro determinants and from populations to firms as unit of analysis. The shift from macro to micro determinants may concur with the legitimization of entrepreneurship as a domain of research (Shane and Venkataraman 2000) which has moved the focus from the study of environments to the study of organizations and their key individuals (Davidsson and Wiklund 2001; Low and MacMillan 1988). On the other hand, the shift from populations to firms may be attributed to at least two reasons.

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5 Strategic management literature followed a similar trend (see Hoskisson et al. 1999).
First, the initial focus on populations has been a consequence of the theoretical developments and rich empirical program promoted by organizational ecologists in the study of organizations. Criticisms to such a framework\textsuperscript{6} may have limited the application of organizational ecology in organization studies (see Davis 2015), and, as a consequence, the focus on populations of organizations has decreased. Second, some important limitations arise when focusing on populations as level of analysis. Indeed, population-level does not allow to account for intrapopulation variation, i.e. variation in characteristics across organizations. This may be a drawback when incorporating certain dynamics or features that are believed to be different across individual organizations (see Baum and Mezias 1992).

While the shift in the study of new firm survival regarding both the determinants (from macro to micro) and the unit of analysis (from populations to firms) is evident in the literature, a similar ‘swing’ (see Hoskisson et al. 1999) is not visible on the time dimension. More specifically, the 50-years old idea originated from Stinchcombe that founding conditions matter for the development and performance of new firms have received considerable attention from both entrepreneurship and organizations researchers (Short et al. 2009, p. 49). The overall idea here is that while unfavorable conditions at founding may disfavor the survival of new firms, favorable conditions would instead enhance it (Dobrev and Gotsopoulos 2010; Geroski et al. 2010). Yet, (potential) advantageous conditions at founding do not always result on survival premium for new firms. Dencker and Gruber (2015), for instance, recently noted that “even for crucial types of founder knowledge endowments (such as prior industry experience and managerial experience) results have been mixed, leaving scholars with inconclusive evidence regarding the role that the founder’s knowledge plays in affecting new firm outcomes” considering this as “a serious shortcoming for the field of entrepreneurship” (p. 1035). Similarly, (potential) disadvantageous conditions at founding do not always result in lower survival for new firms. For instance, the widely used density delay model (see Nickel and Fuentes 2004), according to which a high density of organizations at founding should decrease the survival of new firms due to resource scarcity and tight niche packing (Carroll and Hannan 1989), has failed to find support in many empirical studies (see Kuilman et al. 2009). Thus, our knowledge on the effect of founding conditions on the survival of new firms is still scarce.

Using imprinting theory as a theoretical lens, the purpose of this dissertation is to investigate how individuals, i.e. founders and organizational members, as well as external environments at founding affect the survival of new firms. The focus on individuals and external environments derives from

\textsuperscript{6} Although some studies have provided insightful ways on how to connect and bridge ecology with other fields of organizational studies, such as strategy (see Dobrev et al. 2006), some researchers consider ecology as a very deterministic approach to organizations (Astley and Van de Ven 1983; Burgelman 1991) which allows for very low managerial relevance (Dobrev et al. 2006). For this reason, its recent application may be limited.
the idea that “organizations tend to take on the characteristics of people and environments that surround their early establishment”? (Dobrev and Gotsopoulos 2010; Kipping and Üsdiken 2014; Romanelli 1991, p. 90). Such characteristics often persist in new firms for some time (Marquis and Tilcsik 2013), manifesting in distal or proximal outcomes, such as survival (Simsek et al. 2015).

1.4 Clarification of key concepts

At this point it is relevant to briefly clarify some key concepts that play an important role in this dissertation.

*Conditions at founding.* In this dissertation I define conditions at founding those new firms are exposed to at inception. As Kimberly (1975) claims, "just as for a child, the conditions under which an organization is born […] have important consequences for its later life" (1979: 438). Organization analysts have shown how conditions at founding in new firms are likely to persist over time (Boeker 1989; Hannan et al. 1996; Johnson 2007; Simsek et al. 2015) and have an important impact on the survival and performance of such organizations (e.g. Bamford et al. 2000; Dobrev and Gotsopoulos 2010; Eisenhardt and Schoonhoven 1990; Geroski et al. 2010; Marquis and Tilcsik 2013). One reason may be that new “[O]rganizations set on a course at founding from which change may be costly or difficult” (Boeker 1989, p. 492). Another reason may be that “young organizations make investments in people, technology, and assets that they may not be able to change because they are too myopic or resource-poor” (Eisenhardt and Schoonhoven 1990, p. 506; Geroski et al. 2010). Moreover, research has shown that for new firms “founding and subsequent conditions can be similar” (Geroski et al. 2010, p. 510) especially if the focus is placed on the very initial stage of the life-cycle of the new firms (as this dissertation does) and if the emphasis is given to some structural and environmental conditions that do not change very rapidly over time (see Amezcua et al. 2013; Swaminathan 1996). One may question how long founding conditions may persist to affect the survival of new firms. In a recent study, Geroski et al. (2010) found that these effects are far from negligible and, at least in the first 10 years after founding, the effects associated with founding values of firm- and environmental-level variables are greater than the effects associated with current values. Similarly, Marquis and Tilcsik (2013) argued that inertia and institutionalization maintain the mark of founders’ choices of organizing at founding on new firms over time. As a consequence, it seems reasonable to assume that the impact of founding conditions on a new firm persists during the first years of its existence.

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7 Boeker (1988) describes the imprinting effects of founders as “entrepreneurial and environmental imprinting”.

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Founders and organizational members. In this dissertation I refer to founders as those individuals who create and found new firms (cf. Nelson 2003), whereas I refer to organizational members as all the individuals employed by a new firm at founding (Delmar and Shane 2006). While all the founders are organizational members, not all organizational members are founders (cf. Fern et al. 2012). The distinction between founders and organizational members is important in this dissertation. Indeed, while in essay 1 I investigate the effect of founders’ characteristics, Essays 2 and 3 look at characteristics of the organizational members at founding. The first choice is in line with the idea that founders are conduits of organizational templates and managerial practices (Feldman et al. 2013; Klepper and Sleeper 2005; Phillips 2002). For Essay 2, instead, the choice of focusing on all organizational members is based on the premise that routines and capabilities in new firms are brought in at founding by all employed individuals, not only by stand-alone founders. Indeed, organizational routines are considered as explicitly collective rather than individual-level phenomena (see Nelson and Winter 1982; Pentland 2011). In a similar vein, Wezel et al. (2006) argue that in new firms “the propensity to replicate routines will be higher as [people] move with peers who have experienced similar histories and display equivalent cognitive dispositions” (p. 693). Focusing merely on founders does not allow to capture these mechanisms as a whole, even because most of new firms present only one founder/founding manager at founding. Finally, the choice of focusing on all organizational members in Essay 3 derives from the promise that congenital learning and absorptive capacity in new firms is driven and enhanced by all the members of the organization, especially in medium-high and high-technologies industries where the knowledge and skills of engineers and technicians may affect a new firm’s ability to vicariously learn from the knowledge in the industry. The importance of focusing on all organizational members when studying new firms has also been highlighted by Klotz et al. (2014) who define new venture team as “the group of individuals that is chiefly responsible for the strategic decision making and ongoing operations of a new venture” (p. 227).

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8 Except from founders themselves, individuals labeled as organizational members do not possess any equity share of the new firm. However, they are employed by the new firm at founding and involved in their daily operations.

9 Some studies argue that in new firms, founders often constitute the entire organization (e.g. Zheng et al. 2015) so this difference may not be appropriate. However, I found empirical evidence that in my sample not all new firms at founding are represented solely by their founders, supporting the distinction between founders and organizational members at founding.
Prior experience. In this dissertation I refer to prior experience as the experience organizational members have acquired while working in certain organizations/industries prior to joining the new firm. While working in an organization, individuals may learn organizational practices and templates, and acquire relevant routines, capabilities and skills. They may also acquire or absorb knowledge from the environments, e.g. technology, industry, geographical market, in which their organizations operate. I differentiate between three types of prior experience. I begin by looking at founders’ prior experience in an incumbent family firm. Given that family firms differ considerably from non-family firms in their governance and organizational practices (Carney 2005), I argue that founders of new firms acquired different governance and organizational practices depending whether they were previously employed at a family or non-family firm. I continue by looking at prior shared experience, i.e. whether some (or all) organizational members have worked together immediately before starting the new firm. Prior shared experience should, in turn, convey routines and capabilities to new firms to leverage on. Finally, I look at prior industry experience, i.e. the cumulative experience of all organizational members at founding, and differentiate between prior intra- and inter-industry experience. I argue that such experiences guide the absorptive capacity of new firms when abducting technological knowledge from their environments.

External environments. In this dissertation, I define external environments as the context where firms are embedded and operate. External environments are commonly identified as either industries or geographical areas, e.g. regions (Davidsson and Wiklund 2001; Wholey and Brittain 1986). In this dissertation I mainly refer to the industry where a new firm operates.

Survival. In this dissertation I define survival as the existence of the organization in the year under investigation (Shane 1996). Survival is relevant for new firms for at least three reasons. First, scholars of organizations vastly agree that survival is a necessary condition for success (Kimberly 1979). Indeed, survival “can be seen as minimum criterion of success” (Brüderl and Preisendörfer 1996; p. 218). Second, the threats that liabilities of newness pose to a new firm are usually reflected in its survival. New firms that survive their first years signal an ability to overcome such liabilities. Third, it is problematic to merely rely on financial performance or indicators to assess the success of new firms. Delmar and Shane (2004), for instance, argue that the initial “milestones that ventures seek to reach are not performance outcomes like return on sales or profits, but are such things as the assembly of resources or the organization of a company. Because the new venture can be disbanded at any time after the identification it has been initiated, performance in the early part of the venture’s life is best represented by (not) disbanding” (p. 394). Moreover, new firms also compete in very heterogeneous industries. For
instance, new firms in medium-high and high technology manufacturing industries usually invest heavily in intangibles such as R&D; yet such investments are either immediately expensed in financial reports or arbitrarily amortized (Amir and Lev 1996). New firms in other industries may have different strategies and costs. Despite the potential advantages to use survival as a measure of performance for new firms, I also acknowledge the limitations of such an approach. Indeed, not all the new firms that terminate their existence are unsuccessful. For instance, a firm may cease to exist because it merges with another one or because it splits into two or more entities. Fortunately, I was able to rule out empirically these alternative explanations by excluding all those new firms that have ceased to survive because they have gone through a merger or split during the observation period.

**New firm.** In the context of this dissertation, I define a new firm as a newly established legal entity (see Shane and Khurana 2003). This definition automatically excludes all those individual or team-level efforts and gestational activities that do not result in the legal registration of a new business (cf. Brush et al. 2008; Yang and Aldrich 2012). The point of departure of my dissertation is the potential liability of newness witnessed by new firms. However, new firms may vary substantially on the support they possess at founding, especially if they are owned by another company, i.e. parent firm (Helfat and Lieberman 2002). To take into account for these differences, I focus only those new firms that are not (co)owned by established firms. In this sense, new firms in this dissertation can be considered as independent new firms. This choice relies on the suggestion that venture-backed new firms do not usually face (the same amount of) liabilities of newness (Agarwal et al. 2004) as they can benefit from the support of their parent company (Semadeni and Cannella 2011). As a consequence the failure of such new firms may have different determinants with respect to independent new firms (Bradley et al. 2011).

**Entrepreneurial spawn.** I define entrepreneurial spawns as new firms founded by individuals who were former employees of incumbent firms. Numerous labels have been applied to define these firms, such as spinoffs, spin-outs, spawn, and progeny (see Walter et al. 2014). For clarity, I use the term “spawn” consistently in this paper. The premise under the concept of spawn is that such firms inherit characteristics, such as knowledge and social capital from the parent firm (Agarwal et al. 2004; Chatterji 2009; De Figueiredo et al. 2013) and that spawns present blueprints at founding, e.g. templates, developed at the parent organization (Feldman et al. 2013; Ferriani et al. 2012; Helfat and Lieberman 2002; Klepper 2002; Phillips 2002; Zahra et al. 2007).

**Parent company.** I define as ‘parent’ the organization from which the new firm spawned. In my study, the parent company does not retain any
ownership of the spawn (cf. Semadeni and Cannella 2011) which makes entrepreneurial spawns independent new firms. In entrepreneurial spawning literature, the term parent firm is frequently used to refer to the organization from which the new firm spawned even if the parent firm does not retain ownership of the spawn (e.g. De Figueiredo et al. 2013; Ioannou 2013; Semadeni and Cannella 2011). Alternatively, other studies refer to the parent firm as the ‘source firm’ (e.g. Agarwal et al. 2016; Campbell et al. 2012).

International new ventures. International new ventures are start-ups that enter international markets soon after inception. By being both new and international at the same time, international new ventures are exposed simultaneously to the ‘twin liabilities’: newness and foreignness (Cavusgil & Knight, 2015; Mudambi & Zahra, 2007; Sui & Baum, 2014). By being international firms, these firms face liability of foreignness which relates to the “unfamiliarity and strangeness that firms experience in foreign markets” (Knight and Cavusgil 2004, p. 128) and that can lead to disadvantages, also in competing with firms that are familiar with international markets. Carr et al. (2010), for instance, propose that newer ventures are more likely than their older counterparts to fail subsequent to internationalization because of their lack of established capabilities and limited resources in the markets they enter. By being new firms, they instead face a series of challenges in financing and staffing their operations, securing relationships with suppliers and buyers, attracting customers, and establishing their legitimacy (Delmar and Shane 2004; Sine et al. 2006; Yli-Renko et al. 2002). New firms, therefore, generically lack the positional advantages that accrue to firms that are more established and socially embedded in an industry (Hannan 1998; Stinchcombe 1965). Following prior research (Cavusgil and Knight 2015; Coviello 2015; Oviatt and McDougall 1994; Patel et al. 2016), in this dissertation I define international new ventures as those firms that undertake exports activity since inception. One may argue that, based on the Uppsala model (Johanson and Vahlne 1977) and on literature on born globals (Knight and Cavusgil 2004), the levels of international commitment, ranging from exports to the establishment of foreign sales subsidiaries and production facilities, may be a better defining factor for international new ventures. While this argument may apply for SMEs or older firms, it would be too restrictive for very new and small resource-constrained firms such the ones I sample.

Family business. Following previous studies (e.g. Cannella et al. 2015; Miller et al. 2007), I define family firms as those that are owned and managed by at least two members belonging to the same family. For new family firms, this definition applies at founding. Literature has long acknowledged that family firms are different than non-family firms in different aspects. Research has argued that uniqueness in family firms arises from the presence of another system next to the business one, i.e. the family (Habbershon and Williams
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1999). The direct effect of the family on the business has implications for the objectives, visions, and practices family firms pursue (Chrisman et al. 2005). Family firms are believed to embrace market-oriented logics through the founders; but at the same time the social context of the family (Aldrich and Cliff 2003; Wiklund et al. 2013) is believed to lead to constraints on the firm’s economic objectives (Miller et al. 2011) and to different priorities and behaviors toward the business (Gómez-Mejía et al. 2007). Given the coexistence of the business and family systems in family firms, they can be considered as different organizational forms with specific recruitment practices (Miller and Le Breton-Miller 2005), resource configurations (Arregle et al. 2007; Habbershon and Williams 1999; Sirmon and Hitt 2003) and organizational cultures (Zahra et al. 2004).

1.5 Structure of the dissertation

The remainder part of dissertation is divided into four chapters: chapter two introduces the theory used in this dissertation together with the research questions addressed in the different essays; chapter three includes a detailed description of the method used in the dissertation and it focuses on data description, sampling criteria and analytical techniques. Chapter four includes a short outline of the four essays. Chapter five presents a concluding section that states the intended contributions to both theory and practice of the dissertation. It also contains a discussion of the limitations and suggestions for future research. The manuscript ends with the inclusion of a full version of all the essays which address the research questions presented in section 2. Combined, the studies contribute to the understanding of founding conditions on the survival of new firms. Each essay is presented in the format of an article and is included as a chapter in the dissertation.

2 Theoretical framework

In the theoretical framework, I start by reviewing the concept of liability of newness. This provides a foundation for introducing the role of individuals and environments at founding as important conditions affecting the survival of new firms. Following this, I introduce imprinting as the theoretical umbrella linking generic founding conditions to the development and performance of new firms. I then synthesize the mechanisms through which the founding conditions under assessment may convey advantages and/or disadvantages to new firms through imprinting dynamics. I conclude the theoretical framework with a figure which shows the research model of this
dissertation and provides a visual representation of how the four essays are connected.

2.1 Potential liability of newness in new firms

The point of departure of this dissertation is the potential liability of newness experienced by new firms in their early years. The concept of liability of newness was firstly introduced by Stinchcombe (1965) to explain why, as a general rule, a higher proportion of new firms failed compared to their older counterparts. The author suggested four potential reasons. First, new organizations depend on new roles and tasks that have to be learned at some costs. On the other hand, in old organizations former occupants of roles can teach their successors. The costs and time linked to learning in new organizations are high and these organizations are less inefficient than older ones until this learning occurs (Stinchcombe 1965). Second, sometimes new roles have to be invented, and this may conflict with constraints on capital or creativity. Third, social interactions in a new organization resemble those between strangers, and a common normative basis or informal information structure may be lacking. Finally, stable links to clients, supporters, or customers are not yet established in new firms. In dealing with external actors (e.g. customers or clients) new organizations are forced to compete with existing organizations that have well-established client groups who are familiar with the organization.

The liability of newness hypothesis has been empirically tested in different empirical studies (e.g. Carroll and Delacroix 1982; Freeman et al. 1983) and extended by other scholars. Hannan and Freeman (1984), for instance, provided further ecological arguments to support the concept of liability of newness. Authors suggested that selection pressures favor organizations that are able to prove their reliability and accountability. Both dimensions require organizational structure to be highly reproducible. The reproducibility of an organization’s structure, and consequently its inertia, increase with its age due to processes of internal learning, coordination and socialization with external actors (Hannan and Freeman 1984). Again, since selection processes favor both reproducible and inert organizations, the mortality rate of organizations should decrease as they age. Romanelli (1989), instead, conceptualizes

10 This view, however, has been challenged by some researchers. Brüderl and Schussler (1990) and Fichman and Levinthal (1991) have respectively argued in favor of “liability of adolescence” and the “honeymoon period”, according to which new firms may survive for a time with little risk of failure because they can draw on initial resource endowments and enthusiasm, so failure rates are predicted to have an inverted U-shaped relationship with age. However, after this waiting period which usually lasts for a short time, failure rates reach high levels and then gradually decrease (Brüderl and Schussler 1990; Strotmann 2007). Finally, Baum (1989) argued in favor of liability of obsolescence according to which failure rates are expected to increase with age because firms are highly inertial and tend to become increasingly misaligned with their environments. Empirically, Henderson (1999) found liability of adolescence to hold for standards-based strategist firms, i.e. whose technologies conform
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liability of newness as new firms’ initial lack of resources of wealth, power and legitimacy. Swaminathan (1996) refers to barriers to entry, lack of ties to external actors, inability to attract skilled labor, and difficulties of internal organization. Through a resource-based view approach, Thornhill and Amit (2003) propose that “young organizations are more likely to suffer from resource and capability deficiencies than are older firms” (p. 499). Another example is forwarded by Fischer and Pollock (2004) who propose that “an organization’s internal and external social capital [...] may reset the liability of newness clock” (p. 464). Finally, Wiklund et al. (2010) propose that “[E]xternal challenges associated with newness include the need to learn about the environment in which the firm is to do business” (p. 425).

While the liability of newness was initially conceptualized as new firms’ lack of wealth and power, the evolution of the concept pinpoints to the idea that new firms often lack capabilities, resources, templates, routines and legitimacy. Such features, however, can be brought in by their founders or organizational members at founding (Beckman 2006; Helfat and Lieberman 2002) or they may be available in, or conveyed by the external environment at founding (Kuilman et al. 2009). While this may be a short-term advantage from new firms, it may also bear some longer-term disadvantages due to the persistence of certain features in the organization. The next section introduces organizational imprinting as a theoretical lens to study the effect of certain founding conditions on the survival of new firms.

2.2 Imprinting

As highlighted by Marquis and Tilcsik (2013), the concept of imprinting was developed in animal behavior studies to describe the tendency of domestic birds to follow the first-seen moving object. Researchers in that field noticed that such behavior was “stamped in their nature” as a result of early experience.

The concept of imprinting in organizational studies was firstly introduced by Stinchcombe (1965) to explain why organizations and types of organizations founded in a common period were displaying similar features. The author claims that “organizations formed at one time typically have a different social structure from those formed at another time” and that the basic structure of the organization tends to remain relatively stable “both because these organizations can function effectively with those organizational forms, and because the forms tend to become institutionalized” (p. 153).

with open and publicly available specifications, while liability of obsolescence to hold in proprietary strategist firms, i.e. those using internally developed, firm-specific technologies.

11 While Stinchcombe did not explicitly mention “imprinting” in his essay, researchers have attributed to him the use of this concept in organization studies (see Johnson 2007; Marquis and Tilcsik 2013; Miles et al. 1974; Tilcsik 2014)
While Stinchcombe’s idea of imprinting primarily focused on the industry and population-level, recent theoretical developments argue for imprinting as broader and multi-level theory (see Marquis and Tilcsik 2013). The two most comprehensive studies on imprinting in organization studies are Marquis and Tilcsik (2013) and Simsek et al. (2015). Given the importance of both studies in the theoretical framework and development of this dissertation, I will briefly summarize them. According to Marquis and Tilcsik (2013) “during a brief period of susceptibility, a focal entity develops characteristics that reflect prominent features of the environment, and these characteristics continue to persist despite significant environmental changes in subsequent periods” (Marquis and Tilcsik 2013, p. 201). Based on this definition, imprinting has three essential features: (a) the existence of time-restricted sensitive periods when a focal entity presents a high susceptibility to environmental influence, (b) the impact on the focal entity of the environment such that the focal entity reflects elements of the environment at that time; and (3) the persistence in time of such elements in the focal entity (Marquis and Tilcsik 2013). The authors then clustered existing literature in organizational imprinting into a 4 by 3 matrix where 4 are the entities that bear imprints, i.e. organizational collectives, organizations, organizational building blocks, and individuals, whereas 3 are the different sources of imprints, i.e. economic and technological conditions, institutional factors and individuals.

Starting from the above-quoted definition of imprinting advanced by Marquis and Tilcsik (2013), Simsek et al. (2015) propose a process-based model of imprinting that goes beyond the idea of seeing imprinting as “a once-off episode whereby the environment is merely stamped upon an entity” (p. 289). Authors develop a model according to which imprinting involves three processes. In the first process, the genesis, the characteristics of the imprinters, i.e. the sources of imprints, interact with the imprinted, i.e. the focal entity, in ways that conclude in the formation of an imprint. As one may expect, there is heterogeneity of both imprinters and imprinted, e.g. individuals, organization, environments. During the second process, the metamorphosis, the imprints generated during the genesis either persist, amplify, decay, or transform. Finally, the manifestation depicts the impact of imprints on an entity’s behavior and outcomes. In the next section I will use the definition of imprinting proposed by Marquis and Tilcsik (2013) together with some features of the two models described here to contextualize the phenomenon of imprinting in new firms.

2.3 Imprinting in new firms

The concept of imprinting has been widely adopted in the study of new firms mainly because of the analogy with the bioecological view of imprinting which takes place during an early life stage of the focal entity (see Marquis and Tilcsik
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2013). Acknowledging the existence of multiple sensitive periods during an organization’s life, e.g. initial public offering (see Judge et al. 2015; Nelson 2003), the most unequivocal sensitive period in an organization is represented by its founding “as it marks the fundamental transition from nonexistence to existence” (Marquis and Tilcsik 2013, p. 202; Simsek et al. 2015). Indeed, during this period organizations take form and shape (Perkmann and Spicer 2014).

Once the sensitive period in the case of new firms has been identified, I discuss the potential different sources of imprints. External environments at founding have long been considered important sources of imprints for new firms (Romanelli 1991). This idea can be dated back to Stinchcombe (1965) seminal paper according to which some features of the social environment at the time of founding influence (or imprint) the organizational processes. This is mainly because of the great uncertainty of founding coupled with new firms’ initial inability to respond to environmental forces rapidly enough (Romanelli 1989). However, “while the environmental level was the initial focus of most imprinting research, scholars have also considered individuals, particularly, founders, as a potential source of imprinting” (Simsek et al. 2015, p. 296).

Indeed, even when organizations are brand new, they rarely begin with a blank slate (Huber 1991; Levinthal and Myatt 1994; Mitchell 1989) as “founders carry traits that shape their firms” (Helfat and Lieberman 2002, p. 734). Research thus agrees that new firms at founding are heavily imprinted by their founders and founding teams, making this one of the most investigated themes in recent literature (Dobrev and Gotsopoulos 2010). Research has proposed and found that founders imprint the structure (Phillips 2005), routines (Phillips 2002), capabilities (Klepper 2002), strategies (Boeker 1989; Fern et al. 2012), organizational templates and trajectories (Baron et al. 1999; Feldman et al. 2013), values (Leung et al. 2013) and networks (Marquis 2003; McEvily et al. 2012; Milanov and Fernhaber 2009) of the new firm.

A natural question thus follows: what are the mechanisms by which imprinting occurs? When it comes to individuals imprinting organizations, Marquis and Tilcsik (2013) propose that “founders choose initial organizational features based on their background and what is available in the environment, and inertia and institutionalization maintains the mark of these choices over time” (p. 208). This quote highlights the importance of founders’ background. Founders’ background consists of their social class origins, (Kish-Gephart and Campbell 2015), education (Lee and Battilana 2013) or families (Jaskiewicz et al. 2015). Yet, research vastly agrees that founders acquire imprints from past exposure to work environments (Burton and Beckman 2007; Ellis et al. 2016; Higgins 2005; Lee and Battilana 2013; Tilcsik 2014). Mathias et al. (2015), for instance, claim that prior work experience is a “highly salient source of imprint” (p. 22). Dobrev and Gotsopoulos (2010) notice that the type and duration of prior work experience exercise strong imprint effects on founders while Bryant (2014) states that founders’
organizational models and assumptions derive from previous employment. Empirically, studies have demonstrated that new firms strongly reflect the features of the organization their founders used to work before starting the new firm. For instance, Burton et al. (2002) observed that founders who come from entrepreneurially prominent parent firms are more likely to pursue an innovation-based strategy. Phillips (2005), instead, found that founders who come from prior employments where female leadership was historically the norm are more likely to found new firms that subsequently promote women into prominent positions. So the idea here is that “elements that have been imprinted onto an organization persist not only within that organization but can also be transmitted to newly founded organizations by prospective entrepreneurs who ‘desert’ their parent organizations and establish their own startups” (Ellis et al. 2016, p. 3). This means that imprinting takes place at the individual level and that individuals are the receivers (from the prior employment) as well as the carriers (to the new firm) “of the environmental elements at the organizational level” (Ellis et al. 2016, p. 12).

When it comes to external environments imprinting organizations, Marquis and Tilcsik (2013) instead propose that “constraints of the initial resource and technology environment shape initial organizational practices and capabilities, which persist in the long run due to inertia and institutionalization” (p. 208). A systematic effort to study the influence of external environmental conditions at founding on the survival of new firms was undertaken by organizational ecologists through density-delay models. Organizational ecologists observed that firms established at the peak of a population’s life cycle experience higher mortality even when the number of organizations decreased, which contradicted density-dependence models developed at the time (see Nickel and Fuentes 2004 for a review). They coupled observations in data with Stinchcombe (1965) ideas on environmental imprinting and advanced that some part of the variation in new entrants’ mortality could eventually be explained by population density conditions at birth and labeled it density delay model (Carroll and Hannan 1989). The authors propose that density leads to two problems new entrants need to deal with. First, resources are often scarce in high-density periods (liability of scarceness); such conditions disfavor smaller and more fragile organizations. Second, high density may imply a tightly crowded niche, or market, where new entrants are pushed at the boundaries of the established resource space, since they cannot compete directly with established organizations. They argued that both resource scarcity and tight niche packing affect the initial mortality rate of organizations. While some researchers have assumed that the effect of density at founding on organizational mortality is either permanent and unchanging (Romanelli 1989) or it consists on an initial liability that declines proportionally (relative to other organizations’ liability to fail) over an organization’s lifetime (Carroll and Hannan 1989), others instead claimed that the higher mortality rates experienced by organizations founded in
adverse environmental conditions may not be permanent. Swaminathan (1996) for instance extended such a model arguing that resource scarcity results in an initial liability only, but tight niche packing results in a permanent liability for organizations founded under those conditions. This happens because “resource scarcity hampers the initial development of organizational capabilities, whereas tight niche packing affects the permanent competitive position of organizations within a population” (p. 1353). Moreover, an organization’s age is supposed to moderate the environment-survival relationship. More recently, Kuilman et al. (2009) advance two arguments in support of a positive effect of organization density on resource mobilization at the time of founding. First, when the density of organizations is higher, more training grounds are available for aspiring entrepreneurs who can use their inner knowledge about the structures and strategies of the existing firms, as well as the social networks they developed at such firms, as resources to construct and successfully run a new venture. Second, a higher density in a population enhances the legitimacy of its corresponding organizational form. Growing legitimacy of an organizational form ensures that more resources will be available to new firms from the same type of organizational forms.

2.4 Founding conditions and the survival of new firms

In section 2.1, I have introduced the concept of liability of newness together with its more recent conceptualizations and its relationship with the survival of new firms. In section 2.2 I have introduced imprinting theory and in section 2.3 I have contextualized it in the setting of new firms. In the current section I will synthesize it into a theoretical framework which aims to shed light on the effect of founders’ and organizational members’ prior experiences, as well as environments at founding, on the survival of new firms.

2.4.1 Prior experience

This section of the manuscript proposes that founders and organizational members acquire imprints through their prior working experience and that such imprints, in turn, are passed down to the new firm at founding (Ellis et al. 2016; Lee and Battilana 2013) and affect their development and survival (Phillips 2002). While founders’ and organizational members’ prior experiences in established organizations usually compensate for the lack of experience of the new firm, thus mitigating its liabilities of newness and positively affecting its survival (Agarwal et al. 2004; Dahl and Reichstein 2007; Ganco and Agarwal 2009), imprints derived from prior experiences may also bear some constraints to the new firm (Higgins 2005, p. 4). In the following sections I outline which types of imprints may be conveyed by
founders’ and organizational members’ different types of prior experience and how these may impact the survival of the new firms they start or join at founding.

Entrepreneurial spawning

Entrepreneurial spawns are new firms founded by individuals who are former employees of incumbent firms (Agarwal et al. 2004; Chatterji 2009). Such incumbent firms are often referred to as the parent firm even when the parent firm does not retain ownership of the spawn (e.g. De Figueiredo et al. 2013; Ellis et al. 2016; cf. Semadeni and Cannella 2011). Parents have an important influence on spawns through the imprints they once exercised on the now founders (Ellis et al. 2016; Phillips 2002).

Parent firms can be seen as imprinters (Ellis et al. 2016; Ferriani et al. 2012) that stamp founders around certain dimensions. Phillips (2005), for instance, found that founders who come from parent firms where female leadership was historically the norm were more likely to found spawns that subsequently promote women into prominent positions. Feldman et al. (2013), instead, found that organizational practices of spawns are very similar to those of the organization founders departed from. That is, parent firms often imprint employees around certain features so when (and if) employees leave the parent company to start their own spawn, such features are likely to pervade and persist in the spawn. Following this logic, heterogeneity in the imprinter, i.e. the parent firm, is expected to regulate the type (and quality) of such imprints (see Burton et al. 2002; Dahl and Reichstein 2006; Ferriani et al. 2012).

An unexplored but important source of heterogeneity is whether the parent is a family or non-family firm. It is important to focus on parent firm nature as family or non-family for at least two reasons. First, the family firm is the most common organizational form in the world (La Porta et al. 2000) which makes them very likely to be potential parent firms of entrepreneurial spawns. Second, family firms significantly differ from non-family firms (e.g. Gedajlovic et al. 2012; Gómez-Mejia et al. 2007). One important difference between family and non-family firms has been identified in their governance and organizational practices. Carney (2005) argued that the unification of ownership and control in family firms convey organizational authority which, in turn, generates three dominant propensities labeled as parsimony, personalism and particularism. Family firms usually take strategic decisions with the family’s personal wealth so they are likely to be prudent and parsimonious; this translates into minimization of risks (Naldi et al. 2007), costs and more efficient use of resources (Carney 2005). Personalism means that the family can project its own vision onto the business because agents can operate under fewer internal constraints due to the unification of ownership and control (Carney 2005). Finally, particularism means that family firms may employ decision criteria based upon altruism or nepotism, which in turn may
lower their parsimony. Next to governance practices, family firms differ from non-family firms in their organizational practices. Organizational practices can be considered as particular ways of functioning of an organization (Kostova 1999). Family firms differ from non-family firms around some organizational practices. For instance, recruiting practices in family firms may be different because they are sometimes driven by altruism favoring family members over other non-family individuals (Schulze et al. 2003). On the other hand, family firms usually present more effective knowledge-exchange cycles that convert tacit into explicit knowledge (Chirico and Salvato 2008; Patel and Fiet 2011).

Given that parent firms imprint spawns on certain features through the imprints they once exercised on the now founders, it is reasonable to expect that founders who used to work at a family firm before starting the spawn may be imprintied on specific governance and organizational practices and carry diverse blueprints than those who used to work in a non-family firm. Such imprints and blueprints may affect the development and survival of the spawn. The first research question therefore asks:

**Research Question 1:** Do entrepreneurial spawns from family firms survive more or less than spawns from non–family firms?

**Prior shared experience**

Research has recently advanced the concept of founding members’ prior shared experience, i.e. some or all of the founding team members have worked together before they founded their new firm (Zheng et al. 2015). Such shared experience “may be distinct from independent experience in that groups of employees that move together may be better able to transfer knowledge and routines to new firms” (Phillips 2002; Zheng et al. 2015, p. 2). Prior shared experience is thus extremely relevant to take into consideration when analyzing organizational routines and capabilities. Organizational routines are usually conceptualized as explicitly collective phenomena (e.g. Nelson and Winter 1982, p. 107; Pentland 2011) and are seen as “repetitive, recognizable patterns of interdependent actions, carried out by multiple actors” (e.g. Feldman and Pentland 2003, p. 95). According to Felin et al. (2012), the micro-foundations of organizational routines and capabilities include constituent components (i.e. main effects) – individuals, processes, and structure; and interactions within and across components (i.e. interaction effects) – the interactions of individuals, processes, and structures that contribute to the aggregation and emergence of the collective constructs. For routines to be developed by individuals, processes need to take place under a common structure. Organizations provide structures under which interaction among individuals is likely to happen giving thus birth to organizational routines (Sine et al. 2006). While single individuals may bring organizational routines and capabilities to the new firm (e.g. Sapienza et al. 2006), “the propensity to
replicate routines will be higher as they [individuals] move with peers who have experienced similar histories and display equivalent cognitive dispositions” (Wezel et al. 2006, p. 693). This speaks in favor of organizational members’ prior shared experience as a more effective means through which organizational routines and capabilities can be transferred to the new firm. Prior shared experience can be an asset for new firms to leverage on. Organizational members may implement in the new firm pre-existing shared routines and capabilities developed while working in the same organization. This, in turn, should lower the costs associated with building routines and capabilities, or negotiate and coordinate different ones (Phillips 2002), lowering thus the initial liability of newness and increasing survival. However, prior shared experience can also be a liability as the perpetuation of such shared routines and capabilities through imprinting dynamics may limit new firms’ ability to develop new ways of doing things, which in turn may affect a firm’s adaptation, evolution and strategic change (Autio et al. 2011; cf. Boeker 1989; Judge et al. 2015).

International new ventures are an interesting setting where to explore the prior shared experience-survival relationship. Such firms are exposed to the ‘twin liabilities’, i.e. newness and foreignness (Cavusgil and Knight 2015; Mudambi and Zahra 2007; Sui and Baum 2014, p. 822). While the liability of newness has been widely discussed in the previous section of this dissertation, liability of foreignness arises from the “unfamiliarity and strangeness that firms experience in foreign markets” (Knight and Cavusgil 2004, p. 128) and that can lead to disadvantages, especially when competing with firms which are more familiar with international markets (see Zaheer 1995). Internationalization, thus, adds an additional layer of external uncertainty next to the market and technological uncertainty to which new firms are already subjected (Bruneel et al. 2010). International new ventures may limit the threat of both liabilities by leveraging on pre-existing routines and capabilities derived from organizational members’ prior shared experience. In this context, I introduce the concept of prior shared international experience which refers to organizational members working together in the same international firm before starting/joining the international new venture. I focus on international experience as it “is arguably the most beneficial type of experience [...] to manage international risks” ( Shrader et al. 2000, p. 1233). Pre-existing routines and capabilities deriving from organizational members’ prior shared experience in international firms may be a key asset for international new venture’s survival (cf. Sapienza et al. 2006). However, high lengths of prior shared experience may also ‘lock-in’ international new ventures, constraining their ability to develop new routines and capabilities (Autio et al. 2011).

The second research question aims at disentangling the effect of organizational members’ prior shared international experience on the survival of international new ventures. Accordingly:
Research Question 2: How does organizational members’ prior shared international experience affect the survival of international new ventures?

Prior industry experience

Entrepreneurship research has long investigated the role of founders’ prior industry experience on the performance and survival of the new firms they found (Dencker and Gruber 2015). Prior industry experience is often argued to be an important asset for new firms as it facilitates the discovery of entrepreneurial opportunities (Gruber et al. 2008), the accumulation of new knowledge and skills (Shane and Stuart 2002), and it stimulates congenital learning (Huber 1991). However, empirical evidence of the performance effects of new ventures’ prior industry experience is mixed (Delmar and Shane 2006; Dencker and Gruber 2015; Gruber et al. 2013; Unger et al. 2011). One reason may be the lack of distinction between the differing nature of prior experience: prior experience can be acquired in the industry in which the new venture operates, i.e. intra-industry experience, as well as in other industries i.e. inter-industry experience.

Prior intra-industry experience can give new ventures considerable learning advantages enabling them to identify opportunities for new products and improve their comprehension of industry knowledge and technological trends (Colombo and Grilli 2005; Cooper et al. 1994; Kor 2003; Vissa and Chacar 2009). It also fosters the development of related absorptive capacity (Lane and Lubatkin 1998; Lenox and King 2004) that is necessary to identify, evaluate, acquire, assimilate, absorb and exploit related external knowledge, ideas and discoveries to enhance new ventures’ innovation (Cohen and Levinthal 1990; Weigelt and Sarkar 2009). Nonetheless, having large amounts of industry experience may blind organizational members when evaluating industry knowledge (Levinthal and March 1993).

Prior inter-industry experience gives new ventures the broader knowledge necessary to define and exploit opportunities resulting in heterogeneous absorptive capacity (Shipilov 2009), in which new ventures can contemplate a broader landscape of possibilities (Gruber et al. 2008) by engaging in distant search. Heterogeneous absorptive capacity can give new ventures opportunities to recombine different strands of knowledge, thus increasing the potential for novel combinations of knowledge resulting from an understanding of different knowledge domains (Gruber et al. 2008). However, prior inter-industry experience also brings some challenges. Indeed, the extent to which incoming diverse knowledge is understood, absorbed and integrated is likely to vary significantly, as organizational members may find it challenging to absorb and share the different types of knowledge and to determine the its relevance (Levitt and March 1988; Weigelt and Sarkar 2009).

Building on organizational learning literature, I argue that the type of search new firms undertake and the subsequent learning they experience
depend on their organizational members’ knowledge at founding, which in turn derives from their prior industry experience (Dencker et al. 2009; Fern et al. 2012). This is in line with Huber (1991) consideration that “[W]hat an organization knows at its birth will determine what it searches for, what it experiences, and how it interprets what it encounters” (p. 91). In that sense, organizational members’ prior industry experience imprints the searching and learning behavior of new firms. Organizational members’ intra- and inter-industry experience at founding may induce survival-enhancing learning depending on the nature of the technological knowledge environment in the industries where new firms operate (Posen and Chen 2013). The technological knowledge environment refers to the pool of patented knowledge generated by the firms in an industry which is publicly accessible by all firms (Operti and Carnabuci 2014).

Research Question 3: How do organizational members’ prior intra- and inter-industry experiences interact with the industry knowledge characteristics to affect the survival of new firms?

2.4.2 The external environment at founding

As suggested above, the effect of environmental conditions at founding on the survival of new firms has been mainly studied by organizational ecologists through density-delay models. This theory suggests that density (of the same organizational form) at founding affects the later development and survival of new firms through different mechanisms described in section 2.3. Thus, the environment at founding imprints new firms. Interestingly, and with some exceptions, prior studies have mainly considered new firms at founding as homogenous organizations. However, new firms at founding can be quite heterogeneous. One important source of heterogeneity may rely on the family/non-family nature of the new firm. This is important for at least two reasons. First, new firms, as well as the opportunity recognition and resource mobilization processes to start them, often come from individuals who share family relations (Aldrich and Cliff 2003; Schjoedt et al. 2013). This implies that an important share of all new firms are indeed family firms. Second, new family firms differ substantially from new non-family firms as discussed above. Given such differences as well as the call for a better understanding about the relationship between environments and family firms (Sharma 2004), it becomes interesting to analyze how environmental conditions at founding may favor (or hinder) the survival of new family firms. I thus advance an organizational ecology approach to study of new family firms survival.
An organizational ecology approach to new family firms

In order to advance an organizational ecology perspective to study the impact of ecological conditions of the environment at founding on the survival of new family firms, I need to *pave the ground* for a correct application of the theory in the context of new family firms. I will thus discuss new family firms as a distinct organizational form, structural inertia in new family firms and how new family firms are made visible in the environment (for it to select them).

Research has argued that the uniqueness in family firms arises from the presence of another system next to the business one, i.e. the family (Habbershon and Williams 1999). Systems theory has thus been proposed as one of the “most commonly and explicitly utilized approach within family business research” (Jennings et al. 2014, p. 30). The direct effect of the family on the business has implications for the objectives, visions, and practices family firms pursue (Chrisman et al. 2005). Family firms are believed to embrace market-oriented logics through the founders; but at the same time the social context of the family (Aldrich and Cliff 2003; Wiklund et al. 2013) is believed to lead to constraints on the firm’s economic objectives (Miller et al. 2011) and to different priorities and behaviors toward the business (Gómez-Mejía et al. 2007). Given the coexistence of the business and family systems, family firms are usually considered organizational forms with specific recruitment practices (Miller and Le Breton-Miller 2005), social capital and resource configurations (Arregle et al. 2007; Habbershon and Williams 1999; Sirmon and Hitt 2003) and organizational cultures (Zahra et al. 2004). Moreover, the coexistence of the business and family systems also conveys family firms with a long-term orientation (see Brigham et al. 2014 for a review) which is often mirrored in their goals, outcomes, and identities (Le Breton-Miller and Miller 2006). This orientation is reflected by different dynamics, such as securing stable employment to other family members (Kellermanns et al. 2008), creating value for the upcoming generations (Miller and Le Breton-Miller 2003; Zellweger et al. 2012), and developing and preserving family reputation (Berrone et al. 2012; Miller and Le Breton-Miller 2005). Although the arguments above are presented for generic family firms, I expect new family firms to behave very similarly. Indeed, also in new family firms the family system co-exists with the business one. For instance, literature on family-based entrepreneurial teams claims that when members of a family jointly start a firm, the business, i.e. entrepreneur, and family dimensions intersect to affect their behavior (Brannon et al. 2013). Similarly, Chua et al. (2004) argue that “[l]f family firms are born, then family values and culture affect the vision, goals, strategies, structure, and management style of the business from the beginning” (p. 40).

One of the core assumptions of organizational ecology is that organizational forms are exposed to structural inertia. Thus, whether organizational ecology perspective can be considered a legitimate theoretical lens to study the survival of new family firms depends on whether the
organizational form under assessment is exposed to structural inertia forces that prevent it from adapting to environmental conditions. There are good reasons to support the idea that family firms are exposed to inertia. The co-existence of family and business matters in strategic decision-making may push family owners to postpone necessary and important business decision because they need to take care of family-related issues, promoting inertia in family firms (Schulze et al. 2002). The entwined effects of ownership concentration, altruism, and other problems of self-control in family firms can, over time, also lead to strategic inertia (Schulze et al. 2002). The lack of a clear separation of ownership and management often makes family firms conservative and resistant to change (Kets de Vries 1994; Zellweger 2006). Brunninge et al. (2007), for instance, found that closely held SMEs, i.e. those where ownership was limited to the CEO, his or her immediate family (spouse, children, parents), board and/or TMT members, exhibit less change than other SMEs. Given the arguments presented above about inertia in family firms, it seems reasonable to assume that new family firms are also exposed to structural inertia.

For the environment to select a given type of organizational form, i.e. family firm, the new organizational form must make itself ‘visible’ and ‘known’ (Katz and Gartner 1988). However, for new firms this is often challenging as they often lack initial reputation, legitimacy and history. There are some reasons to assume that new family firms are still ‘visible’ and ‘known’ by the environment. By definition, new family firms are owned and controlled by at least two family members. Official legal records report such information, which proves, in addition to providing evidence of the firm’s existence, that the new firm is owned by family members. Additionally, family firms often communicate their nature (and identity) in more explicit ways. First, they often use the family’s name as part of the firm’s name (see Deephouse and Jaskiewicz 2013) as family firms find important to make it possible for different stakeholders to identify the responsible family in their business (Brundin et al. 2014). Second, family firms often explicitly include their ‘family business’ nature in their mission or brand (Craig et al. 2008). Obtaining such identifying symbols is a way for a group of individuals in a new firm to establish “organizational boundary-identifying conditions” (Katz and Gartner 1988, p. 432).

Given the acknowledgment of family firms as different organizational forms, their potential difficulty to adapt and their ability to make themselves recognizable in the environment, environments are believed to select the fittest ‘exemplars’ to survive. Organizational ecology can thus be considered an effective perspective to study how certain conditions at founding may affect the survival of new family firms. The last essay of this dissertation and last research question conceptually propose how certain environmental conditions may affect the survival of new family firms through ecological considerations.
Research Question 4: How do ecological conditions of the environment at founding affect the survival of new family firms?

2.5 Research model

Figure 2 below presents the four essays included in this dissertation. It sheds light on the mechanisms through which different founding conditions may impact the survival of new firms. Founders, organizational members and environments imprint new firms at founding ($t_0$) around different dimensions which derive from different types of experiences founders and organizational members undergo prior to founding ($t-n$) and from environmental conditions at founding ($t_0$). Such imprints are likely to affect the survival of new firms ($t+n$).

The dashed arrows simulate what is imprinted and by whom. In Essay 1, we argue that founders carry different blueprints to the new firm depending on whether they were working as employees in family or non-family firms in the same industry before founding their new firm. Such blueprints are reflected in certain governance and organizational practices. In Essay 2, I propose that organizational members who have worked together (and at the same time) in the same international firm, carry blueprints to the new firm, which are intrinsic to the working experience they shared and which are reflected in certain organizational routines and capabilities. Essay 3 advances the idea that organizational members’ prior industry experience at founding imprints new firm’s absorptive capacity of the technological knowledge available in the environment. Finally, Essay 4 argues that ecological conditions of the environment at founding are likely to imprint new organizational forms, i.e. family firms, with legitimacy and resources. As a whole, these essays contribute to a better understanding of how different founding conditions may impact the survival of new firms.
Figure 2 An imprinting perspective on new firms’ survival: A generalized research model

3 Methodology

The choice of the methodology is argued to be related to the researcher’s view on social reality and knowledge. Indeed, “different ontologies, epistemologies and models of human nature are likely to incline social scientists towards different methodologies” (Burrell and Morgan 1985: 2). The overall research model suggests causal relationships between different variables. Causality implies one factor causing another. This can be addressed by a quantitative approach—where the term ‘quantitative’, broadly speaking, refers to having many cases, applying formal measurements, and using statistical analysis techniques (Davidsson 2004). As a result, this dissertation will use a quantitative methodology to investigate the proposed research questions.

There are several ways to collect quantitative data: e.g. surveys, experiments, and secondary sources. For this dissertation, I rely on secondary registered archival data. Registered data presents some important advantages in the specific set of this research. First, the empirical phenomenon studied in this dissertation is new firms. Reaching new firms is often hard to accomplish, especially in the very first years of their existence. As highlighted in the introduction and theory part, new firms tend to disappear very quickly and in high quantity due to the reasons outlined above. In this sense, a
longitudinal survey-based study may not be able to track efficiently such a volatile phenomenon. On the other hand, population-based register data can give a comprehensive and clear picture on the number of firms started in a given year, its development, therefore reducing survivorship biases. Moreover, register data are often longitudinal in nature and thus available for many subsequent years. This is an important issue as to establish causal relationships it is fundamental to measure the cause before the effect (Menard 2002).

However, the use of secondary data may also bear some risks (see Davidsson 2004 for a generic discussion). In the specific context of new venture survival studies, some scholars have lately challenged the use of archival data by claiming the poor fit between such data and Stinchcombe’s theory (Aldrich and Yang 2012). The authors highlight that two potential problems may arise when using register data to inquiry liability of newness prepositions in new firms: a) registration data usually include business entities that have achieved a sufficient level of performance to be noted in public records; b) registration data widely use government databases include only businesses that hire at least one employee working full time, thus excluding businesses without employees (see also Katz and Gartner 1988). Authors, instead, propose the use of emerging organizations, i.e. those organizations that are in the nascent phase, thus not necessarily founded (see also Kuilman et al. 2009), as more appropriate to test Stinchcombe’s idea. However, Aldrich and Yang (2012) also acknowledged that “selection bias from using registration data might vary across countries, depending on institutional conditions. While new ventures in the U.S. might operate for months or years before registering with a government agency, new ventures in North European countries are required to register at a very early stage” (Yang and Aldrich 2012, p. 481). Delmar and Shane (2004), for instance, found that in Sweden legitimating activities involving government were the first step in entrepreneurial activities for most new ventures in Sweden. As all the empirical studies in this dissertation are based on Swedish data, the limitations advanced by Aldrich and Yang (2012) about the fit between Stinchcombe’s liability of newness and registered data are partially mitigated.

3.1 Research design of the empirical studies

3.1.1 Data description

The data for the empirical studies in this dissertation come from different longitudinal data sources provided by Statistiska centralbyrån (SCB), the Swedish Central Bureau of Statistics. SCB is the Swedish government agency responsible for producing official statistics regarding Sweden. In this dissertation I combine three different longitudinal dataset. The first data source is called Registerbaserad arbetsmarknadsstatistik (RAMS) and it
includes a complete list of the registered businesses in Sweden that have corporate income tax accounts and legally hire employees. RAMS includes all registered firms in Sweden. For a firm to be present in RAMS, it has to file taxes to the Swedish government and to have at least one employed individual. RAMS provides annual information (1990-2010) such as firm’s ownership, industry of operation, number of employees and financial indicators among others. The second data source is Longitudinell integrationsdatabas för sjukförsäkrings- och arbetsmarknadsstudier (LISA) which provides yearly information about all the employed individuals in Sweden. The information in LISA is very detailed as it includes, among others, an individual’s education, gender, age, employer, salary (1990-2010) and family members (2000-2007). The third data source is SCB’s exporter register which provides annual information (2000-2010) on a firm’s destination, value and weight of imports and exports for each imported/exported product. I used firm’s identification number to link employees to their employers and firms to import/export activities. As the point of departure of this dissertation is the potential liability of newness (and foreignness) witnessed by new firms, I argue how firms may (or may not) be able to overcome such liability by relying on certain characteristics at founding to survive their early years of existence. Thus, I am interested in “genuinely” new firms. However, new firms may vary substantially on the resources and capabilities they possess at founding if they are owned by another company, i.e. parent firm (Helfat and Lieberman 2002) or if they are a voluntary divestiture of an established firm (Garvin 1983). To take into account for this potential bias in my sample, I have followed common practice in previous studies that have used very similar data as mine and excluded a) all new firms that are owned by a public entity or a domestic/foreign business group (Bradley et al. 2011) and b) all new firms with more than 10 employees at founding, which are very likely to be considered as divestiture of existing firms in Sweden12 (Andersson and Klepper 2013). Finally, because some of the key variables, e.g. family members and exports, were available only for some specific time intervals, the samples in the different studies do not fully overlap. However, I have used multiple cohorts of new firms in each study to limit cohort effects.

3.1.2 Samples for the different essays

As proposed above, the different studies use different samples depending on the phenomena under assessment and on data availability.

Spawns. Matching RAMS and LISA allows me to identify spawns founded by employees of incumbent firms. Following prior research, I defined

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12 It is also common that in large archival data sources firms are mistakenly given a new identifier (see Eriksson and Kuhn 2006; Geurts 2015). Therefore, removing all those new firms with more than 10 employees at founding partially limits this issue.
entrepreneurial spawns as those new firms in which the founder(s) was an employee of an incumbent firm (same 2-digits SNI code) immediately before founding the spawn (Agarwal et al. 2004).

*International new ventures.* Matching RAMS and SCB’s exporter register allows me to identify firms that export from inception. Following prior research, I operationalize international new ventures as those firms that undertake exports activity since their first year of birth (Cavusgil and Knight 2015; Coviello 2015; Oviatt and McDougall 1994). One may argue that, based on the Uppsala model (Johanson and Vahlne 1977) and on literature on born globals (Knight and Cavusgil 2004), the levels of international commitment, ranging from exports to the establishment of foreign sales subsidiaries and production facilities, may be a better defining factor for international new ventures. While this argument may apply for SMEs or older firms, it would be too restrictive for very new and small resource-constrained firms (with 10 or less employees at founding).

*New firms in medium high and high-technology industries.* Essay 3 investigates how new firms can leverage on organizational members’ prior industry experience to vicariously learning from the public technological knowledge of the industry and secure survival. In this Essay, we strengthened the design by including new firms high-technology and high-technology industries (EUROSTAT, 2014). In such industries, technological knowledge is of crucial importance for organizational survival. Moreover, companies find it essential to patent, contributing to the industry’s public knowledge. The dynamism of these industries also places considerable pressures on new ventures to assemble their knowledge quickly, compelling them to scan their environment and stay abreast of technological trends.

### 3.1.3 Level of analysis and operationalization of survival

All the variables of interest in my empirical studies are (or are aggregated) at the firm-level. An exception is made for the industry knowledge dimensions of Essay 3 that are calculated at the industry level. This is coherent with my theorizing on new firms’ survival-enhancing vicarious learning from industry knowledge.

This dissertation investigates how certain founding conditions impact the survival of new firms. Therefore, as survival is a key dimension of my conceptualization, it becomes very important to operationalize it in the most rigorous way given the data at hand. Using 1 year as the primary time unit, I track new firms yearly ($t$) from founding to a certain period of time $T$, where $T$ usually goes between 4 and 7 years (depending on the first cohort of reference). I define survival as the existence of the organization in the year under investigation (Shane 1996). Firms that were listed in RAMS in a given
year $t$ were categorized as survivors. Given the use of survival analysis as the analytical technique in the empirical studies of this dissertation (see below), in any specific $t$, firms that disappear are coded as 1 whereas those that survived are coded as 0. In large databases like the one that I use in this dissertation, it may be that some coding errors in the files occur. In order to be on the safe side in identifying exit with such a database, I required a firm to be absent from the dataset for at least two subsequent years before classified it as an exit (Geroski et al. 2010). One of the biggest challenges in this type of research is understanding what is meant by organizational exit or disappearance (Mellahi and Wilkinson 2004; Wholey and Brittain 1986). Indeed, new firms can disappear because they failed economically, but they can also disappear because they went through a merger or split. These processes are substantially different. This potential problem is also frequent when using large administrative datasets. In a recent article, Geurts (2015) argues that “[A] well-known but major problem with these data is that […] changes in the firm’s structure, such as mergers or split-ups, create additional difficulties in identifying firm histories over time” (p. 425). Fortunately, RAMS data provides information on whether a new firm’s exit is a result of a merger or split during the observation period. Acknowledging for this potential issue in the raw data and for the potential bias these new firms could create in my results, I have followed common practice of excluding all those new firms that have disappeared because they have gone through a merger or split during the observation period (see Argyres and Bigelow 2007; Coad and Timmermans 2014).

### 3.1.4 Analytical technique

The analytical technique used in the empirical essays of this dissertation is time-to-event analysis, commonly known as survival analysis. Survival analysis is predominately used in biomedical sciences where the interest is in observing time to event such as death or illness; time-to-event analysis has also been used widely in the social sciences where interest is on analyzing time to events such as marriage and job changes among others (Allison 2010). Survival analyses has been applied in organizational studies with binary dependent variables measured over time as such a technique explicitly includes time as a variable of interest, being thus “more flexible and better able to extract and use information from longitudinal studies” (Morita et al. 1989, p. 280). Survival analysis, for instance, has been the main analytical technique used by organizational ecologists to study the determinants of deaths in populations of organizations.

Survival analysis can be seen as “a collection of statistical methods that are used to describe, explain, or predict the occurrence and timing of events” (Allison 2010, p. 413). Survival analysis requires that each observation is observed over a defined interval of time. If events are not repeatable, i.e. death,
observation is usually terminated at the occurrence of an event. Most methods of survival analysis require that the event time is measured with respect to some origin time. Usually, “the origin time is the same as the time at which observation begins” (Allison 2010, p. 415). In my studies, the event under assessment is the death, i.e. exit, of the firm, the choice of origin is its incorporation year, and the time frame is 1 year, which means that I look at whether the firm is at risk of the event every year. By looking at firms from their inception, I avoid late entry or left truncation issues in the data (Allison 2010).

The first choice one shall make before analyzing survival time data is whether survival times is continuous or a discrete phenomenon, which in turn depends on two characteristics: “the underlying behavioral process generating survival times, and the process by which the data were recorded” (Jenkins 2005, p. 21). Simply put, if one knows the exact times at which events occur, it is better to use methods that treat time as continuous, whereas if one knows only the month or the year of the event, it may be more appropriate to use the discrete-time methods (Allison 2010). The most popular discrete-time models are the Logit model, which better fits for event times that are truly discrete, and the Complementary Log-log model, i.e. cloglog, which is more suitable for events that can happen at any given time but are only observed to occur in discrete intervals, i.e. months or years (Allison 2010). On the other hand, time-continuous models can either be semi-parametric or parametric. Cox regression, the most popular method for regression analysis of survival data, is an example of a semiparametric model. Cox model makes no assumptions about the distribution of event times. Parametric models, instead, make specific assumptions on the distribution of the hazard function. Examples of such models (and distribution) are Weibull, Exponential, Lognormal and so forth. Conditional on the first choice, the second choice one shall make is to choose the probability distribution of event times.

I will now use the knowledge described above to argue for the most appropriate model to apply in the empirical studies of this dissertation given the data I have access to. Although firms can enter and exit at any point during the year, the SCB data are updated annually. Thus, the exact day of entry or exit is not observed in my data, and the risk of failure is observed in discrete (as compared to continuous) time. This nature of my data would suggest the use of discrete-time models. However, as noted by Jenkins (2005) “[I]ntrinsically discrete survival times are rare in the social sciences. The vast majority of the behavioral processes studied by social scientists occur in continuous time, but it is common for the data summarizing spell lengths to be recorded in grouped form. Indeed, virtually all data are grouped (even with survival times recorded in units as small as days or hours)” (p. 21). Consequently, I use a Cox proportional hazards model which is a more established technique which does not assume a baseline hazard function. More specifically, I use a stratified Cox proportional hazard models. The
A stratified Cox model is an adaptation of the Cox proportional hazard model that uses stratification to control for a predictor that does not satisfy the proportional hazards assumption (Cleves et al. 2008). More specifically, stratification allows the baseline hazard function to be different for different strata. To account for industry differences in the survival hazards of spawns, I stratified firms on the industry in which they compete, as defined by either 2-digit SNI or 4-digit SNI codes. In this way, industry-specific baseline hazard rates are computed.

4 Essays outline

In this section I briefly summarize the four essays presented in this dissertation.

4.1 Essay 1: The survival of family-firm spawns

Do entrepreneurial spawns from family firms are more likely to survive than spawns from non-family firms? Using a matched employer-employee panel data set, we find that entrepreneurial spawns from family firms survive longer than spawns from non-family firms. To mitigate endogeneity concerns, we used a two-stage model for self-selection into spawning and implemented coarsened exact matching to compare more closely aligned treatment (family parent) and control (non-family parent) samples. We further show that entrepreneurial spawns from family firms survive longer when located closer to the parent firm and when the founder had longer tenure at the parent firm.

4.2 Essay 2: Founders’ prior shared international experience and the survival of international new ventures

This paper shows how organizational members’ prior shared experience in international firms affects the survival of the international new ventures (INVs) to which they belong. I propose that as the amount of prior shared international experience (PSIE) increases, these ventures are more likely to draw greater survival-enhancing benefits from the pre-existing routines and capabilities that their members previously developed while working together in the same international firm. However, with a high amount of PSIE, INVs may find it difficult and costly to revise existing routines and capabilities and to develop new ones for survival. Using a unique sample of Swedish INVs, I
find that PSIE has an inverted U-shaped relationship with survival. Further, I theorize and show that contextual familiarity between the contexts in which PSIE was acquired and those in which it is applied through an INV is an important contingency of the PSIE-survival relationship. This study has valuable implications for research on international entrepreneurship and shared experience.

4.3 Essay 3: Industry knowledge characteristics, prior experience and new venture survival

Recent research suggests that new ventures can overcome threats to their survival by gaining access to technological knowledge from other firms in their industry even without directly transacting with them or joining their networks. This access can be obtained through vicarious learning that allows new ventures to benefit from spillovers of industry knowledge made public through patents. However, absorbing industry knowledge can be difficult for new ventures. On the one hand, new ventures have different absorptive capacities as a result of their organizational members’ prior experience within the current industry and across different industries. On the other hand, industries differ in the characteristics of their public technological knowledge (i.e., intensity and breadth). We propose that the intensity and breadth of an industry’s public technological knowledge interact with organizational members’ prior industry experience to determine the ability of new ventures to learn vicariously, affecting the likelihood of venture survival. Our results show that having prior experience in the same industry is beneficial for new venture survival when the technological knowledge within an industry is high in intensity and breadth, while prior experience across different industries is beneficial when this knowledge is low in intensity and breadth. This study contributes to the literature on prior industry experience, organizational learning, absorptive capacity and new venture survival.

4.4 Essay 4: The survival of new family firms: An organizational ecology perspective

Motivated by both the scarcity of studies on the survival of new family firms and the call to better understand how external environments may affect family firms, I apply organizational ecology to outline the potential effects of environmental conditions on the survival of new family firms. This study extends organizational ecology in the context of new family firms, proposes three testable propositions and opens new avenues for research on the ecology of (new) family firms.
5 Overall contributions and conclusions of the dissertation

5.1 Contributions to theory

This dissertation provides several contributions to entrepreneurship literature, imprinting theory and family business research. First, it links different founding conditions to the survival of new firms. While “substantial research has been devoted to unpacking the specific effects of firm-founding conditions and behavior on subsequent performance” (Short et al. 2009, p. 49), recent research shows that potential favorable conditions often lead to negative organizational outcomes (see Dencker and Gruber 2015). Similarly, potential unfavorable conditions may paradoxically result in positive organizational outcomes (see Kuilman et al. 2009). By integrating imprinting theory in the context of new firms, this dissertation shows the impact of certain founding conditions on the survival of new firms. The focus is in different founding conditions as well as different types of new firms.

Second, it contributes to imprinting theory by systematically extending its application to different types of new firms. It argues that new firms present features of their founders, organizational members and external environments at founding (Marquis and Tilcsik 2013) and that such features are likely to persist in new firms, affecting their development and survival (Simsek et al. 2015). It also acknowledges heterogeneity on the imprinter, imprinted and imprints (see Marquis and Tilcsik 2013; Simsek et al. 2015). More precisely, it advances that founders’ prior working experience in incumbent family firms is likely to convey governance and organizational templates to new firms. Organizational members’ prior shared experience in international firms, on the other hand, is likely to convey routines and capabilities to international new ventures, whereas different kinds of prior industry experience convey different types of absorptive capacity to new firms in high and medium-high tech industries. Ecological characteristics of the external environment at founding such as population density, on the other hand, are likely to convey legitimacy and resources. All the features described above are likely to persist in new firms through imprinting dynamics and ultimately affect the survival of new firms.

Third, this dissertation highlights the limits of prior experience as a potential favorable founding condition. For instance, in essay 2 I argue for, and show that long lengths of organizational members’ prior shared international experience have a negative effect on survival. This is because imprint dynamics are believed to lock-in the development of new routines and capabilities in new firms. Moreover, this dissertation also emphasizes the ‘fit’
between prior experiences and current context. For instance, essays 1 reveals that spawns started by ex-employees of family firms survive longer than those started by ex-employees of non-family firms. I attribute that because inherited governance and organizational practices from family firms such as parsimony and personalism may be valuable in the context of new firms, which typically need to manage operations with fewer resources and operate under the unification of ownership and control. This study also adds to Elfenbein et al. (2010) who found that small firms spawn more successful new firms because “entrepreneurship is more similar to employment in a small firm than it is to employment in a large firm” (p. 661). Similarly, in essay 2, I find that the initial disadvantages of long tenure of prior shared international experience on the survival of new firms are mitigated when the similarity between prior and current export portfolio is high. Finally, in essay 3, we find that having organizational members with prior experience in the same industry as the new firm is beneficial for its survival when the technological knowledge within the industry is high in intensity and breadth. On the other hand, prior experience across different industries is beneficial when technological knowledge within the industry is low in intensity and breadth. Altogether, my theorizing (together with the underlying empirical findings) provides an explanation for the limits of prior experience and it adds to the recent debate in entrepreneurship research on the ambiguous role of founders’ prior experience on outcomes of new firms (Delmar and Shane 2006; Dencker and Gruber 2015; Dokko et al. 2009; Fern et al. 2012; Gruber et al. 2013; Mulotte et al. 2013; Posen and Chen 2013).

Fourth, this dissertation contributes to family business research in two ways. First, it extends the ongoing debate in the literature regarding differences between family and non-family firms to an underinvestigated, yet important case in strategy and entrepreneurship, i.e., spawning, and it clarifies how family firms compare with non-family firms in this case (essay 1). Family firms are often considered to invest less in innovation (Block 2012), to acquire fewer firms (Miller et al. 2010) and to take lower risks (Naldi et al. 2007) than non-family firms; however, compared to non-family firms, family firms survive longer (Wennberg et al. 2011; Wilson et al. 2013). My results show that family-firm parents are better at spawning longer-surviving ventures. By showing the potentially advantageous position of family firms in terms of spawning longer surviving spawns, this study strengthens our understanding of when family firms contribute positively to the economy. Second, it theorizes on how ecological conditions in the external environment affect the survival of new family firms (essay 4). Although prior family business research has argued that “studies examining […] external environmental factors and their relationships to the family-owned business are needed” (Wortman 1994: 21), research in this area is limited. One explanation may reside in the belief that new family firms may start off in more favorable competitive positions than non-family firms, e.g., in terms of
resources and social ties; thus, they may “exhibit correspondingly lower concerns about environmental issues” than other types of new firms (Chrisman et al. 2002 p. 123). Another explanation may lie in the scarcity of studies on new family firms' founding and survival, where the focus on environments through ecological considerations becomes salient (see Carroll and Delacroix 1982). An organizational ecology approach to new family firms is useful for identifying the environmental conditions under which new family firms survive. It may also help explaining why family firms are overrepresented in certain industries and underrepresented in others (see Villalonga and Amit 2006).

Finally, this dissertation adds to the recent focus on time and history in management and entrepreneurship research (see Kipping and Üsdiken 2014; Welter 2011). The theoretical developments proposed in this dissertation together with the compelling empirical evidence suggest the importance of taking into account firms’ prehistories (see Helfat and Lieberman 2002) in the form of founders’ and organizational members’ prior experiences when studying the survival of new firms. Studying founders’ prior employment in family or non-family firms within the domain of entrepreneurial spawns (essay 1) or prior shared international experience within the domain of international new ventures (essay 2) represent novel topics in the study of prehistory in different, yet important, types of new firms.

5.2 Contributions to practice

Next to the theoretical contributions discussed above, this dissertation offers important insights for the realm of practice. A consistent finding in my studies is that the conditions under which a new firm is founded are crucial for its early survival. My results show that the early survival of a new firm is influenced by the prior experiences of its founder and organizational members and by the fit of such experiences with the new setting. Aspiring entrepreneurs should thus devote a particular attention when building up their own firms and make sure to do so properly. For instance, when setting up international new ventures, founders should be careful to partner up with (or hire) individuals whom they have shared long tenures of prior working experience in the same international firm. This may become even more problematic if the new firm aims at exploring new geographical markets or stay in the same industry (as their prior organization). When deciding who to hire, aspiring founders of high-tech and medium-high tech new firms should instead consider the characteristics of the technological knowledge in the industry they plan to enter. My results show that new firms operating in high-intensity and broad technological knowledge industries benefit from organizational members with high prior intra-industry experience and low inter-industry one. Thus, assembling a team with such characteristics at
founding is likely to improve new firm survival. Finally, my results should encourage employees of family firms with promising entrepreneurial ideas to consider entrepreneurship as a viable and promising alternative career.

The results advanced by the empirical studies of this dissertation are also particularly relevant for individuals or firms who are potentially interested in investing in new firms, such as business angels or venture capitalists. First, potential investors should understand that the condition under which a new firm has been founded are likely to persist and affect their survival. Thus, the stage of development of a new firm, e.g. pre-founding and post-founding, is an important factor to take into thought when considering whether to invest in a new project or not. Second, this dissertation points out the limits of organizational members’ prior experiences. Prior research suggests that one of the key factors investors look at when making decisions about which project/idea to fund is the composition of the founding team, favoring those with prior industry experience (cf. Eckhardt et al. 2006; Maxwell et al. 2011). My findings show that in high-tech and medium-high tech industries, organizational members’ prior industry experience at founding has a significant effect on the subsequent survival of new firms only when matched with certain characteristics of the technological knowledge base of their industry. Similarly, potential investors should balance the intuitive advantages new firms may derive from having organizational members with long pre-founding shared working experience in similar organizations, with the ‘hidden’ disadvantages brought in by such people in the new organization. My results are also relevant for policy makers. Given that founding conditions have an important impact on the survival of new firms, policy makers should contemplate the benefits of pre-founding policies as post-founding ones may not be as effective (Geroski et al. 2010).

5.3 Limitations

This dissertation suffers from some limitations. As described in section 1.4 and throughout the manuscript, in essay 1, we focus on the prior experience of founders whereas in essays 2 and 3 the focus is on the prior experiences of organizational members. While I motivate such choices in depth, one may still argue that focusing on organizational members, i.e. all employees, at founding may be a limitation. Such claims may derive from the large body of prior literature focusing solely on founders or founding teams. However, the conceptual arguments advanced in this dissertation point in favor of a focus on all organizational members. In essay 2, I identify a dominant coalition of people who have jointly developed organizational routines and capabilities through their prior shared experience before starting/joining the international new venture. Although the founder may not be part of such coalition (as she or he did not possess such shared experience), the new firm can still leverage
on such routines and capabilities, bearing important implications on its development and outcomes. Relying only on founders’ prior shared experience would automatically exclude the prior shared experience of other organizational members. Focusing only on founders would also be problematic from an empirical standpoint. Indeed, most of the international new ventures in my sample only have one (person listed as) founder, which means that the shared component among founders is not possible to identify when only one founder exists. In essay 3 instead, the focus on all organizational members derives from the fact that other qualified employees rather than founders, e.g. engineers and technicians, often hold relevant prior industry experience. Neglecting the prior industry experience of such individuals in the organization would limit our understanding of the congenital and vicarious learning dynamics in such firms and their subsequent effect on survival. Future research could test whether a founder effect really exists or whether focusing on all organizational members at founding is more beneficial when studying performance and survival of new firms. Variance decomposition studies may be very appropriate to answer such question.

An important assumption in this dissertation is that the survival of new firms is always beneficial for the economy. While there is a large compelling empirical evidence for it (see section 1.1), one may question the role of underperforming, yet surviving, firms. Indeed, “efficient performance is only one—and not necessarily the most important—determinant of organizational survival” (Meyer and Zucker 1989, p.9). Several factors exist that may lead entrepreneurs to persist with underperforming firms (see DeTienne et al. 2008). Existing literature vastly supports the idea that, next to firm performance, organizational survival is also determined by a firm’s threshold of performance—“the level of performance below which the dominant organizational constituents will act to dissolve the organization” (Gimeno et al. 1997, p. 750). A firm’s threshold of performance is, in turn, negatively influenced by both psychic income from entrepreneurship and switching costs (Gimeno et al. 1997). It seems reasonable for me to assume that in my samples, a firm’s threshold of performance is relatively high. For instance, in essay 2 I focus on entrepreneurial spawn. All founders of such new firms were employed in an incumbent firm the year before starting the spawn. This means that their psychic income from entrepreneurship and costs to switch to another profession other than entrepreneurship should both be low. Thus, if their spawns underperform, it is very likely for them to close the new firms and find another job. In essay 3 and 4, the focus is on international new ventures and new firms in high-tech and medium-high tech industries. While it is difficult to make claims about how the nature of such firms may influence founders’ psychic income from entrepreneurship and switching costs, it seems reasonable to assume that the environments where both types of new firms operate are uncertain and competitive. On the one hand,
internationalization adds an additional layer of external uncertainty (Bruneel et al. 2010). On the other hand, hi tech industries are different from traditional industries as new firms in the former types of industries usually face shorter span of product life cycle, heavier R&D investments, higher uncertainties, and more intense competition for new product share (Qian and Li 2003). Due to the competitive and uncertain environment faced by both international new ventures and hi tech new firms (due to the contexts in which they operate), it seems reasonable to assume that underperforming firms in such contexts are soon pushed to termination by environmental forces.

Another important assumption in this dissertation is that founders and organizational members acquire imprints from past exposure to work environments, i.e. prior experiences, and such imprints are conveyed to their new firms and ultimately affect their survival. While I advance theoretical reasons to support this idea, the data at hand do not allow to directly capture imprinting processes and effects. Information on imprinting processes and effects would allow me to test my model with greater accuracy. We try to address this limitation by proposing some theoretical arguments in essay 1, together with some moderators suggested in essays 2 and 3. Such arguments and moderators capture the similarity between the context in which imprints are acquired, i.e. prior organization, and the one where they are put in use, i.e. the new firm, and show that contextual similarity is often beneficial, providing some support to the imprinting-environment fit hypothesis, i.e. the benefits derived from the similarity between the environment at the prior organization and the current one (see Tilcsik 2014), However, better tests disentangling the effect of founders’ and organizational members’ formative experiences could be conducted. Moreover, my study largely overlooks the multi-genealogical nature of imprinting (see Ellis et al. 2016). Future research should address this limitation and extend my theoretical model to account for such dynamics.

The data I use in this dissertation present very important advantages for the study of the survival of new firms. First, they include all the registered new firms in Sweden. Second, their longitudinal nature allows to a) avoid survivorship bias which is a serious concern in studies on new firms (see Stam and Wennberg 2009), especially those using survey-based data, and b) run sophisticated econometric models, i.e. Cox proportional hazards model, and other alternative tests that aim to strengthen the robustness of the results. Nevertheless, registered data may also bring some limitations. First, the set of studying variables is limited to the one collected by SCB. However, SCB is well-known to provide very detailed and fine-grained data, especially at the individual level. Second, someone may question whether registered new firms are an appropriate empirical context where to test liability of newness arguments. While most of the existing research on liability of newness focuses on registered new firms, Aldrich and Yang (2012) have recently challenged this approach by claiming that the focus should instead be put in emergent
organizations, i.e. those organizations that are in the nascent phase, thus not necessarily founded (see also Kuilman et al. 2009). Delmar and Shane (2004) found that legitimating activities involving government are the first step in entrepreneurial activities for most new ventures in Sweden which makes me confident that many new firms in my sample are emergent organizations. Nevertheless, in light of the current call for more replication studies in both strategic management and entrepreneurship (Bettis et al. 2016; Davidsson 2016), future research could replicate some of the proposed relationships in this dissertation on samples of nascent firms only, e.g. Panel Study of Entrepreneurial Dynamics, and see whether results yield important differences.

5.3 Suggestions for future research

In the previous section I have highlighted the key limitations of this dissertation and proposed how future studies may address some of these limitations. However, in this section I will suggest how my findings may guide future research on the role of founding conditions for new firm outcomes.

This dissertation proposes that conditions at founding imprint new firms around certain features that are likely to persist and ultimately affect their survival. It mainly focuses on (and links) two of the three stages of the imprinting process, i.e. the genesis and manifestation, and it assumes that imprints generated during the genesis usually persist through the intermediate stage, i.e. the metamorphosis. While this assumption seems reasonable as I am focusing on the early survival of new firms, it may still be the case that during the metamorphosis stage, imprints amplify, decay, or transform (see Simsek et al. 2015). In order to account for this possibility, future research could explore different moderators of the founding conditions-new-firm-outcomes relationship aiming at disentangling the amplification, decadence and transformation of imprints. For instance, the relationship between organizational members’ prior shared international experience and the survival of new firms could become more negative if new employees from the former international firm would join the international new venture overtime as this should amplify the existing imprints at founding. Similarly, adding other employees over time who did not share prior employment experience with other founding organizational members may reduce the negative effect of high lengths of tenure on survival.

This dissertation examines two underinvestigated, yet important, aspects of family firms. Essay 1 explores whether spawns of family firms survive more or less than spawns of non-family firms. Results show that family-firm spawns survive more, especially if founded by ex-employees with longer tenures in family firms and if located geographically close to the family firm they spawn from. Essay 4 instead proposes how some ecological conditions of an industry
at founding may affect the survival of new family firms. Although both essays provide novel approaches to the study of family firms, they both conceptualize family firms as homogenous organizations. Yet, family firm research emphasizes the heterogeneity of such firms (Chua et al. 2012; Melin and Nordqvist 2007), by looking at indicators such as degree of family involvement in the firm, generation in control, etc. Starting from this consideration, future studies could focus only on spawns from family firms and theorize/test whether the percentage of family involvement in the parent firm is likely to be related to the success of their spawns. Moreover, future studies could try to understand why some family members decide to leave their family firm to start an independent new firm in the same industry, i.e. spawn. Conflicts between family members may play a key role in spawning decisions. Overall, the study of family-firm spawns is a promising area of research with many opportunities. Similarly, future studies on the effect of ecological conditions of an industry on new family firms could investigate whether different legitimation effects exist depending on the similarity between existing organizations and new family firms in terms of family involvement in the firm. Yet, such a study would require very fine-grained information about the characteristics of the population of family firms in a given industry.

In essay 3, we have explored two key characteristics of an industry’s public technological knowledge: intensity and breadth. Future research may examine other characteristics that could challenge new ventures’ ability to benefit from this knowledge, such as complexity and novelty. Likewise, the cumulative effects of these and other characteristics on new venture survival may require exploration of how different combinations of an industry’s public knowledge characteristics may influence survival differently. We have argued throughout the paper that new ventures can achieve survival-enhancing learning as a result of absorbing industry knowledge. However, as in the majority of existing studies (e.g. Baum and Ingram 1998; Kim and Miner 2007), we were unable to capture learning directly but rather speculated on the survival implications of such potential learning. Future studies would benefit from measuring and capturing this learning directly and relating it to venture survival and other measures of performance.

Essay 4 in this dissertation is a conceptual piece. A natural follow-up would be to empirically test the propositions advanced in the study using real data. When doing so, researchers should pay attention to different aspects, such as the empirical context where to test the propositions, the level and unit of analysis, the operationalization of the main variables and the analytical techniques to apply. Essay 4 discusses all of these aspects in great details. Moreover, essay 4 could be extended in two interesting ways. First, while prior research has adopted family-level perspective, e.g. family embeddedness (Aldrich and Cliff 2003), on new (family) firm creation, future research can focus on the effect of ecological conditions of the environment on the founding of new family firms. Such research would complement the few
existing studies investigating the creation of new family businesses (e.g. Bird and Wennberg 2014). Second, essay 4 focuses on two approaches within the organizational ecology perspective that are applicable to (the survival of) new family firms, i.e. density delay and resource partitioning. However, organizational ecology offers additional approaches that could potentially shed light on the environmental selection mechanisms of family firms, such as liability of newness and smallness, and fitness set theory. For instance, one could examine whether new family firms present a lower liability of newness than new non-family firms because of their strong ties in family groups, which may facilitate the mobilization of different resources (Chrisman et al. 2002). Similarly, it would be interesting to see whether family firms actually experience a liability of newness each time a succession process takes place (see Chrisman et al. 2003), as new members need to learn new roles and positions in the firm, and how this process may affect the survival of the family firm.

Finally, the present research captures certain founding conditions but not others. Specifically, it focuses on new firms’ individuals and ecological conditions of the external environment at founding. However, different sources of imprints exist. Next to the one discussed in this dissertation, Marquis and Tilcsik (2013) propose that organizations are also imprinted by technological conditions and institutional factors. Future research could theorize and empirically show how such factors may impact the survival of generic new firms, or, even more interestingly, international new ventures and new family firms.
Founding conditions and the survival of new firms

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