Relatedness through kinship
The importance of family co-occurrence for firm performance

Evans Korang Adjei
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Dedication

To my family.
Acknowledgements

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Evans Korang Adjei
Umeå University
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Author’s declaration: Joint effort in planning and writing the manuscript. Sole responsibility for the empirical analysis.


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Abstract

The aim of the thesis is to analyse the effects of family co-occurrence and past familial relationships (inherited entrepreneurial abilities) on firm performance. This aim is motivated by the contemporary arguments that social relations (e.g. family ties) are important in the analysis of today’s space economy. In most studies, the point of departure in the analysis of firm performance has often been to analyse and examine the cognitive resources available in a firm, as well as a firm’s geographical closeness to related firms and industries. However, this argument has been challenged, and it is further suggested that social relations, and for that matter family relations (or family co-occurrence), may be important in the analysis of firm performance. To test this argument, the analysis is based on longitudinal data comprising various register data on the Swedish population and firms.

To examine the aim, three different but related questions were analysed: the first analysed the prevalence of family employment across different regions and how this affects firm performance; the second examined the relationship between entrepreneurs’ familial relations (co-occurrence of different family relations) and skill variety, on one hand, and how the relationship affects firm performance on the other; and the third examined the effects of present family relations (family firms) and entrepreneurial capital (EC, inherited entrepreneurial capability from self-employed parents – past family relations) on the survival and growth of new entrants. Questions 1 and 2 were explored by applying simple ordinary least squares (OLS) and fixed effects (FE) regressions, respectively. Question 3 was explored by employing an event-history analysis (survival analysis) to determine the time to exit and OLS for the growth analysis.

The results show that family co-occurrence in firms (be they family or non-family firms) positively affect labour productivity. At the same time, the results show that some specific family relationships are more important than others in terms of impacting labour productivity. Moreover, the results indicate that family firms, in particular, benefit the most from having family members employed in the firm, especially when this involves family relationships such as couples and/or children. The co-occurrence of couples and/or children in family firms moderates the negative impacts of similarities and unrelatedness of skills on productivity. The results show that the impacts of family co-occurrence are greater in smaller specialized regions than diverse and larger ones. Thus, while the family positively correlates with firm performance, this is mainly the case in specialized regions. The results further show that family firms are not more resilient, as the literature argues; but this effect is confounded by EC. The implication is that it is not family firms per se that are resilient but rather firms with entrepreneurial experience from parents, especially in rural regions; meanwhile, family firms create more jobs. However, the analysis could not identify a clear regional effect of the role of family firm on job creation. In this sense, the present thesis
provides important insight into why the family constitutes an important part of the firm production setup. The findings show that it is necessary and important to consider the family, and family firms, in the larger regional development framework. Moreover, while reflecting on the importance of the family in relation to firm performance, we should also not lose sight of the fact that there is a latent risk in family co-occurrence in firms: it is not a problem—until it becomes a problem.

**Keywords:** proximity dimension, agglomeration economies, family, family co-occurrence, family firm, region, firm performance, regional development, entrepreneurial capital, localized learning, Sweden

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1. INTRODUCTION

“Family isn’t defined only by last names or blood; it’s defined by commitment and by love. It means showing up when they need it most. It means having each other’s backs. It means choosing to love each other even on those days when you struggle to like each other. It means never giving up on each other” (Dave Willis).1

Willis’ definition of the family shows how the family goes beyond just last name, blood, marriage or adoption, and that it must be characterized by love and commitment to one another. This distinguishes the family from other social groups in the economic landscape. Willis’ conception of the family resonates with the popular Spanish adage “an ounce of blood is worth more than a pound of friendship”; in other words, this implies that the family represents an institution of economic, production, and social functions that shape the economic landscape. In the pre-industrial stage, or in pre-modern society, because technology was limited and barely changing, most economic and productive activities took place within the family, in which the distribution of activities was organized based on custom and tradition (Ross & Sawhill, 1977). The family thus played a central role in production and distribution chains, since economic and social status were defined by family ties.

New technology and specialization have caused a shift from the home to the factory, which can be noted during the industrial stage, or in modern society. As part of the effects of the Industrial Revolution or development, the shrinking of the extended family into the present nuclear family leaves little to be said of the family’s capacity as a production and economic unit. Ross and Sawhill (1977) argue that, to some degree, the family itself has become a more specialized unit whose major responsibility is the creation and socialization of children. The implication is that, because the family has lost some economic and production functions, it is no longer the central institution in society. Yet, the family still continues to play a crucial role in the economic and productive setup of the economic landscape. For example, through families’ strategic decisions and entrepreneurial activities, family firms are important agents in the regional economic development framework. Recent studies indicate that, on average, family or kinship ties constitute about 14% of Swedish workplaces (Holm, Westin, & Haugen, 2017).2, at the same time as family firms account for about one-fourth of total

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1 Dave Willis is a Pastor and the author of several books. He teaches communication courses, and has served as a consultant in the areas of interpersonal communication, public speaking, and social media strategy. http://www.patheos.com/blogs/davewillis/quotes-worth-sharing/

2 In this thesis, the term family ties represents the relationship between family members and relatives (kin). This includes relations based on consanguinity (blood relations) – e.g. siblings, grandparents, cousins, uncles – and those based on conjugality (marriage). Family ties is therefore used interchangeably with kinship ties.
employment and one-fifth of the gross domestic product (GDP) in Sweden (Bjuggren, Johansson, & Sjögren, 2011). This makes the co-occurrence of family members and the impacts of family firms a phenomenon that is likely observable at most workplaces and in most regional economies.

Despite the crucial role of the family and the report that family typologies play a major role in regional development in terms of GDP per capita (Duranton, Rodríguez-Pose, & Sandall, 2009), the family is relatively under-researched in most studies in relation to regional differences in economic development. Basco (2015), for instance, argues that regional development studies have neglected to investigate the role of the family on firm behaviours and the consequences of this influence on regional economic and social development. While regional development literature has recognized the role of social capital in shaping competitive advantages (e.g. Saxenian, 1994), the potential role of familial relations has often been studied through case studies (e.g. Johannisson et al., 2007). However, the link between the family and regional socioeconomic outcomes deserves more attention in the literature as it can offer significant progress toward understanding why some regions are more developed or more able to adapt to shocks than others (Duranton et al., 2009), since there is hardly an aspect of a society’s life that is not affected by the family (Alesina & Giuliano, 2014).

Given the above-mentioned gap, this thesis contributes to the regional economic development literature by analysing the role of the family on firm performance. The thesis specifically considers how various forms of family relations (or family co-occurrence) and entrepreneurial capital (EC) influence firm performance in different types of regions. While family co-occurrences capture the present family relations within firms, EC represents the entrepreneurial experiences and practices inherited from self-employed parents (also termed as past familial relations). The analyses are positioned at the intersection between the agglomeration and proximity dimensions literature exploring and capturing the relevance of proximity in various dimensions, on the one hand, and the family business literature on the other. The thesis places keen attention on social proximity – the family and how such relations among many others are important for understanding spatial differences in firm performance. The thesis is based on the assumption that the family is a resource that is important for increased firm performance, but most importantly, in regions characterized by agglomeration diseconomies or in regions lacking the benefits derived from the collocation of firms, usually small regions.

Social relations at the micro level comprise a major factor for collaboration within and across firms (Boschma, 2005; Granovetter, 1985). This makes the family an effective learning group since group norms and culture shape skills and communication in cases in which the group attaches great value to learning (Granovetter, 2005). Family relations offer an ideal environment for creating social capital through modelling trust as a foundation for collaboration and reciprocity (Bubolz, 2001; Coleman, 1988). Trust is an important element in relationships, and in economic transactions at large (Uzzi,
In the family, trust can be assumed as path-dependent as family members always strive to avoid ruining the established culture of trust and supportive behaviours. This tends to preserve the family over other social groups, and further makes family relationships more durable (McPherson, Smith-Lovin, & Cook, 2001; Nahapet & Ghoshal, 1998). Trust-laden relations permit others to act heuristically, and hence speed up knowledge circulation and conserve cognitive resources.

At the same time, strong family ties can adversely affect firm performance or economic development. First, a high level of trust in the family is likely to produce distrust outside the family, a behaviour that can impede cooperation with and development of formal institutions (Alesina & Giuliano, 2014). Ermisch and Gambetta (2010) found that high family trust produced a lower level of trust in strangers as well as distrust among co-workers, especially among non-family employees (Pearce, 2015). In family relationships in which a great deal of loyalty is involved, there may be an underestimation of the risk of opportunism and uncertainty. Furthermore, family co-occurrence can adversely affect learning processes. Learning processes among family members can result in the accumulation of similar cognitive resources that can cause lock-in and slower growth (Bentolila, Michelacci, & Suarez, 2010; Grabher, 1993).

Kramarz and Nordström-Skans (2010) suggest that hiring family members is a suboptimal strategy as children who perform well find jobs elsewhere, or quickly move to other employers, while underperforming children tend to stay much longer in the same firm with their parents. This creates undesirable spillovers and causes a lack of flexibility, which can restrict novelty and hamper openness to potential knowledge sources outside the family.

Moreover, the impacts of family co-occurrence and EC on firm performance and regional development comprise a geographical problem. This situation has not received enough attention in economic geography. The co-occurrence and role of family ties are influenced by the region; that is, there is a potential varying outcome of the role of family ties depending on the spatial context. For instance, because metropolitan regions are characterized by a higher agglomeration of both specialized and diverse industries and workers, there is comparatively increased efficiency in labour market matching (Duranton & Puga, 2004; Glaeser, 1999; Gordon & McCann, 2000; Puga, 2010; Wheeler, 2001). This means that metropolitan regions may place little importance on hiring through family referrals compared to rural regions, where access to agglomeration externalities is scarcer and labour market efficiencies are enhanced by established norms through continual interactions. Florida (1995), for instance, argues that larger labour market regions are collectors and repositories of knowledge and ideas that give rise to positive externalities, primarily by creating opportunities for people (and/or firms) in different industries to exchange ideas in an

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3 In this thesis metropolitan regions are those characterized by high population, high population density, and high economic activities. Therefore, metropolitan regions is used synonymously with larger regions. The same applies to the use of rural and smaller regions, except when specified.
effort to explore and exploit complementarities (Glaeser, 1999). It is therefore imperative to argue that, because rural regions are characterized by labour market matching deficiencies and a lack of variety, family co-occurrence in firms may be more dominant there. Consequently, geography drives the presence and role of family ties.

Moreover, there is evidence that agglomerations are not homogenous but rather vary along several dimensions, and hence that different firm-internal resources influence performance (Knoben, Arikan, van Oort, & Raspe, 2016). The implication is that family co-occurrence could still influence firm performance in larger regions through the interplay with resources at the firm level. This makes the family, and family firms, not simply a small peripheral topic. However, we need to know more about the underlying mechanisms and importance of the family and family firms in the economic landscape. This suggests a need for an empirical analysis of the effects of the family and family firms, which is what this thesis seeks to achieve.

1.1. Aim and research questions

The aim of this thesis is to analyse the effects of family co-occurrence and past familial relationships (inherited entrepreneurial abilities) on firm performance. This aim is motivated by the contemporary arguments that social relations (e.g. family ties) are important in the analysis of today’s space economy (e.g. Blanc & Sierra, 1999; Boschma, 2005; Gilly & Torre, 2000; Rallet & Torre, 1999). Basco (2015) also argues that the role of the family has been under-researched in a regional development framework, despite the claims that family relations create positive externalities and hence may explain spatial variations of economic development (Duranton et al., 2009). Moreover, although the firm has been the object of analysis, the exact mechanisms driving the growth in different regions still remain unexplored. The aim of the present thesis finds support in a qualitative finding in the Swedish context by Haugen and Westin (2016), who found that hiring family members not only reduces the risk of hiring the wrong person but also enhances the transfer of tacit knowledge among family members. Nevertheless, family co-occurrence can also produce a suboptimal outcome, owing to a lack of plurality of competences. The aim of this thesis is addressed with three research questions, examined in three separate empirical studies:

1. What are the effects of family co-occurrence on firm performance, and how prevalent is family co-occurrence across different regions? (Paper I)
2. What are the impacts of entrepreneurial family relationships on firm performance, and how do they interplay with in-house skill variety? (Paper II)
3. What are the effects of entrepreneurial capital on the survival and growth of family firms? (Paper III)
1.2. Delimitation and contributions

1.2.1. Delimitation

The present thesis is delimited to the effects of family co-occurrence within the firm. By this delimitation, the analyses exclude all possible impacts of the family outside the firm and between different firms. Instead, the thesis focuses on how family relations within the same firm may enhance firm performance and explain differences in regional development, but also how these same processes facilitate the transfer of EC. The definition of the family and family ties is data-driven because the ASTRID database provides information on the type of family and the type of familial relationships within the family (see further discussion in section 3). The data were delimited to the periods from the 1995s onwards (see further discussion in section 3). The above research questions are brought to fruition in an empirical design that is predominantly quantitative in nature, using longitudinal micro-data consisting of employer-employee matched data in the Swedish economy.

1.2.2. Contributions

The major contribution this thesis seeks to make is to view and discuss uneven regional development from the perspective of the role of family co-occurrence and EC on firm performance. By so doing, the thesis seeks to systematically analyse the impacts of family co-occurrence and EC on the behaviours of firms and the consequences of these behaviours for regional development. The thesis goes beyond the general claim that trust affects cooperation in certain industries in certain regions (Saxenian, 1994; Storper, 1995), by drawing on large-scale data to investigate how the family affects firm performance. By examining the importance of the family in the firm, the thesis hopes to contribute to the understanding of the family’s role in firm competitiveness. Besides examining the absolute benefits of the family, analysing the relational character of learning requires a look at multiple proximities. Despite the extant literature on proximity dynamics, the exact workings of proximity still remain a black box (Boschma, 2005; Shaw & Gilly, 2000). Boschma (2005) suggests that combining different proximity dimensions may offer a solution to most learning problems in the firm; however, there have been fewer studies in this regard. A recent study has shown that (un-)related flows within the same firm are important for firm performance (Östbring, Eriksson, & Lindgren, 2017). Therefore, by examining the combination of multiple proximity dimensions (social proximity and cognitive proximity), the present thesis contributes to the proximity dimension literature. Finally, previous studies indicate that family involvement in family firms enhances their performance over non-family firms in terms of productivity and employment growth (Astrachan & Shanker, 2003; Villalonga & Amit, 2006; Westhead & Cowling, 1996), even when different definitions of family firm are tested (Miller, Le Breton-Miller, Lester, & Cannella, 2007). However, the exact mechanisms driving the growth and survival of family firms still remain unexplored. The thesis therefore contributes to this body of literature by
analysing the impacts of EC on the survival and growth of new entrants across different economic landscapes.

1.3. Structure of the thesis

The thesis comprises an introductory section (kappa) and three papers. The kappa includes six main sections, the first being this introductory section. The second section discusses the theoretical framework on uneven regional development in relation to family ties and firm performance. In this section, the thesis discusses how family relations can facilitate firm performance through various mechanisms. The intention is to give a broader theoretical framework, within which the thesis aims to contribute. The third section briefly discusses the data, key variables, methods, and applied methodology used in the various papers, and the limitations of the data and various methods. The fourth section presents a summary of the three papers, while the fifth presents the concluding discussions on the main findings and implications for theory and methodology as well as suggestions for future research. A short summary in Swedish is provided in section six.

2. THEORETICAL FRAMEWORK

This part of the thesis presents the general theoretical framework. It is worth noting that this does not reflect the entirety of the theoretical framework in each of the papers, but rather the broader literature on which the thesis draws. The section starts with a conceptual overview of how the co-occurrence (or presence) and role of the family comprise a geographical product. From here, the family is discussed in the context of proximity dimensions as important form of social proximity for firm performance. Finally, this section further discusses how family co-occurrence and EC in family firms contribute to the creation and definition of different economic landscapes.

2.1. The co-occurrence and role of the family; a product of geography

In recent decades, studies have shown that firms are more productive, on average, in metropolitan regions (Combes, Duranton, Gobillon, Puga, & Roux, 2012; Florida, Mellander, Stolarick, & Ross, 2012). Two main explanations have been offered for this, asserting that it entails: (1) the effects of firm and skills selection, or (2) the effects of agglomeration economies. Competition is very high in metropolitan regions, allowing only the most productive firms and workers to survive. Prior studies have shown that tolerant and diverse metropolitan regions function as magnets for young, talented and highly educated people (e.g. Florida, 2002). For instance, Bjerke (2012) argues that large and growing Swedish regions are good at attracting and/or keeping graduates. This is the case because highly skilled jobs have become more concentrated in larger cities over time (Florida et al., 2012). Bjerke and Mellander (2017) found that Swedish
graduates are more likely to stay in or move to larger regions and commute longer distances to creative jobs. At the same time, larger regions are characterized by the presence of both specialized and diverse economic activities that promote externalities, which increase the productivity of firms (Combes et al., 2012). Skilled workers and economic activities continue to flock to larger regions, even though they are associated with higher rent, higher cost of living, and higher wages. Glaeser and Maré (2001) explain that higher wages in larger regions are compensated by higher productivity. Glaeser (1999) further argues that, if cities are full of individuals with high human capital and speed in the flow of information, the cities will be more valuable to individuals with high human capital. The implication here is that the selection of productive firms and skilled workers into larger regions only leaves smaller regions with less productive firms and workers on the competitive global market. However, this might not always be the case for all rural regions, as they are heterogeneous and show ranges of economic trajectories; e.g. some are becoming attractive for specialized industries and skills.

Economic geographers have attributed the spatial differences in firm performance to the benefits associated with agglomeration economies. Agglomeration economies arise from a variety of mechanisms, such as the possibility for collocated similar firms or firms in the same industry to share suppliers via the existence of a thick labour market, facilitate matching, and offer the possibility to learn from other firms. Duranton and Puga (2004) emphasize that the spatial concentration of firms and workers makes them more productive. Moreover, since urban agglomerations facilitate skill accumulation and speed the rate of interactions, highly skilled individuals, and productivity advantages are common in larger regions. This argument is closely linked to the localization economies of Marshall (1920). The geographical collocation of similar economic activities broadens the range of potential experiences for all forms of collaboration and intellectual spillovers that are important for firm performance (Glaeser, 1999; Glaeser & Maré, 2001). On the other hand, agglomeration economies can arise from the collocation of a diverse range of economic activities; this is closely linked to the notion of urbanization economies asserted by Jacobs (1969). Clearly, from the above, it is obvious that the demand and supply factors affect the spatial sorting of firms and skilled workers, and hence the geographical differences in firm performance. In all this, we are oblivious to (or have missed) how the spatial sorting of productive firms and skilled workers may result in the differentiated spatial sorting of family co-occurrence or employment and family firms in the literature.

Processes of spatial sorting of skilled workers and productive firms may result in the production of higher family employment or co-occurrence in firms, and hence strong family ties in certain firms and regions. In effect, regions that lack the availability or presence of highly skilled workers may resort to hiring through referrals and family networks, resorting in a higher presence and stronger family ties at the firm level. It
may be difficult to unambiguously claim that processes of spatial sorting of workers and firms could produce family co-occurrence and stronger family ties in smaller regions, *inter alia* the frequent face-to-face interactions. However, it is reasonable to argue that because smaller regions are characterized by the sorting of relatively low-skilled workers (Glaeser, 1999; Glaeser & Maré, 2001), hiring through family ties becomes the most reliable and cheap source of employment (Montgomery, 1991). Additionally, the spatial differences in family ties can be attributed to processes of globalization. Globalization has resulted in structural changes in the family (Roopnarine & Gielen, 2005). The processes of globalization have increased patterns of migration, favouring high movement into larger regions owing to the availability of job opportunities. This has torn families apart, weakening family relations. Moreover, because smaller regions facilitate face-to-face interactions among family members, it reasonable for these regions to produce stronger and more trustful family relationships both within the firm and at home. In a recent paper, Holm, Westin and Haugen (2017) found low levels of kinship density4 at workplaces in Sweden’s metropolitan regions, somewhat high levels in intermediate-sized regions (urban regions), and higher levels in remote and sparsely populated areas (rural or small regions). They further showed that kinship density decreases with rising educational levels, which means that workers with low education are overrepresented at workplaces with high kinship density, a phenomenon that can highly be associated with smaller or rural regions.

### 2.2. Geographical differences in firm performance; from agglomeration economies to proximity dimensions

Over the years economic geographers have studied the role of agglomerations in firm performance. Evidence shows that the geographical agglomeration of firms facilitates the creation of a localized learning system (Maskell & Malmberg, 1999a, 1999b) and university-industry innovation processes (Abramovsky & Simpson, 2011; Ponds, van Oort, & Frenken, 2010), etc. Marshall (1920) argues that there is something ‘in the air’ in geographical agglomeration that seems to stimulate the competitiveness and growth of firms and shape our understanding of the uneven spatial development of industrial districts (Saxenian, 1994; Storper, 1995). For instance, the geographical collocation of related economic activities promotes access to specialized labour and inputs, to technological and knowledge spillovers, and to greater demand and/or supply. McCann and Folta (2008) argue that the geographical concentration of related economic activities enhances efficient access to the supply and demand of important resources exogenous to the economic actors (Ellison & Glaeser, 1999). Meanwhile, according to Jacobs (1969), important sources of knowledge and technological

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4 Where kinship density is the total number of direct individual kinship links at a workplace. For a son and father at the same workplace, the son has two links: one to the father and one from the father (Holm et al., 2017).
Spillovers are external to the industry in which an economic agent operates. The geographical agglomeration of diverse economic activities promotes opportunities to imitate and recombine ideas from different industries (Glaeser, 1999; Malmberg & Maskell, 2002). For example, earlier studies have shown that more diverse economies are conducive to the exchange of skills necessary to the emergence of new fields (Harrison, Kelley, & Gant, 1996b). This is the case because more diverse economies offer a labour force with a broader mix of skills, including new skills conducive to working with emerging production technologies (Harrison, Kelley, & Gant, 1996a). Therefore, proximity is not a new idea in economic geography; geographical proximity has long dominated the theoretical and empirical discussions in the literature.

The general observation in the literature is a strong indication that regions are connected with the geographical concentration of economic activities and skilled workers, with production remarkably concentrated in space (Krugman, 1991), especially in larger regions (Andersson & Lööf, 2011; Combes et al., 2012; Florida et al., 2012). The strong connection between larger regions and the concentration of economic activities and skilled workers tends to make larger regions superior performers to smaller regions. Glaeser and Maré (2001) attribute the regional differences in firm performance to wage differentials (urban wage premium). According to this claim, it is not by chance that highly educated individuals are drawn to larger labour markets where the returns on their human capital are the highest (Wheeler, 2001) and the average productivity is higher. This argument has received greater attention with diverse discussions on proximity dimensions. Besides, geographical differences in innovation and productivity have long been analysed from a diffusion point of view (Hägerstrand, 1967). Hägerstrand's view on innovation and productivity is based on the nature and spatial distribution of information. Hägerstrand argues that the probability that information is transmitted from one economic agent to another declines with the distance between the two. Malmberg and Maskell (2002) expand on this by arguing that when firms collocate, a spatially defined community is usually constructed. This makes it easier for the firms to bridge all forms of communication gaps resulting from different knowledge bases and organizational arrangements. Duranton and Puga (2004) argue that the spatial concentration of economic activities and skilled workers allows for a more efficient sharing of local infrastructure and facilities, a variety of intermediate input suppliers, or a pool of skilled workers. It offers larger markets better matching opportunities between employers and employees, and buyers and suppliers (e.g. Wheeler, 2001). It also facilitates learning processes, by promoting the development and widespread adoption of new technologies and business practices (Puga, 2010). Moreover, economic activities in larger regions tend to generally benefit from geographical proximity because they are located in places where the occupational distribution of workers matches the demand for labour by occupation (Rigby & Brown, 2015).
Proximity goes beyond simply geographical proximity. Developing the argument on the proximity dimensions by the French Proximity Dynamics Group (e.g. Kirat & Lung, 1999; Rallet & Torre, 1999; Shaw & Gilly, 2000; Torre & Rallet, 2005), Boschma (2005) presents four more proximity dimensions beyond the mere conceptualization of geographical proximity: cognitive, organizational, institutional, and social. Cognitive proximity explains the similarities and differences in the capabilities of economic actors. Here the argument is how people perceive, interpret, understand and evaluate economic issues based on shared absorptive capacities (Cohen & Levinthal, 1990), as knowledge is distributed among different economic agents (Antonelli, 2000). Therefore, for economic agents to learn and create knowledge by combining complementary knowledge within and outside the firm, the cognitive distance must be neither too long nor too short. Prior micro-level analyses of cognitive proximity have shown a relationship between cognitive distance (relatedness) and firm productivity (Boschma, Eriksson, & Lindgren, 2009; Timmermans & Boschma, 2014; Östbring, Eriksson, & Lindgren, 2016; Östbring & Lindgren, 2013). Organizational proximity explains that organizational arrangements expressed through similarities in intra- or inter-organizational hierarchies have great impact on the ability to coordinate and avoid uncertainty and opportunism. However, be it intra- or inter-organizational arrangements, strong ties limit access to various pieces of novel information (Kirat & Lung, 1999). The search for novelty often requires going beyond the established channels (Boschma, 2005). Fu, Schiller, and Diez (2012) identified that firms in the Pearl River Delta rely on organizational proximity to gain access to and absorb knowledge – by turning to parent companies for key knowledge in their processes of product innovation.

Institutional proximity (macro-level) describes how shared norms, values, and habits (informal), as well as rules, conventions, and laws (formal) between economic agents, can enhance cooperation. A similar institutional framework streamlines behaviours of economic agents in contract (North, 1992). Analysing the collaboration efforts by institutions, Ponds et al. (2007) found that even though geographical proximity matters, it plays a minor role when the collaboration is between institutions of similar background, even in international collaborations. At the global level, evidence shows that there is a strong connection between agglomeration and a country’s institutional context. Firms tend to agglomerate when investing in countries with a collectivist culture and political/economic uncertainty (Martin, Salomon, & Wu, 2010). Finally, social proximity (micro-level) is the socially embedded relationships between economic agents based on kinship/family and friendship (Granovetter, 1985). Trust-laden relations define socially embedded relationships. The embeddedness literature suggests that higher interactive learning is associated with firms and individuals that are socially embedded, contrary to the neoclassical view. This implies that social relationships facilitate firms’ capacity to learn and absorb external knowledge since social closeness breeds trust, which in turn lowers transaction costs and facilitates collaboration. Fu et al. (2012) show that firms in the Pearl River Delta rely on social
relations to trigger product innovation ideas. The authors argue that socially embedded innovators frequently interact with external partners by combining internal capabilities. Firms rely on their established relations with customers and suppliers to ascertain both tacit and codified knowledge in their product innovation processes.

Boschma (2005) suggests that the proximity dimensions, in their own ways but also most likely in combination, will offer the solution to the fundamental problem of coordination and hence firm performance. Combining different sets of proximities can result in the co-evolution of different sets of knowledge and opportunities that can facilitate novelty. Östbring et al. (2017) found that local related flows (cognitive proximity) are economically beneficial if they cross-firm boundaries (organizational proximity). This suggests that labour mobility across workplaces or firms with similar institutional contexts like strong common rules, ethical practices, routines or incentive structures (institutional proximity) reduces the need for trust-building but facilitates the recombination of existing knowledge, hence creating a localized learning system vital for firm performance. Östbring et al. (2016) demonstrated that multiple measures of cognitive dimensions of employees (level of education and industrial experience) interact in their influence on firm performance. The results suggest that high human capital ratios or high levels of similarity in industrial experience reduce the commonly found negative effects of similarity in the formal knowledge on firm performance. Another example related to the quest in this thesis is the study by Huber (2012). Huber revealed that learning processes can take place between cognitively distant economic actors who are strongly socially related, such as spouses or children. The implication is that cognitively distant economic actors may require a higher level of social proximity (familial relationships) in order to function. This thesis attempts to analyse the problem of firm performance by opening the black box on proximity dimensions in relation to the role of the family.

2.3. Family and firm performance

This section of the theoretical framework presents discussions on why family relationships are a unique form of social proximity, and how this affects firm performance through various mechanisms.

2.3.1. The family and ties that bind

The family is the primary social affiliation an individual can claim (Canning, Mitchell, Bloom, & Kleindorfer, 1994), and is, therefore, the basic unit of every society. The family is both an economic and a production unit, while at the same time being a mechanism for social inclusion (Canning et al., 1994; Ross & Sawhill, 1977). As an economic unit, the family shares basic resources for the common benefit. For instance, families use capital resources for the upkeep of the family, e.g. to sponsor the education of children. Capital allocations between family members allow for risk-sharing between members. As a production unit, the family organizes the division of
labour based on competence and gender, whereby information flows between family members facilitate the quick execution of tasks. Furthermore, as a social unit, the family ensures that family members are not permanently separated from society. This function of the family satisfies the psychological need of belongingness, which represents commitment and security in an uncertain world. The family is regarded as a dynamic, ever-changing institution whose boundaries and meaning oscillate over time (Holtzman, 2008). The family, thus, is a social group that includes relationships based on consanguinity, conjugality or adoption (Trost, 1990) who share experiences and emotional ties with varying responsibilities. This conceptualization of the family assumes both traditional and social expansive status.

It is worth stressing that family relations can also involve step relationships. Martin, Anderson, and Mottet (1999) argue that step relationships are less cohesive and more stigmatized than biological ones. Fine, Coleman and Ganong (1998) indicate that stepchildren regard stepparents as having less authority in their lives. Because of this pre-conceived notion, there are often artificially established impermeable boundaries between stepparents and stepchildren that hinder communication (Golish, 2003). Yet, communication in the family is fundamental in the construction of strong family relationships (Holstein & Gubrium, 1999). Holtzman (2008) argues that the idea that humans come together to create, understand, and recreate their social world through symbolic systems like language shows that family relationships are given meaning in human interaction. Therefore, cultural identities like shared language and norms in families are initiators of communication, which is highly critical in the construction of successful stepfamily and family relationships.

The family can also involve several generations with different experiences and values. Intergenerational relationships bring to play diverse experiences, which are relevant for understanding the role of the family in modern society. Intergenerational relations have invoked many theoretical paradigms or theories, predominant among them is the exchange theory and altruism theory. The exchange theory, emerging from theories of economic systems, assumes that family members make decisions based how to minimize the costs and maximize the benefits of their decisions. The exchange theory supports the argument that there are different levels of commitment among family members (Bird, 2014; Wiklund, Nordqvist, Hellerstedt, & Bird, 2013) that influence different levels of cooperation and exchanges. Moreover, people are more willing to provide both high- and low-cost help to family members than to friends (Stewart-Williams, 2007; Xue, 2013). This validates the kin-selection theory (Hamilton, 1964). The exchange theory predicts that people will increase their commitment to a person if they experience more benefits than costs; however because family relations have social obligations, the family has the power to ensure reciprocity beyond what the market might produce. Migration studies have shown a strong association between distance and support from family members. The foundation of this argument is that the likelihood of receiving support from a family member decreases with
increased distance to that family member. Mulder and van der Meer (2009) found that the ‘distance decay’ in family support differs between family members. Mothers are more likely than fathers to render support over longer distances, while siblings are likely to offer support only when other family members live in close proximity.

The altruism theory is explained as “a motivational state with the ultimate goal of increasing another’s welfare” (Batson, 1991:6). In other words, altruism refers to behaviours that benefit others at personal cost to the behaving individual. Becker (1974) argues that the family has a set of motivations and bonds that guide their interaction with and care for one another. Such altruistic feelings motivate family members, especially parents, to invest in their children – for instance in education, workplace experience, information delivery, etc. – even if there is no plan for repayment by the children (Bianchi, Hotz, McGarry, & Seltzer, 2007). This act makes family membership valuable in ways that both promote and sustain the family bond across generations. Altruism enhances loyalty, as well as commitment, among family members within and outside the firm. Those who feel greater responsibility for their family members’ wellbeing are more likely to cover a longer distance to provide support, i.e. among family members who share strong emotional ties (Mulder & van der Meer, 2009). Siblings are less likely to provide such support than parents and children are (Voorpostel & Van Der Lippe, 2007).

Moreover, family relationships within and outside the firm can expose family members (especially children) to entrepreneurial experience and qualities that can facilitate their entry into entrepreneurship. Thus, past familial relationships and experience can be important resources for entrepreneurship. There is strong evidence suggesting that entrepreneurial families contribute to the development of human capital in the form of experience and skills or entrepreneurial qualities of family entrepreneurs in the early years of childhood or adolescence. This process not only enhances the transfer of complex family wisdom but also prepares individuals for entrepreneurship. Entrepreneurial families can be referred to as institutions or social structures that can both drive and constrain entrepreneurial activities (Dyer & Handler, 1994; Nordqvist & Melin, 2010). Steier (2007) argues that for most successful entrepreneurs there is a silenced story (sub-narrative) of how their family was pivotal in their entrepreneurial lives. “Many entrepreneurs are embedded in a social context that includes a family dimension. For these entrepreneurs, the family represents a rich repository of resources: economic, affective, educative, and connective” (Steier, 2007: 1106). Aldrich et al. (1998) suggest that the entrepreneurial family can be seen as an incubator and a birthplace of entrepreneurial qualities (also; Heck et al., 2006). Entrepreneurial abilities in the form of specific and general knowledge are referred to as entrepreneurial capital (EC) (Aldrich et al., 1998). Marshall (1920) expresses this argument as follows: “the mysteries of the trade become no mysteries; but are as it were in the air, and children learn many of them unconsciously” (p. 271), through things they see and hear around them. EC may not only promote the creation of future
entrepreneurs but may also facilitate successions, as pertains to the transferral of ownership and management to the next generation. Despite this, the family has been virtually neglected as a relevant unit of analysis, even though it could constitute a genuine contribution to the broader regional science field.

The ability of the family to build and sustain trust makes it different from other social groups. Sako (1992) defines trust as either ‘contractual’, ‘competence’ or ‘goodwill’. Contractual trust entails a mutual understanding whereby partners adhere to a specific written agreement, which controls interpersonal relations. Competence trust develops through shared abilities and compliance between economic agents. Lastly, goodwill trust develops over a long period of time. Goodwill trust is shaped by shared norms and values (Sako, 1992), which makes it sustainable, efficient, effective and reliable. Unlike contractual trust, goodwill trust requires no periodic renewal. This type of trust is best produced in an informal, small, closed and homogeneous group, which is able to enforce normative sanctions (Coleman, 1990); meanwhile, among heterogeneous groups, formal rules and contractual trust serve as checks on transactional relationships (Fukuyama, 1995). Trustworthiness in the family can be a mobilizer and a capitalizer for economic and social gain (Bubolz, 2001; Luhmann, 2000) even when the sense of intimacy and commitment may not be the same between all family members (Brannon, Wiklund, & Haynie, 2013; Wiklund et al., 2013).

A very important question has been whether the Industrial Revolution stripped the family of its economic and production functions, by entrusting these functions to the welfare state. This notion has led to the conclusion that the family is no longer the central institution in society (Ross & Sawhill, 1977). In simple terms, a welfare state is a social system based on the assumption that the government has the primary responsibility for the wellbeing of its citizens. The relationship between the welfare state and the family has been described as either crowding-out or crowding-in (Wolfe, 1989). Halla, Lackner, and Scharler (2013) argue that a strong welfare state can facilitate both the formation and the dissolution of family ties. The implication is that a strong welfare state risks crowding out help and support between generations and crowding in help or further responsibilities toward family members. This makes the effects and role of the family still an empirical question, which the present thesis seeks to explore in the Swedish context by analysing the effects of family co-occurrence on firm performance.

2.3.2. How family co-occurrence can affect firm performance

Bubolz (2001) argues that the family is a source, a builder, and a user of social capital. The relationship among family members creates an ideal environment in which social capital can be created (Coleman, 1988). Arregle, Hitt, Sirmon, and Very (2007) suggest that family co-occurrence in the family firm is likely to affect the firm’s social capital, which is a source of competitive advantage. Since families develop sustainable and reliable social capital when the family wields power through firm ownership and
management, this allows the family’s influence to be deeply engrained in all aspects of the firm (Arregle et al., 2007). Yet, the effects of the family on the firm’s social capital are dependent on the strength of the family’s social capital. The implication is that a firm’s social capital is rooted in strong family social capital. If a family is characterized by weak social capital, the family firm’s social capital development will be influenced more strongly by other proximate institutions and non-family employees (Arregle et al., 2007). Therefore, the effects of the family on the family firm’s social capital are strongly linked to the existence of strong family social capital. Moreover, strong family social capital can also have detrimental consequences on the firm’s social capital and possibly firm performance (Adler & Kwon, 2010; Leana & Van Buren, 1999; Nahapiet & Ghoshal, 1998; Portes, 1998). There is a strong possibility of transferring dysfunctional family attributes to the firm and a potential risk of the family social capital dominating the family firm’s social capital. Dysfunctional family communication can cloud appropriate communication in the firm. Unhealthy competition within the family can lead to concerns about whom to select for promotion, and this can create intense internal rivalries, which can impede firm performance.

Family co-occurrence can also affect the resource base of the firm. The key tenets of the resource-based view of the firm suggest that firms achieve competitive advantage by employing valuable and rare resources (Barney, 1991). The reason why certain resources are of greater value is that they are unique and less available, and are therefore less likely to be imitated (Aldrich & Cliff, 2003; Habbershon & Williams, 1999; Sirmon & Hitt, 2003). The theory suggests that firms with valuable and inimitable assets are able to create a sustainable competitive advantage (Barney, 1991; Wernerfelt, 1984). Families carry with them a unique set of resources in the form of human capital in terms of experience and critical judgment (Becker, 1964), social capital in the form of mutual trust, commitment and cohesion (Coleman, 1988), and financial and patient capital in the form of financial aid with long-term repayment plans (Sirmon & Hitt, 2003). The implication is that the family adds an extensive dimension to the resource base of the firm in terms of its efficiency and reliability. Moreover, the enduring nature of family relationships gives the family certain advantages in developing and maintaining a unique bundle of resources that are important for achieving a competitive advantage and hence increased firm performance. On the other hand, because the family is characterized by common values and norms, a higher family co-occurrence in the firm can result in the accumulation of similar resources that might be detrimental to firm performance. Additionally, because it is difficult to acquire and manage rare resources (Barney, 2001), there is a likelihood of the family being perceived as more valuable, which can cause dissatisfaction among other employees; this can affect cooperation and performance.
The family has peculiar assets that can affect a firm’s transactional costs. Gedajlovic and Carney (2010) argue that firms are characterized by certain assets, generic non-tradeable (GNT) that are peculiar to certain factors of production. Though these assets are sticky, they are generic in application and highly common among family members. The family is an influencer of transactional costs, especially in family firms (Gedajlovic & Carney, 2010; Verbeke & Kano, 2010). The family holds GNT that are different from other factors of production in the firm. Gedajlovic and Carney (2010) identify four types of GNT in family relationships – bonding social capital, bridging social capital, reputational assets, and tacit knowledge – that are seen as potentially valuable assets. Regarding the firm as a collection of different factors of production (Alchian & Demsetz, 1972), the family as a resource or a bundle of factors of production presents the capacity to mediate transaction costs. Since the family is characterized by common values and deep interpersonal relations, it facilitates the bonding, orientation, and adaptation of new employees (family members). Mutual trust in the family can lower contract and enforcement cost, and hence facilitate the deployment of resources in a fast, flexible and discrete manner (Yeung, 1997a). The family can promote the generational transmission of tacit knowledge, especially when the firm owner plans to bequeath the business and accumulated institutional knowledge to heirs. Therefore, the family has the capability to overcome information asymmetry and reduce transaction costs; hence the strong incentive to sustain the survival of the firm (Miller, Le Breton-Miller, & Scholnick, 2008).

Family co-occurrence can also influence firm performance through reduced agency cost. An agency relationship is a contract under which the principal engages the agent to perform some task on his behalf (Jensen & Meckling, 1976). This involves delegating some decision-making authority to the agent. The theory suggests that, since the principal and the agent are both utility maximizers, the agent may be tempted to act in self-interest, contrary to the principal’s interest (Chrisman, Chua, & Litz, 2004; Fama & Jensen, 1983b; Jensen & Meckling, 1976). To minimize divergence from the principal’s interest, others suggest that the principal ought to establish appropriate structural mechanisms or incentives for the agent, thus incurring monitoring costs (Fama & Jensen, 1983a; Jensen & Meckling, 1976). Agency cost includes monitoring expenditure by the principal, bonding expenditure by the agent, and residual loss by the principal (Fama & Jensen, 1983a, 1983b). Moreover, agency cost may differ between the principal and different agents, as the firm is viewed as sets of contracts among different factors of production (Alchian & Demsetz, 1972; Gómez-Mejía, Núñez-Nickell, & Gutierrez, 2001). Generally, it is virtually impossible for the principal to have zero agency cost; however, some agents have relatively lower agency cost. Jensen and Meckling (1976) suggest that the separation of ownership from management is the chief source of agency cost in a firm. But, this cost is eliminated when the firm’s ownership and management are not separated or when the firm is managed by a single owner/family (Fama & Jensen, 1983a; Jensen & Meckling, 1976). With this in mind, it may not be surprising when others argue that family contracting
in family firms represents an efficient form of firm governance. Therefore, firm performance by way of cost minimization and greater efficiency is the outcome of a principal-agent relationship involving a family agency contract (Corbetta & Salvato, 2004). Yet, some argue that since family agency contracts are based on common bonds, emotions and sentiments (Dyer, 2006; Schulze, Lubatkin, & Dino, 2003; Schulze et al., 2001), they are prone to depart from economic rationality (Gómez-Mejía et al., 2001) and can therefore threaten firm performance (Schulze et al., 2001).

Family employment in family firms can affect firm performance through the acts of stewards (Miller et al., 2008). The stewardship theory concerns the employment relationship between the principal and the steward (Davis, Schoorman, & Donaldson, 1997; Donaldson & Davis, 1991). The theory suggests that employees’ are ordered as stewards in their behaviours, such that pro-organizational and collectivistic behaviours have higher utility than individualistic and self-serving behaviours (Davis et al., 1997; Donaldson & Davis, 1991). Stewards are organizationally oriented agents, who seek the best interest of the firm rather than their own interest, as they view the success of the firm as a factor that will positively affect them (Davis et al., 1997). This suggests that, given the choice between self-serving and pro-organizational behaviours, stewards will pursue the interest of the organization. Stewards’ behaviours are enhanced by the quality of the relationship with the principal and the business environment (Corbetta & Salvato, 2004; Davis et al., 1997). A quality relationship facilitates and empowers stewardship. Moreover, stewards’ behaviours are based on choice, influenced by both psychological factors (intrinsic motivation, identification and personal power) and situational factors (management, philosophy and culture) (Corbetta & Salvato, 2004; Davis et al., 1997; Zahra, Hayton, Neubaum, Dibrell, & Craig, 2008). Workers who are intrinsically motivated by intangible and higher-order rewards have a high level of identification with the firm and are more likely to act as stewards as they may feel a strong sense of membership in the firm (Davis et al., 1997; Vallejo, 2009; Zahra et al., 2008). Given the choice between a family and a non-family employee, family employees may place a higher value on attaining firm goals. The motivations for familial stewardship behaviours extend beyond economic self-interest (Chrisman, Chua, Kellermanns, & Chang, 2007), but are often influenced by the nature of the relational contracts between the family firm owners and family managers (Argyris, 1973; Corbetta & Salvato, 2004; Davis et al., 1997). The stewardship argument makes family employees lower-risk stewards as they may share in the

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5 Schulze et al. (2001) claim that a failed labour market may lead to the employment of family members. This engenders the risk of adverse selection – when applicants hide information about themselves that prospective employers need in order to properly evaluate their quality and worth (e.g., that they lack the ability and skills to competently behave in the scope of the assigned job) (Fama, 1980; Schulze et al., 2001). This in turn may exacerbate the risk of moral hazard – post-contractual opportunism in privately held family firms, which in turn may affect firm performance.

6 A recent study has shown that stewardship behaviour among non-family employees positively and significantly influences the profitability and survival of family firms (Vallejo, 2009).
general vision of the family and the family firm, and act with sales and profit maximization in mind, knowing that the firm’s success is tied to the family’s welfare. On the contrary, the sense of psychological ownership plagues family stewards. Because family members have a sense of identity and possessiveness in relation to the firm, this creates ‘psychological ownership’ (Pierce, Kostova, & Dirks, 2001) of the firm. This sense of ownership is more likely to affect the sense of subordination to the Chief Executive Officer (CEO) or the entrepreneur. Such attitudes can create tension between family members and result in dysfunctional communication, which can cloud efficient communication in the firm. While the sense of psychological ownership in itself can relate to the tenets of stewardship theory, how it is manifested can negatively affect cooperation and firm performance (Pierce et al., 2001).

Finally, family co-occurrence can affect firm performance by influencing localized learning systems. The family represents a ‘community of practice’ where learning processes can take place. Learning can be a social process whereby participants are actively integrated into the learning system (Brown & Duguid, 1991; Lave & Wenger, 1991; Wenger, McDermott, & Snyder, 2002). The learning process has meaning when it is conducted in the context of a group of people with common experiences and mutual trust (Jeon, Kim, & Koh, 2011). Wenger (2000) argues that humans have formed groups that share cultural practices reflecting their collective learning. Such groups comprise diverse competence bound together by values that influence a common understanding of their communities, and hold each other accountable in this sense of ‘joint enterprise’. Through the joint enterprise, family members understand their stake in the learning system and contribute accordingly. Families continuously establish norms and relationships of ‘mutuality’ that reflect their interactions and produce a ‘shared repertoire’ of communal resources (Wenger et al., 2002). The family as a community of practice presents an opportunity for negotiations through direct participation without limitations. From this perspective, learning processes are expedient not only among actors with shared knowledge base (e.g. skill-related variety, Boschma et al., 2009), but also among actors with a common identity (Lave & Wenger, 1991; Wenger, 2000), common social arrangements, and mutual trust (Boschma, 2005; Giuliani, 2005; Huber, 2012; Maskell & Malmberg, 1999a, 1999b; Nonaka, 1994; Nonaka & Konno, 1998; Reagans & McEvily, 2003).

Wenger (1998) describes the firm as a constellation of different communities of practice; e.g. advice, trust, and communication (Krackhardt & Hanson, 1993). These informal groups are formed across different functions and divisions (Ruuska & Vartiainen, 2003). Through these communities of practice, the firm knows what it knows and becomes effective and competitive. Family employees may overlap between these different communities of practice and hence stand to benefit from the localized learning process while keeping certain specific and complex knowledge within the family. Since strong emotions influence knowledge sharing (Granovetter, 1973; Reagans & McEvily, 2003), family members have a greater motivation to engage
in any learning process. This makes the family an enabler of learning and a manager of shared knowledge (Nonaka, 1994; Nonaka & Konno, 1998). Moreover, family co-occurrence can also weaken the learning capacity of the firm. First, Uzzi (1997) argues that embedded relationships based on loyalty and emotional bonds can lead to the underestimation of opportunism. Since opportunists’ actions are guided by self-interested motivations, this can affect the information flow. Second, a family’s conservative practices can also constrain learning processes. A strong family culture can lock family members into a particular way of doing things and hence make them inflexible, resistant to change, and inclined to stick to path-dependent traditions (Chirico & Nordqvist, 2010) at the expense of their own innovative and learning capacities (Boschma, 2005). Such strong behavioural patterns can counteract changes (family inertia – factors preventing the creation of dynamic capabilities). Lastly, family co-occurrence can also result in the accumulation of similar and suboptimal knowledge that can affect the learning process in the firm (Boschma et al., 2009) and slow down growth (Bentolila et al., 2010).

2.4. Family firms and regional economy

This section of the theoretical framework discusses the connection between the location choices of family firms and the superiority of family firms, and how the effects of family co-occurrence and EC on firm performance vary across space.

2.4.1. Location preferences of family firms and their superiority

The location choices of firms has puzzled researchers in economic geography and regional economics for some time now (Kahn & Henderson, 1992). There are two extreme arguments that have dominated the literature: least cost factors, whereby classic location theory suggests that firms locate to minimize cost and be closer to resources and the market (e.g. Bartik, 1985); and attribute factors, whereby firm location is based on location attributes, like certain infrastructures such as power and water (e.g. Harding, 1988). Recent studies have shown that entrepreneurs tend to start their businesses in regions where they are deeply rooted, where they have family and friends, and that they can call their home region, even when more favourable conditions exist elsewhere (Dahl & Sorenson, 2012). When examining the location preferences of family and non-family firms, Kahn and Henderson (1992) found that proximity to family residence was an important location factor, especially for family firms. The preference of home region is not random. Entrepreneurs with deep roots in their home regions may possess local information (knowledge) and connections that may be of potential value for the survival and growth of the firm. Entrepreneurs may, therefore, survive most in their home regions, even if these places offer the least opportunities. Whereas this may have financial repercussions on the venture (Dahl & Sorenson, 2009), most entrepreneurs appear to start firms not solely as means of maximizing income but also in the pursuit of non-pecuniary compensation such as feeling accomplished and having control over self-employment (Benz & Frey, 2008).
For such entrepreneurs, proximity to family residence may be an important location factor. The analysis by Dahl and Sorenson (2012) indicates that locating a business in the entrepreneur’s home region increases the firm’s survival by 2% (29 days) and its annual profit by roughly $1,362.

Moreover, the location of new entrants differs along urban-rural dimensions. Apart from entrepreneurs benefiting from the local connections in their home regions, the location choices vary along dimensions like the composition, dispersion and turnover of the region (Stearns, Carter, Reynolds, & Williams, 1995). These different dimensions affect the survival and growth chances of new firms. Whereas rural regions have a small number of new firms due to limited supporting resources, larger regions support different types of new firms due to the size and diversity they offer. However, larger regions generate greater levels of competition for resources that can affect the survival of new firms. Contrarily, the diversity in larger regions also enables new entrants to identify niches that reduce competitive effects (Stearns et al., 1995). Moreover, Bird and Wennberg (2014) argue that family firms often exhibit an intense desire to build strong and durable relationships with the local community or the home region of the entrepreneur. This argument seems to be valid for rural regions, where families have the opportunity to form alliances and build close connections with the community to make up for the lack of economic resources and variety (Adler & Kwon, 2010).

2.4.2. Varying geographical effects of family co-occurrence and EC

The importance of family co-occurrence is mostly analysed in family firms because it is these that tend to be the most frequent employers of family members. The argument is based on the claim that the integration of family life and business life creates a conducive atmosphere for the business to thrive. The union of family and business life creates a bundle of resources that are distinctive to the family firm – ‘familiness’ (Habbershon & Williams, 1999). Familiness presents a unified system of governance and a distinct family firm over a non-family firm. Family firms are the most common form of business (Chang, Chrisman, Chua, & Kellermanns, 2008), and for this reason, their importance cannot be underestimated in the growth and resilience of modern societies (Astrachan & Shanker, 2003; Bertrand & Schoar, 2006). Family firms are major contributors to the local economic development in terms of GDP and employment (Astrachan & Shanker, 2003; Bassanini, Breda, Caroli, & Rebérioux, 2013; Bjuggren et al., 2011). Using a narrower definition of a family firm (similar to that used in the attached papers), Bjuggren et al. (2011) found that family firms constitute about three-fourths of all firms in Sweden and account for about one-fourth of total employment and one-fifth of GDP. Using Dutch data, Flören (1998) reports that family firms account for about 43% of all employment in the Netherlands and 54% of GDP. In the US, family firms account for about 60% of employment and GDP (Shanker & Astrachan, 1996).
The performance of family firms is not homogeneous (Chua, Chrisman, Steier, & Rau, 2012) but is rather moderated by the geographical environment in which they operate. In other words, the potential effects of family co-occurrence and EC on a firm’s survival, growth, and productivity may be dependent on the spatial context. For example, although larger regions are associated with higher levels of entrepreneurship and EC, we can expect the effects of EC in larger regions to be stifled by intense competition. It is small and medium-sized enterprises (SMEs) that are greatly affected when competition in larger regions limits the importance of informal relationships. Moreover, because SMEs by default have limited internal resources and capacities, they rely on the scale and scope of resources in their environment (Hoover & Vernon, 1959) and personal networking (past and present family relationships) to mobilize business resources (Aldrich, Elam, & Reese, 1996). Unlike larger regions, we can expect greater impact of family co-occurrence on firm performance in smaller regions, where the co-occurrence and face-to-face interactions between family members facilitate frequent exchanges of tacit workplace knowledge. While this speculation may be imperative and relevant in smaller regional settings, it still remains an empirical question.

Moreover, the geographically varying effects of family co-occurrence and EC on firms’ outcomes may be influenced by the goals that drive family firms. Since family firms are guided by the values of the managing family, these define the firms’ goals and strategic economic and business decisions (Hiebl, 2012, 2014). Dunn (1995) argues that it is more common for family firms to accept lower or longer returns on their investments or sustain their socioemotional wealth (SEW) than to maximize profit (Berrone, Cruz, & Gomez-Mejia, 2012; Gómez-Mejía, Takács-Haynes, Núñez-Nickel, Jacobson, & Moyano-Fuentes, 2007). The implication is that non-economic and family-oriented goals may be important as economic and business goals to family firms (e.g. Basco, 2017; Chrisman, Chua, & Litz, 2003; Chrisman, Chua, Pearson, & Barnett, 2012) as the family firm serves the interests of multiple parties. When family firms are motivated by family-oriented goals, they are likely to be characterized by a high level of family co-occurrence and EC, especially in rural regions. This may contribute to the competitiveness of rural areas by reinforcing experience-based knowledge in the form of tacit knowledge circulation (Chirico, 2008; Chirico & Nordqvist, 2010). In other words, the economic, social and emotional connections generated by the interaction between families and firms are able to influence regional cognitive proximity (Basco, 2015) or regional absorptive capacity. This argument finds support in a qualitative study by Gurrieri (2008), who found that families, familial history, and family firms jointly determine the cognitive aspects of the textile industry networks in the Apulia region (Italy). Family co-occurrence and EC can also influence regional trust-based relations, as family members actively interact economically through the firm and socially through social groups within and outside the firm (Basco, 2015). Trust-based relations are likely to affect economic exchanges. Gurrieri found that social proximity through socio-familial substrates plays a crucial role in Italian clusters of small firms.
for knowledge transmission. At the same time, the family and family firms can affect institutional and organizational proximities at the regional level. Moreover, because the family and family firms continue to participate in the economic and social life of the regional economy, they can to a certain extent be responsible for creating and maintaining traditions, conventions and rules that may later serve as the foundation for institutional and organizational proximity aspects in the region (Basco, 2015). Such proximities may enhance collaborations not only through the knowledge that there are explicit rules and arrangements guiding the relationship but also through an awareness that the level of uncertainty is reduced. However, the competitive nature of larger regions may force family firms to be more business-oriented (placing less importance on the interaction between family members, the family and the firm). Yet, family firms in metropolitan regions exhibiting high levels of family co-occurrence and EC may be on the grounds of competence and need.

In conclusion, the theoretical framework has posited that family co-occurrence and EC are geographical products that can affect different dimensions of the firm (productivity, survival, growth) and partly help explain the varying nature of regional development. Whereas previous studies have associated increased productivity, growth, and survival of firms in metropolitan regions with the availability of skilled labour and performing firms (Combes et al., 2012; Glaeser, 1999), this thesis argues that family co-occurrence may not only compensate for the agglomeration diseconomies or matching inefficiencies in rural regions but also enhance the performance and growth of firms.

3. RESEARCH DESIGN AND CONTEXT

When conducting research, it is important to reflect upon the underlying research questions in relation to what can be studied, how it can be studied, and the kind of answers that are likely to be obtained. With this in mind, this part of the thesis presents a discussion of the data, methodology, ethical considerations and method, and how these adequately guide the empirical interest.

3.1. Description of Data

The analyses in the three papers are based on data from the ASTRID database, hosted by the Department of Geography and Economic History at Umea University. The database combines several registers from Statistics Sweden (SCB) and contains relational micro-data for all firms, workplaces and individuals from the 1960s onward. It is possible to connect most socioeconomic attributes of workers in relation to where they work and in which region, as well as their place of residence, as the database integrates several registers. The geo-referenced attributes of firms or plants and people make it possible to conduct relational investigations at several spatial levels. Moreover, the longitudinal nature of the ASTRID database allows for longitudinal studies at the firm, industrial and regional levels in the Swedish economy. The basic
unit of analysis in the three papers is the plant or firm. In the database, the term plant represents a separate economic activity part of a firm. The terms plant and firm are used interchangeably because the analyses in the attached papers draw on only single-plant firms. In other words, only firms with a single workplace or plant were included in the analyses. With single-plant firms, we can trace the owners or the entrepreneurs (usually sole ownership). Every firm and worker in the database has a unique identification code, which makes it possible to link workers and their workplaces.

### 3.1.1. Connecting family members in a firm

The ASTRID database holds a longitudinal family register that contains information on every family in Sweden. The multigenerational nature of the family register in the database provides information on spousal couples (partners) as well as biological family members – parents, children, siblings, etc. (the data do not distinguish between biological and adopted children). More importantly, the family register contains unique identification codes for every family, family members' indication of the kind of family relationship, and the workplace identification code for all working family members. The family and workplace identification codes enable the identification of family co-occurrence in the same workplace or firm. The process is enhanced by linking individuals to each other, sometimes using the firm owner or entrepreneur as the pointer, based on the family information. The present thesis adopts a simple definition of a family, based on the SCB records, either as consanguineous (blood-related) and conjugal family relation (marriage/civil registration) (e.g. Brannon et al., 2013; Trost, 1990). In Paper I, we identified family co-occurrence by (1) randomly selecting an employee from the employee dataset connected to the firm and subsequently checking whether any of his or her family members were present in the same firm. (2) If none of his or her family members were present in the firm, another random employee was selected. (3) The total number of family members was summarized on every firm to examine the total effect of family co-occurrence on labour productivity. The random approach of selecting family members eliminates systemic bias by giving all families present in the firm an equal chance of being selected. However, since families are heterogeneous and just one family group is identified and selected for every firm, there is a higher probability of randomly selecting a family with specific characteristics (e.g. dysfunctional communication) that can affect the results. In Papers II and III, we used the entrepreneur or firm owner as the pointer to connect family members in the firm. With the family identification code and the employment identification code, we linked all family members related to the entrepreneur in the firm. In Paper II, the family members are grouped based on the type of relationship they have with the entrepreneur (spouse, children or siblings). This approach presented the opportunity to access the impacts of the family and different familial relationships in family firms. Meanwhile, in Paper III, this allowed us to analyse the role of present and past familial relationships on the survival and growth of new entrants.
3.1.2. Identifying a family firm

In the family business literature, there is no accepted or universal definition of a family business (Chua, Chrisman, & Sharma, 1999; Miller et al., 2007; Westhead & Cowling, 1996). While many researchers have tried to offer satisfactory definitions, there is still no widely accepted definition (Chrisman, Chua, & Sharma, 2005). However, the involvement of the family in the management and ownership structure of the firm is unique in the family firm definition (Bird & Wennberg, 2014; Sciascia, Mazzola, Astrachan, & Pieper, 2012). Reviewing current trends in the family firm literature, Chrisman et al. (2005) identified two approaches to defining the family firm: the component-of-involvement approach (or input-based), and the essence approach (or output-based). The component-of-involvement approach is based implicitly on the belief that family involvement is sufficient to make a firm a family business whilst the essence approach, on the other hand, is based on the belief that family involvement is only a necessary condition. According to Kraiczy (2013), following the components-of-involvement approach, a firm can be defined as a family firm when (1) a family or a family member is the firm owner, (2) the firm is family-managed, or (3) the firm is controlled by a family. And with the essence approach, family involvement must affect (1) the strategy of the firm, (2) the vision and intention to maintain control and hand the firm over to the next generation, (3) the firm’s behaviours, and (4) distinctive familiness. As these two approaches of identifying a family firm are different in nature and purpose, in the present thesis we used the input-based approach to define a family firm as a firm (1) having two or more employees who belong to the same family as the firm owner or entrepreneur, (2) having at least one family member in a management position, and (3) that serves as the family members’ main source of income (see, for example Bird, 2014; Bird & Wennberg, 2014; Miller et al., 2008; Sciascia et al., 2012 for similar approaches). Nonetheless, though the data do not readily avail the essence-approach effect of the family in the definition of a family firm, it is possible to speculate that the adopted definition of a family firm based on the component-of-involvement approach implicitly accounts for the family impact or influence on the firm (essence approach). Thus, if a family owns and manages a firm, it is not spurious to expect that the family may be likely to affect the strategy and vision of the firm and the intention to maintain control and hand the firm over to the next generation (especially when it is a small business).

3.1.3. Defining entrepreneurial capital (EC)

Unlike Aldrich et al. (1998), who measured or identified EC through several qualitative questions, the nature of the ASTRID database allows a definition based on binary outcome. To define EC, we first identified the parents of the entrepreneurs or firm owners in the sample and traced them from the 1970s, which was as far as the data would allow. Second, we checked whether any of the parents were entrepreneurs or firm owners. We identified the self-employed parent(s) from the occupational code in the sampled firm. Third, with these self-employed parents, we used stricter factors to
identify self-employed parent(s), who we argue may offer or provide EC to their children (or may engage in entrepreneurial relationships that can influence their children’s future entrepreneurial endeavours). First, the parent(s) must have been self-employed for a minimum of three years, and second, they must have at least one employee. The major reason for these stricter definitions is to avoid the selection of solitary workplaces, where exchanges of knowledge do not take place. Whereas Aldrich et al. (1998) identified that not having been born to self-employed parents did not constitute a property barrier, we argue that the sociological processes that take place between self-employed parent(s) and their children can constitute a resource in itself (some form of entrepreneurial spillovers) (Lindquist, Sol, & Van Praag, 2015) for the entrepreneurs’ labour market outcomes. Based on the two binary variables (family firm and EC), four firm classifications were developed.

Table 1: Firm classifications based on firm type and EC

<table>
<thead>
<tr>
<th>Firm type/EC</th>
<th>Yes EC</th>
<th>No EC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family firm</td>
<td>Family firm with EC</td>
<td>Family firm without EC</td>
</tr>
<tr>
<td></td>
<td>- Family firms where the owner has/had self-employed parent(s)</td>
<td>- Family firms where the owner does not/did not have self-employed parent(s)</td>
</tr>
<tr>
<td>Non-family firm</td>
<td>Non-family firm with EC</td>
<td>Non-family firm without EC</td>
</tr>
<tr>
<td></td>
<td>- Non-family firms where the owner has/had self-employed parent(s)</td>
<td>- Non-family firms where the owner does not/did not have self-employed parent(s)</td>
</tr>
</tbody>
</table>

3.1.4. Limitations of the database

The ASTRID database has a major limitation related to this type of micro-level analysis. The identification of family members is based on the family identification code, which is linked to one’s parents or grandparents. In the database, family members are identified in chains using the parents or grandparents as pointers (either alive or dead – which implies that the family register contains records of both dead and living family members, especially grandparents and parents, for the purposes of identifying family chain or history). People connected to the same parents are recorded as siblings. The chain is broken when parents or grandparents are missing in the register (e.g. parents registered outside Sweden). This potentially underestimates an undisclosed number concerning family co-occurrence across firms and regions. Despite the longitudinal nature of the database, it has limitations in historical coverage, and some of the data covering family members are missing. From this position, it is difficult to conduct proper longitudinal studies in this respect. For instance, the parents or grandparents of current older workers and immigrants are missing in the data; this is likely to affect the density of family co-occurrence in a firm and, by extension, in the region.
3.2. Methodological comments

The three papers making up this thesis draw on the critical realist methodology, with strong abstraction and concrete investigations (Bhaskar, 1978; Collier, 1994; Sayer, 1981; Yeung, 1997b). Each paper started by first reviewing existing related scholarly studies in economic geography and related fields, like family and family business studies (abstraction investigation). The literature review continued in an iterative manner until theoretical saturation had been reached (when new evidence stopped being obtained). This process helped in the identification of research gaps and the formulation of the relevant research questions, as well as in placing each paper within a specific literature(s). The abstraction investigation facilitated the creation of a conceptual basis, which later assisted in the interpretation of the findings from empirical analyses (concrete investigation). Guided by the assumption that there is no fundamental difference between methods applied on data (Sayer, 1992; Yeung, 1997b), some of the results were methodologically validated on related and different facets of the phenomenon under investigation (methodological and data triangulation). The results were treated as complementary rather than contradictory.

3.3. Method

3.3.1. Data and empirical model

Even though the data for the three papers are from the same ASTRID database, the analyses are based on different samples and time periods (see Table 1 for a summary). The sampled firms (in Papers I-III) and time periods were driven by the research questions, and consequently, have implications for the results. The sampled firms are only privately-owned single-plant SMEs with more than one employee. Firms with more than one employee were used to exclude one-man businesses, for which the effects of family relations cannot be directly verified. SMEs were used in the analyses because it is reasonably easy to identify a proxy firm owner or entrepreneur in the ASTRID database based on the occupational status of either self-employed or regular employee. This is barely possible in the very large firms. Public firms were excluded from the analyses as they possess certain characteristics that are not conditioned by the free market, which makes it difficult to study them, especially in matters concerning firm performance. Firms without identification, industrial or regional codes were excluded from the analyses. Firms without performance indicators (value-added and Företagens och arbetssällskapens dynamik (FAD code)) were excluded as well. The unit of analysis in Paper I was firms between 1995 and 2010; in Paper II, firms between 2002 and 2012; and in Paper III, all start-ups in 2002, followed until 2012. These time periods cover one major recovery phase of the real estate and financial crisis in the early 1990s, and the latest global financial crisis in 2008. In light of this, it was informative to explore family hiring vis-à-vis hiring based on meritocracy and how family co-occurrence affects performance, controlling for these time periods.
For the empirical models, in Paper I we employed ordinary least squares regression (OLS) (as well as in Paper III, for the growth model) as the main empirical strategy and fixed effects regression (FE) for methodological triangulation (or robustness check in this case). The panel nature of the data makes the triangulation technique complementary to the OLS model. Moreover, because in Paper II we were concerned about the within effects of entrepreneurial family relationships, we used the FE model. The shortfall of FE is that it does not account for the between effects. In Paper III, we used event-history analysis to analyse the relationship between family firms and EC. We used a common analytical technique for event-history graphical analysis: a Kaplan-Meier (KM) survival analysis as an explorative tool and a Cox proportional hazards model as a measure of effects and strength. KM analysis explains the ratio of firms that exit over firms at risk multiplied by time. Because the event (exit) is recorded in discrete time in the ASTRID database (the year in which the firm exited), it is difficult to know the exact time an event occurred. In the analysis, firms that survived at the end of every observed period are treated as right-censored observations (Klepper, 2007). Since a KM analysis only offers the visualization of univariate or multivariate curves, which lack statistical strength and significance of the relationship, a Cox proportional hazards regression was introduced. Although the Cox proportional hazards model restricts control over time, it is the most appropriate for firm-level survival analysis in which the general trend tends towards a naturally decreasing cumulative hazard over time.

3.3.2. Measuring performance

Although non-economic goals are important measures of performance, especially in family firms (e.g. Basco, 2017; Chrisman, Chua, & Zahra, 2003), most empirical studies on the performance of the family and family firms have primarily dealt with economic performance. With this in mind, the discussion in this section is delimited accordingly (Chrisman et al., 2005). The effects of family co-occurrence on firm performance can be measured in many ways (Richard, Devinney, Yip, & Johnson, 2009). Theoretically, family co-occurrence has been linked to different facets of the firm (e.g. learning system, firm’s social capital, transaction and agency costs, etc.) that affect the firm’s effectiveness (survival), performance (productivity), and growth (employment). For instance, the effects of learning in the firm can be measured in many ways. Since learning involves the acquisition of specific and general knowledge, it manifests itself through the cognition of employees (McGrath, 2001), changes in cognition and behaviours (Argote & Miron-spektor, 2011) and changes in knowledge embedded in routines (Levitt & March, 1988). Furthermore, the effects of localized learning manifest themselves in the characteristics of an organization’s products and services (Helfat & Raubitschek, 2000) or its patent stock (Alcácer & Gittelman, 2006), as well as in changes in the characteristics of performance (productivity), such as its accuracy or speed (Argote & Epple, 1990).
In Papers I and II we defined firm performance as labour productivity, measured as per capita value added. Labour productivity has been used as a performance measure in many other studies (e.g. Boschma et al., 2009; Eriksson, 2011; Östbring & Lindgren, 2013). Productivity is a more straightforward measure of industrial output (Rigby & Essletzbichler, 2002) than other measures such as patents and citations, which exclude large parts of the economy. Moreover, productivity is a key measure of firm efficiency (Palia & Lichtenberg, 1999). Labour productivity was estimated by compensating for the effects of inflation/deflation. Log values of labour productivity were used in the analyses to control for skewness in the data. In Paper III, we defined firm performance as the rate of survival and employment growth. Studies have shown that family ownership and control affect firm survival and employment growth (Bassanini et al., 2013; Lee, 2006). Whereas survival may reflect the efficiency and effectiveness of the firm, employment growth may reflect not only the capacity of the firm in terms of human capital but also regional capacity in certain knowledge bases. We measured growth as the annual absolute change in employment (Backman & Palmberg, 2015). The natural log of the values was used in the models to control for skewness. Likewise, survival as a measure of firm performance is measured using a categorical variable that captures the existence of the firm. Survival and financial performance outcome may be closely related, as mergers and acquisitions (M&A) may suggest higher performance than bankruptcy, especially the acquisition of smaller firms (Richard et al., 2009). However, M&A can also suggest a loss of control and ownership by the owning family. Since the ASTRID database does not provide such detailed information on how the organizational structure within firms changes in relation to either a merger or an acquisition, M&A were excluded from the survival analyses.
<table>
<thead>
<tr>
<th>Elements</th>
<th>Paper I</th>
<th>Paper II</th>
<th>Paper III</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aim</td>
<td>To analyse the effects of family members’ presence on firm performance</td>
<td>To analyse the moderating effects of different familial relationships on skill variety on firm performance</td>
<td>To analyse the effects of entrepreneurial capital on firm survival and growth of new entrants</td>
</tr>
<tr>
<td>Data</td>
<td>ASTRID database</td>
<td>ASTRID database</td>
<td>ASTRID database</td>
</tr>
<tr>
<td>Method/empirical model</td>
<td>OLS and FE models, comparing descriptive statistics of family employment or co-occurrence across regions and sectors</td>
<td>FE model, descriptive statistics comparing different familial relations in terms of education, income, etc. by gender</td>
<td>Event-history analysis and OLS model</td>
</tr>
<tr>
<td>Dependent variable</td>
<td>Labour productivity</td>
<td>Labour productivity</td>
<td>Firm survival and employment growth</td>
</tr>
<tr>
<td>Key independent variable</td>
<td>Number of family members (family co-occurrence)</td>
<td>Number of family members (family co-occurrence) by specific relation to the entrepreneur or firm owner, i.e. spousal relations, siblings, children, etc.</td>
<td>EC by entrepreneur or owners of family firms and non-family firms</td>
</tr>
<tr>
<td>Key conceptual underpinnings</td>
<td>Proximity dimensions, familial relations, localized learning, regional sorting</td>
<td>Entrepreneurial family relations, related variety, localized learning</td>
<td>EC, survival and growth concept</td>
</tr>
<tr>
<td>Study context and region definition</td>
<td>Sweden and SCB definition</td>
<td>Sweden and SCB definition</td>
<td>Sweden and SCB definition</td>
</tr>
</tbody>
</table>
3.4. The Swedish labour market in context

In Sweden, there are 290 municipalities, which are responsible for a large proportion of local services, including schools, emergency services, and physical planning. The municipalities in the north cover large areas of sparsely populated land. The municipalities are further classified into 72 functional labour market regions, often referred to as FA regions (see Figure 1A, highlight on the 3 metropolitan regions). The FA regions normally consist of four to five municipalities, sometimes more (Johansson, Klaesson, & Olsson, 2002), and constitute integrated housing and labour market areas where most people can find both a place to live and a place to work. The regions are grouped together based on the intensity of the commuting flows between municipalities. The average commuting time is 8-15 minutes within a municipality, 20-45 within an FA region, and longer than 45 minutes for extra-regional time distance (Johansson et al., 2002; Johansson, Klaesson, & Olsson, 2003). An overwhelmingly large share of commuting takes place within the FA regions, which justifies their being classified as labour market regions and clusters in some form (Johansson et al., 2003).

Most of the large FA regions in terms of employment and number of economic activities are located in central and southern Sweden, whilst those with large land areas are found in northern Sweden (see Figure 1B), often most of these FA regions have the highest per capita productivity (see Figure 1D). Even though Figure 1B and 1D show similarities in the spatial pattern of employment and productivity per capita, some mid-Sweden regions characterized by moderate employment levels show low per capita productivity (e.g. Mora, Malung, Torsby, Söderhamn, and Hudikvall) and some regions in the north that are characterized by low employment show high levels of per capita productivity (e.g. Luleå, Dorotea, Vilhelmina, Åsele, and Lycksele). Figure 1C does not show north-south spatial pattern of family co-occurrence as Figure 1B shows for employment, however, it shows relatively higher share of family co-occurrence in smaller regions across the entire Swedish economy (e.g. Ljusdal, Harjedalen, Vansbro, Ludvika, Värnamo, Vetlanda, Arvidsjaur, Överkalix, Övertorneå, and Haparanda). In other words, larger FA regions are characterized by relatively low share of family co-occurrence.

The Swedish labour market is characterized by active labour policies (Bornhäll, Daunfeldt, & Rudholm, 2017), safer workplace environments, and the role of workers’ unions. The employment policy, such as the last-in-first-out principle (Skedinger, 2010), implies that in cases of redundancies, firms must dismiss the last-hired employee first. This may to some extent keep firms from hiring more labour, especially during economic difficulty, as it may be expensive to revoke one bad recruitment decision. A reform of the employment protection legislation in 2001 made it possible for firms with less than eleven employees to exempt two of the employees from the last-in-first-out principle. The implication is that, while the last-in-first-out policy may reduce hiring, it also suggests fewer dismissals during a recession but also fewer hires during recovery, especially for smaller firms. Furthermore, employers’ associations
and unions negotiate workers’ minimum wages, layoffs, social security, holidays, etc. through collective agreements; this means that the government has little involvement in such labour market issues. In recent years, changes on the Swedish labour market have brought about changes in the composition of the labour force (Håkanson, 2014). Observable changes on the Swedish labour market since the 1990s include economic reform policies and demographic developments. These changes have contributed to increased percentages of several groups of people on the labour market (i.e. persons with weaker labour market attachment, like younger and older people and immigrants). Swedish labour laws allow for a meritocratic style of hiring; however, not in private sector firms, where family member hiring can be intense.

Figure 1: (A) Swedish FA regions with the 3 metropolitan regions selected; (B) number employees (thousands); (C) family co-occurrence (share), and (D) productivity per capita (hundreds), quartile are shown here (data on firms with maximum of 50 employees, 1995-2010)
In a survey, Emling (2000) found that the share of family firms among private firms with Swedish owners accounted for about 55% in 1999. Bjuggren et al. (2011) also found that 65% of privately-owned firms in 1999 with 20% voting rights were family firms. This clearly indicates that family firms constitute a greater portion of the Swedish economy, which makes the family and family firms more than a peripheral topic. Family firms account for about one-fourth of total employment and one-fifth of GDP (Bjuggren et al., 2011). Swedish family firms are relatively active in various sectors of the economy, but are highly represented in sectors like the agriculture and forestry industry (90%), retail (62%) and manufacturing (61%), and maintain a higher share in rural areas (Emling, 2000). The abolishment of the inheritance and gift tax in 2004 has helped families pass on family firms to the next generations. In the Swedish context, it is the norm that family members hold key positions in the management of the family firm. Over 90% of family firms have family members as company leaders (Emling, 2000). The business culture among Swedish family firms is stronger, sustainable over a longer period of time, and more noticeable and describable for people both within and outside the business (Hall, Melin, & Nordqvist, 2001). This is common among SMEs, where ownership is often concentrated in one family or individual.

Finally, since Sweden usually is characterized by having weak family ties compared to other northern European economies (Alesina & Giuliano, 2010), Sweden makes an interesting case in two main regards. First, this thesis will be able to depict whether this assumption of weak family relation actually is true. Second, if indeed family relations do play a significant role for firm performance in Sweden, it is likely that these relationships also are relevant in other countries where family relationships are argued to be stronger. Therefore, analysing the role of family ties on firm performance in Sweden allows for wider comparison.

3.5. Ethical considerations regarding register data

Ethical considerations in geographic research are critical (Griffith, 2008), and permeate various stages of the research (i.e. design of the study, data collection, analysis, and communication of results). Ethical considerations for quantitative methodologies using register data have long been an issue in academia (Panter & Sterba, 2011), but have received little attention. Ethical considerations for micro-data are mainly concerned with complying with laws and standards concerning issues such as data protection, confidentiality and security (Griffith, 2008). To uphold these ethical standards, first, we started every paper by applying for the data with specific variables from the Department of Geography and Economic History. This process ensures that the variables or attributes that are made available are only those that are correct and necessary for the research. Second, to ensure confidentiality, the firms and employees included in the data are identified by workplace and employment identity codes, respectively. This avoids direct identifiers like specific names and addresses. This is important, as family relationships constitute a highly sensitive and important topic in society. Finally, due to the sensitive nature of the data, they are stored and used on
Internet-free computers in a secured research laboratory. This means that the analyses and results are secured from unapproved users on the Internet.

4. SUMMARY OF PAPERS

Paper I Social proximity and firm performance: the importance of family member ties in workplaces

In Paper I, we analysed the role of family co-occurrence across different labour market regions and industries. The argument in this paper is based on the claim that social relations between individuals in a firm are beneficial for the exchange of tacit knowledge (Boschma, 2005; Nonaka, 1994; Nonaka & Von Krogh, 2009) and hence firm performance. This is a process that is hardly possible to trade on the market (Maskell & Malmberg, 1999a, 1999b). The literature on regional learning and organizational learning has argued that proximity, in the form of social relations, experiences, identity in language, norms and mutual trust, can easily enhance the transfer and conversion of knowledge (Boschma, 2005; Nonaka, 1994).

This study comes as a significant contribution to the literature on proximity dimensions at a time when social proximity in the sense of economic geography has come from the analysis of former co-workers and professional acquaintances. On the whole, while one strand of the literature argues that social proximity may enhance learning and performance (Breschi & Lissoni, 2001), another argues that social proximity in any form is less important in specialized regions (Gordon & McCann, 2000). These findings are not contradictory, but rather exist in different contexts (or measurements) of social proximity. In Paper I, we examined the impact of social proximity in the form of family co-occurrence on firm performance, while considering how this effect differs across agglomeration types, firm sizes, and firms with higher degrees of human capital. We expect the effects of family co-occurrence on firm performance to vary across space and type of firms. This is anticipated because prior studies have shown that firms operating in larger agglomerations benefit from knowledge spillovers from large pools of skilled labour and increased efficiency in labour market matching (Glaeser, 1999; Overman & Puga, 2010), and therefore social proximity in the form of family relations may have a subordinate role, unlike in smaller regions.

To test this, geo-referenced longitudinal employer-employee micro-data were used. The analyses included privately owned firms in Sweden between 1995 and 2010, with a maximum 50 employees in 1995. We analysed the impacts of family co-occurrence on firm performance, measuring firm performance as the per capita deflated value added (labour productivity). A simple OLS regression, weighted by employment size with year, region and sector fixed effects, was used for the analyses. In addition, a fixed-effect regression was also included in the model to determine the robustness of the effects of family co-occurrence on firm performance.
The results in Paper I show that there is a higher prevalence or co-occurrence of family members across firms in smaller regions and industries with low entry requirements, where hiring is predominantly based on social contacts. This result confirms the notion that because larger regions are characterized by agglomeration externalities, relying on family networks as a means of hiring may be inefficient. In addition, across all regions and industries, the results show a gradually diminishing rate in the proportion of family hiring or co-occurrence over time. The analyses further indicate that family co-occurrence positively affects firm performance. The results further show that the effects of family co-occurrence on labour productivity are even positive and significant in non-family firms (where there may often be a small proportion of family co-occurrence). Finally, and more importantly, the results indicate that family co-occurrence chiefly affects firm performance in specialized regions, contrary to the argument by Gordon and McCann (2000).

In light of these results, Paper I suggests that the family represents an important factor of production that can explain the contemporary differences in employment and firm performance across regions and industries, even though its relevance has been downplayed in economic geography over the years.

**Paper II Familial relationships and firm performance: the impact of entrepreneurial family relationships**

In Paper II, we analysed the context-dependent nature of family relationships and how these relationships moderate the effects of skill variety on firm performance. The idea that human capital is a superior factor of production has been highlighted using the role of skill variety, which represents cognitive distance and the insight that it should be neither too great nor too small (Boschma et al., 2009). However, there is divergence in the existing empirical works on skill variety. Boschma et al. (2009) found related skill inflows to be beneficial for productivity, whereas unrelated skill inflows were found to positively impact productivity in capital-intensive industries in Sweden (Östbring & Lindgren, 2013). Results from the Copenhagen region show that related skill inflows are detrimental to the productivity of Danish firms (Timmermans & Boschma, 2014).

To fully understand this, we argue that it would be prudent to combine different resources within the firm since local generation of knowledge is determined by the combinative capabilities of the firm (Boschma, 2005; Kogut & Zander, 1992). This claim is completely entrenched in the regional learning literature discussing the relationship between proximity dimensions and learning (Shaw & Gilly, 2000). Family relation may be an important contingency in shaping the economic effect of skill variety on firm performance. While the family may offer ready employment for family firms (Birley, Ng, & Godfrey, 1999), it is also an important source of resources for the entrepreneur (Arregle et al., 2015). Though family co-occurrence affects firm performance (Cruz, Justo, & De Castro, 2012), we still lack sufficient knowledge about which particular family relation is the most important for firm performance, as family relations are
regarded as a set of nested circles reflecting a hierarchy of relationships (Aldrich & Cliff, 2003; Cantor, 1979). Consequently, in Paper II, we argue that different family relations may imply different stocks of social and human capital potential for enhancing or impeding localized learning and performance.

To test this, we used longitudinal micro-data on privately owned firms between 2002 and 2012, with a maximum of 50 employees in 2002. Using the entrepreneur as a pointer, we connected his or her family members in the firm. (Children, partner, siblings). With this information, we examined the impacts and interplay between entrepreneurial family relationships and formal skill variety on firm performance, measuring firm performance as labour productivity, expressed as the per capita deflated value added. For the empirical analyses, FE models were applied, weighted by employment size and with year, region and sector fixed effects to control for unobserved heterogeneity.

The findings indicate that family relationships involving children and/or spouse in the firm are more likely than any other family constellations to positively and significantly affect labour productivity. Moreover, the analyses showed no evidence of sibling relationships influencing productivity. While the family is argued to be an important source of capital, it appears that this is only the case when it involves children and/or spousal relationships. The findings support the suggestion that family firms are not homogeneous in terms of family co-occurrence and commitment to the firm (Melin & Nordqvist, 2007), but rather comprise several forms of family relationships with different levels of ties, which consequently affect the economic outcomes (Wiklund et al., 2013). Furthermore, the results indicate that family relationships involving children and/or spouse abate the negative effects of skill similarities and differences on labour productivity. Consequently, entrepreneur-spouse relations in the firm positively affect productivity at every level of similarity and/or unrelatedness in formal education. The results corroborate the argument that learning processes can take place between cognitively distant economic agents who are strongly socially related (Huber, 2012).

In conclusion, Paper II makes a strong case for the literature on why some employers may be more selective when hiring, relying more on close family members, aware that this is less expensive but also cognizant that there is a social dimension between related variety and firm performance.

**Paper III Family firm and entrepreneurial capital: the importance of entrepreneurial capital for firm survival and growth**

In Paper III, we analysed the effects of current family relations (family firm) and past family relations (EC) on the survival and growth of new entrants, taking into account the regional context and the effects of the 2008 global financial crisis. There are persistent regional differences in job creation and growth, as many peripheral regions in the most advanced economies have struggled with the restructuring of the
manufacturing sectors. These differences have been attributed to the processes of firm selection and agglomeration economies (Combes et al., 2012). This strand of literature suggests that firms and workers are on average more productive in metropolitan regions, which has contributed to an uneven regional development (Combes et al., 2012; Glaeser & Maré, 2001). Still, there are also numerous exceptions to this dominating picture, as social capital is often attributed to the resilience of peripheral regions. Johannisson et al. (2007), for example, argue that family and tradition jointly construct shared values that guide firms in the prosperous Gnosjö region in Sweden.

However, the family and EC are often neglected factors in the empirical literature. EC represents the entrepreneurial practices and experiences inherited from self-employed parents (Aldrich et al., 1998). We argue that the family and EC may affect the staying power and growth of firms, especially in rural regions where the family and family firms are deeply rooted. We test for the relationship between family firms and EC not because family firms constitute a bulk proportion of firms in the regional and national economies (Chang et al., 2008), but because they are also important actors in the regional and national development framework (Basco, 2015). This study aims to bridge the disconnection between family firms’ survival and job creation in regional development literature by emphasizing the role of EC.

For the analyses, we employed longitudinal employer-employee matched micro-data of privately owned start-ups in 2002 with a maximum of 50 employees and followed them until 2012. Considering the nature of the data, we defined a family firm as one having two or more employees belonging to the same family as the firm owner, having a family member of the firm owner in a management position, and serving as the main source of income for the family members (e.g. Sciascia et al., 2012). A firm has EC if the parent(s) of the entrepreneur were self-employed. We employed a Cox proportional hazards model for the survival model and an OLS model for the growth model. Together with a group of control variables, the effects of current and past family relations on the survival and growth of new entrants were determined.

The results indicate that although family firms are somehow more resilient than non-family firms, this effect is confounded by EC even when other co-determinants of firm survival are controlled for. The implication is that it is not family firms per se that are more resilient but rather those with entrepreneurial experiences, or EC, from self-employed parents. This finding is contrary to what has previously been reported about the resilience of family firms. Moreover, the effect is highly predominant in rural or smaller regions. Additionally, the results show that family firms grow more than non-family firms; however, the sample could not identify any clear regional effects of the role of the family firm in job creation. In conclusion, Paper III makes a strong contribution to the literature on regional development and the resilience of family firms by arguing that current and past family relations explain different facets of
regional development. This finding should pave the way for further empirical studies on the resilience of family firms in relation to the role of EC.

5. CONCLUDING DISCUSSIONS

This section of the thesis discusses the implications of the major findings from the three papers in relation to existing theory and earlier findings. This section further discusses the implications of the findings for policy planning, regional development, and future studies.

5.1. Findings and discussions

The thesis set out to investigate three main research questions linking economic geography and family business studies. The research questions are reiterated below for the purposes of following the discussions:

1. What are the effects of family co-occurrence on firm performance, and how prevalent is family co-occurrence across different regions? (Paper I)
2. What are the impacts of entrepreneurial family relationships on firm performance, and how do they interplay with in-house skill variety affect firm performance? (Paper II)
3. What are the effects of entrepreneurial capital on the survival and growth of family firms? (Paper III)

In the literature on proximity dimensions and firm performance, the importance and roles of cognitive and geographical proximity have been extensively highlighted (e.g. Abramovsky & Simpson, 2011; Boschma, 2005; Boschma et al., 2009; McCann & Folta, 2008; Ponds et al., 2010; Timmermans & Boschma, 2014). Evidence on geographical proximity indicates that being spatially close to other economic agents facilitates the development of social capital and cooperation. These factors are difficult to trade through the market but important for firm performance. The literature on proximity dimensions and firm performance also indicates that for economic agents to learn and create knowledge, their absorptive capacities must be complementary to facilitate the easy absorption, interpretation, and evaluation of economic issues. Howells (2002) suggests that geographical proximity may play only a subtle role in influencing collaboration and the development of social capital. The implication is that geographical proximity in itself is neither a prerequisite nor a sufficient condition for learning processes or knowledge exchanges to take place. Although social proximity (e.g. family relations or co-occurrence) has been argued to enhance learning processes and collaboration within the firm, it has received little attention in the empirical literature. Despite this evidence, Ross and Sawhill (1977) suggest that the family’s major responsibility in today’s economic setup is the creation and socialization of children. This suggests that the family has lost its economic and production functions of the pre-industrial era, and is thus no longer the central institution in society.
Moreover, the increase in family start-ups (Chang et al., 2008) has shown that social relations and family relations are important in the analysis of the space economy (e.g. Basco, 2015; Boschma, 2005; Gilly & Torre, 2000).

Common to the above research questions is the link between the family, the family firm, and the regional economy. This link has often been neglected in the discussion on regional development. Therefore, this part of the concluding discussion focuses on how the findings in the three papers consolidate the relationship between family, family firm and regional economy. The thesis has advanced the proximity dimension discussions by arguing that social proximity-invoked by family relationships can partly explain variations in regional development in relation to firm performance. Primarily, the findings have demonstrated that family relationships are as important as any other resources available in the firm (Papers I, II & III). The findings corroborate prior claims that family ties facilitate trustworthiness, a resource that is difficult to trade through the market but important for localized learning and increased firm performance (Boschma, 2005; Maskell & Malmberg, 1999b). In the same vein, the findings have advanced the two main streams of research within the family business field; that is, studies comparing family and non-family firms (Paper I & II) and studies discussing the heterogeneity within family firms (Paper III). Previous studies have distinguished between family firms and non-family firms with arguments such as family firms have peculiarities in distinct resource endowment (Arregle et al., 2007; Habbershon & Williams, 1999; Sirmon & Hitt, 2003), business attachment (Berrone et al., 2012; Gómez-Mejía et al., 2007), specific governance mechanisms (Carney, 2005), and long-term strategic goals and business culture (Miller & Le Breton-Miller, 2005; Zahra, Hayton, & Salvato, 2004). The present thesis has advanced this line of research with the findings in Papers I and II. Other studies have also shown considerable differences between family firms; not all family firms behave in the same way (Chua et al., 2012). This thesis contributes to this line of argument with the analysis of EC in Paper III.

5.1.1. The family, the family firm and the regional economy

The findings from the study demonstrate that family co-occurrence (be it a family or non-family firm) influence different dimensions of the firm. Although interactive learning processes cannot be pinpointed using micro-data, it is reasonable to expect that the socializing process between co-workers usually involves some type of knowledge transfer. In this regard, it is assumed that family members are more likely to learn and exchange knowledge through socialization and internalization processes, as proposed by Nonaka (1994). This effect is clear on the impacts of family co-occurrence on firm performance. To some extent, this shows that family ties and supports transcend welfare arrangements by the state and defy previous findings, by emphasizing that even in today’s Western welfare states, where globalization and labour mobility (or migration) have resulted in structural changes in the family, solidarity between family members remains strong and resilient (Mulder & van der Meer, 2009).
At the firm level, the results indicate that family co-occurrence positively affects firm performance. For instance, the results show that having family members in the same firm affect the firm’s performance (labour productivity). Moreover, the results reveal that family firms, in particular, benefit the most from having family members employed in the firm, particularly when this involves specific family relations like spouse and/or children. The implication of this finding is that specific family relationships are more important when it comes to impacting labour productivity. It is not surprising to see why certain specific familial relationships co-occur in family firms and positively impact labour productivity. Obviously, this result helps explain that the presence or co-occurrence of strong family ties in the workplace creates a positive social work environment where family members can support each other in job-related tasks. Such a social work environment fosters intimate personal knowledge among the family (Haugen & Westin, 2016), which strengthens cooperation to the benefit of everyone, as well as firm performance. This finding also shows that family firms are particularly dominated by certain types of family members – in this case, nuclear family members. The dominance of certain family members also shows that the hiring and co-occurrence of family members in firms may not necessarily be an absolute act of nepotism, but rather a process to facilitate the transfer of specific family wisdom (Cabrera-Suárez, Saá-Pérez, & García-Almeida, 2001; Chevalier, 2001).

The analyses further indicate that, at the firm level, some familial constellations have the potential to moderate the effects of skill variety on labour productivity. The implication of this finding is that the effects of skill variety on labour productivity are highly associated with, or conditioned on, the presence or co-occurrence of certain familial relationships, especially in family firms, something previously not known. In particular, the results show that the co-occurrence of an entrepreneur and his/her spouse in the same firm positively impacts labour productivity but also moderates (or abate) the negative effects of highly similar and different skills on labour productivity (Paper II). This relationship has previously been found to negatively affect labour productivity (e.g. Boschma et al., 2009). Entrepreneur-child relationships in the firm also moderate the negative impacts of highly similar skills in the firm. The results imply that spousal and/or child relationships or co-occurrence in the firm may be important moderators of highly similar and different skill portfolios at the workplace, especially in family firms. This finding finds support in the argument by Huber (2012), who argues that learning processes can take place between cognitively distant economic actors who are strongly socially related, such as a spouse or children. The results show that different cognitive capabilities require a higher level of social proximity in order to function. The findings in Papers I and II indicate that, although family co-occurrence in firms may be an important source of capital for firm performance, it appears that this is only the case when the relationship involves children and/or a spouse. These findings further confirm the suggestion that family firms are not a homogenous set of firms but rather comprise several forms of familial relationships with different levels of ties, which consequently affect their economic outcomes (Melin & Nordqvist, 2007;
The implication of the results is that spousal and child relationships in the firm are likely and better able, to flexibly adapt both the family and business roles to leverage their familial relationships to generate a competitive advantage, while sibling relationships may be burdened by or shrouded in pre-existing conflicts.

Furthermore, at the regional level, the analysis shows a relatively higher share of family co-occurrence among firms in smaller or rural regions compared to firms in larger regions; however, the proportion of family employment shows continuous reduction over time (Paper I). The reduction in the proportion of family employment can either be the result of the general decrease in employment rates or a decrease in family ties, as argued by others (e.g. Alesina & Giuliano, 2010, 2014). At the same time, the regional difference in family co-occurrence in firms can be attributed to the spatial sorting of workers and firms. The spatial sorting of workers has resulted in the limitation of highly skilled labour in rural or smaller regions, which has occasioned the relatively higher family co-occurrence in firms, especially family firms. Additionally, this picture of family employment in firms in smaller regions can partly be associated with agglomeration diseconomies and labour market matching inefficiencies in smaller regions. As compensation for these processes, social connections (e.g. family ties) are used as sources of employment.

Moreover, the results show how the regional context matters when it comes to the impacts of family co-occurrence on firm performance. In particular, the results indicate that the impact of family co-occurrence is greater in smaller and specialized regions than in diverse and larger regions. Consequently, the findings establish that it is mainly in smaller, specialized regions that family co-occurrence positively affects labour productivity. This finding has implications on or may hold for, smaller regions characterized by specialized family firms, especially in ‘one-firm regions’. The findings justify the argument that the geographical differences in firm performance can partly be attributed to the spatial sorting of skilled labour and economic activities, as well as the differentiated spatial sorting of family co-occurrence or employment and family firms. While Gordon and McCann’s (2000) claim that social proximity is less relevant in specialized regions, the findings from the present thesis indicate that social proximity invoked by family relations is indeed associated with higher performance in specialized regions. It is no coincidence that most specialized regions in Sweden are smaller regions with a relatively higher proportion of family firms and family employment. To a larger extent, the results from Papers I and II point to the conclusion that family co-occurrence in both family and non-family firms affects different levels of analysis (individual, firm and region). These findings should bring some clarity to the anecdotal evidence on hiring family members and how family co-occurrence enhances the superiority of family firms across different types of regions.

Apart from extensively showing that family co-occurrence is highly viable for analysing firm performance and uneven regional development, this thesis has also shown the
effects of current familial relations (family firm) and past familial relations (EC) on the survival and growth of new entrants. The results have shown that past familial relationships can expose family members to entrepreneurial capabilities, which has a higher propensity to influence strategic decisions later in entrepreneurship. The results show that entrepreneurs who have had self-employed parents (EC) are more likely than other entrepreneurs to engage in strategic entrepreneurial decisions that can drive entrepreneurial successes like firm survival, even when the regional context and times of economic instability are controlled for (Paper III). Further analyses show that this empirical evidence is valid for firms in rural regions. A possible interpretation of this finding is that firms in rural regions develop and rely on durable past entrepreneurial experiences from self-employed parents to surmount the resource shortage that often characterizes rural regions. This finding advances the claim by Aldrich et al. (1998), who argued that EC is an incentive for entering into self-employment. However, the findings in the present thesis suggest that EC goes beyond being simply a resource for entering into self-employment, also serving as a resource for the staying power of new entrants, especially in rural regions. More importantly, the thesis has demonstrated that the resilience of family firms is confounded by EC (past familial relations), although it has previously been reported in the literature that family firms (current familial relations) are more resilient due to cost internalization, etc. (e.g. Braun & Latham, 2009; Mackie, 2001). The implication is that family firms per se are not more resilient but that it is rather firms with entrepreneurial experience from self-employed parents (or EC) that are. Furthermore, the findings also indicate that family firms are more likely to create more jobs than non-family firms. However, the results show no clear regional effect on the role of family firms in relation to job creation. The results have shown that both present and past familial relationships influence different facets of regional economic development (firm survival and employment growth), a finding for regional policy planning.

Finally, this thesis has shown that family co-occurrence and EC have greater levels of spatial variation, as well as positive effects on firm performance (e.g. labour productivity, firm survival) and regional development (e.g. employment growth). Support for this result is found in the recent work by Holm et al. (2017), who found a higher share of family co-occurrence or kinship density in rural regions. While their analyses suggested and expected diversity in the workforce at the firm level to be potentially important and to interplay with the family dimension, especially in metropolitan regions, the current thesis found this to be true in small specialized regions. This confirms the underpinning assumption that the family is a bundle of diverse resources that are important for increased firm performance, but most importantly in firms (especially in family firms) in smaller or rural regions.

5.2. Implications for theory and methodology

The findings from this thesis have implications for theory and methodology in research within economic geography and family business studies. First, the findings suggest that
proximity invoked by family ties may be as relevant as any proximity dimension in the firm. The implication is that a comprehensive conceptual understanding of what the family is and how it develops shared values should further be developed. A comprehensive theorization of the family and family relations has the potential to facilitate a deeper understanding of the mechanisms that drive mutual cooperation in the family, and the possible effect on firm performance. Second, this study has laid the foundation for understanding more important questions relating to how past and present family relationships can affect different economic outcomes. These questions may broaden our knowledge regarding the scope and role of social proximity. The present thesis also has some methodological implications. The data provided by SCB contain unique information on the family and family linkages, which allowed for the construction of different family co-occurrences and the identification of family firms based on ownership and management information. This approach of accounting for the effects of family co-occurrences on firm performance is potentially more informative than a mere binary variable indicating whether family members co-occur in the same firm or not. The micro-level nature of the information on the family and family linkages enabled the construction of some key variables that allowed us to investigate the research questions on large samples, which increased the precision and estimation power while reducing potential selection bias. Lastly, in the empirical analysis, we relied on panel data, which allowed us to examine differences across observations as well as differences within observations over time, providing stronger claims of causality. This systematic methodological approach should facilitate and guide future attempts in this regard, especially in different regional contexts.

5.3. Implications for policy and regional development

The present findings have implications for policy planning and regional development. First, identifying the impacts of family co-occurrence on firm performance, especially in family firms, is a great step toward understanding how to encourage entrepreneurship while taking into account the role of the family. These findings should not only provide policymakers with knowledge of the role of family co-occurrence on firm performance but also aid policymakers in understanding the importance of social context in the lives of entrepreneurs. Second, the findings have implications for why certain family members co-occur in some workplaces. This should feed policymakers not only with the general rhetoric of nepotism but also with the knowledge of which familial relationships are the most beneficial in terms of impacting firm performance, and their trade-offs. This makes a strong case for why some employers may be more selective when hiring (mostly in private firms), relying more on close family members, while also being aware that this is less expensive. In this regard, policymakers should rather see such exercises as trade-offs. Third, the thesis has demonstrated that geography is crucial in the analysis of the role of present and past familial relationships in relation to the survival and growth of new entrants. This is an interesting finding that should trigger different paradigms of policy planning, since the
creation of an entrepreneurial ecosystem not only facilitates entry into entrepreneurship but also enhances entrepreneurial spillovers that ensure prudent decisions and strategies that facilitate the survival of firms, especially in smaller regions. The implication is that, although smaller regions may not have the same capacity as larger regions to promote entrepreneurship, firms in smaller regions are more likely to leverage EC to enhance firm survival. Finally, whereas the findings confirm the importance of the family, it is worth noting that disparities in family structures still exist, e.g., across Europe, and have contributed to the differences in social and economic development. This should inform policymakers about the need to deal with the institutional barriers related to inherited family structures and cultures that are particularly resistant to change (Duranton et al., 2009).

5.4. Limitations and recommendations for future research

A discussion of some caveats and suggestions for future research is warranted in this regard. Even though the data used in this study offer several benefits in relation to their longitudinal nature, wide coverage, and ability to capture most aspects of the firm and the region, they are also associated with a number of limitations, all of which present important avenues for future research. First, the measurement of the family effect on firm performance was mainly an investigation of the co-occurrence of family members in the same firm. The nature of the data does not allow an examination of the mechanisms that could be at play, how these mechanisms might contribute to a better understanding of the synergistic familial relationships, or how they influence firm performance. Failure to understand the underlying synergistic relationships only allowed for the use of inferences, which rely on theoretical justifications. While there is no problem with such an approach, a fine-grained dataset that captures synergistic family relationships would contribute to understanding why certain familial relationships are predominant in certain family firms and regions. Second, we are aware of the limitations posed by how EC was measured. The underlying assumption was that self-employed parents pass on entrepreneurial abilities and capabilities to their children through familial socialization and involvement in family firms. The data only allowed the use of a simple binary measure of EC, which is likely to miss more interesting aspects of the argument. Future studies in this regard may consider a wider definition of EC. Furthermore, such measurement of EC can enhance the examination of how it could influence M&A deals since M&A is one of the most preferred processes for implementing a firm’s strategic goals (e.g. increasing market share). Third, firm performance was measured in the analysis as labour productivity, survival and employment growth because these are effective measures of firm success. Moreover, examining the impacts of family co-occurrence on non-economic indicators would also be of great theoretical and practical value, as family firms are driven by both economic and non-economic goals. Finally, future studies could explore individual family members’ labour market outcomes in terms of how being employed in a family firm affects one’s wages, career development, satisfaction, etc. vis-à-vis family members...
employed in non-family firms. This could bring clarity to the argument of whether family members’ successful labour market outcomes are tied to family firms only.

5.5. Conclusions

The present thesis set out as one of the few studies to investigate the economic importance of family co-occurrence and EC for firm performance, and the consequences of this influence in the analysis of the economic landscape. In the analysis of firm performance and uneven regional development, extensive attention has been given to geographical and cognitive proximities, to the neglect of other proximity dimensions like social proximity. Many studies have confirmed the importance of geographical proximity on firm performance in arguments referring to, for instance, enhancing cooperation and the development of social capital. Others have shown the relationship between cognitive proximity and firm performance through factors like skills, education, and experience. Moreover, though evidence shows that social relations are important for collaboration and firm performance, little attention has been devoted to this in the empirical literature. In an attempt to demonstrate that social proximity can partly explain the uneven regional development from the level of the firm, we employed a longitudinal dataset from Sweden to address three research questions. The thesis has laid the theoretical and empirical foundations for understanding how social proximity affects firm performance; in this case, how and why family co-occurrence is an important resource in the setup of the firm. The present findings suggest that, apart from the family being an important resource within the firm setup, certain family relationships are more able to leverage their unique attributes to invoke economic importance in similar and unrelated skills for firm performance. Further, the analyses show that the effects of family co-occurrence on performance are more pronounced among firms in small, specialized regions. Finally, the analyses show that past familial relationships (EC) constitute an important resource for firm survival, especially in rural regions. This finding suggests that family firms per se are not more resilient but that is rather firms with entrepreneurial experience from parents that are. However, family firms grow more than non-family firms. Moreover, it cannot be concluded that regions characterized by higher family co-occurrence are the most prosperous regions, but, however, the findings contribute to the discussions on the spatial variation of firm performance.

These findings contribute to the discussion in economic geography by providing different perspectives for understanding the mechanisms behind economic growth and development in various regions and industries. Likewise, the analyses bring some understanding to the consistent heterogeneity of firm performance between different firms within the same regions and industries, by assessing the impacts of family co-occurrence and EC. All this should offer new perspectives for explaining and supporting why the family constitutes an important part of the firm’s production setup, particularly in family firms and in rural or smaller regions. The findings should challenge policymakers to consider whether it might not be imperative to encourage...
the development and sustenance of entrepreneurial families and family firms (Benedict, 1968). Moreover, while reflecting on the importance of the family in relation to firm performance, we should also not lose sight of the fact that there is a latent risk in family co-occurrence in firms: it is not a problem—until it becomes a problem (Haugen & Westin, 2016).

6. SAMMANFATTNING PÅ SVENSKA (SUMMARY IN SWEDISH)

Bakgrund/Forskningsläget

Trots familjens centrala roll och rapporter som visar på vikten av familjetyper och familjetyper i förståelse om regionale utveckling, har familjens roll relativt lite undersökt i relation till regionala skillnader i ekonomisk utveckling. Basco (2015) argumenterar exempelvis för att studier i regional utveckling har förbisett att studera familjens roll i relation till företagsbetande och därmed den roll familjen spelar för regionens ekonomiska och sociala utveckling. Den regionala utvecklingslitteraturen visar på vikten av socialt kapital för att förstå konkurrensfördelar, medan familjelationers potentiella roll primärt har behandlats i fallstudier. Länken mellan familjen och regionala socioekonomiska utfall förtjänar mer uppmärksamhet i litteraturen då den kan erbjudas betydelsefulla insikter om varför vissa regioner har lyckats bättre, eller har lättare för att ställa om vid kristider än andra, då det i stort sett inte finns någon aspekt av samhället som inte är påverkad av familjen (Alesina & Giuliano, 2014).

Med tanke på den tidigare beskrivna luckan ger denna avhandling ett bidrag till den regionalekonomiska litteraturen genom att analysera familjens roll i företag. Mer specifikt så undersöks hur olika konstellationer av familjelationer på arbetsplatser (samförekomst) och entreprenörskapital (EC) påverkar företagets konkurrensförmåga och potential att förbli och öjämna regional utveckling. Medan familjesamförekomster innefattar familjelationer som finns i ett företag representerar EC entreprenörens nedarvda erfarenheter från föräldrars entreprenörskap. Analysen sker i interaktionen mellan agglomerations och närhetsdimensionslitteraturens (‘proximity’) utforskande av relevansen av olika typer av närheter, å ena sidan, och familjeföretagssamhället, å andra sidan. Denna avhandling fokuserar på den sociala dimensionen av ”nähet” – i form av familjen, och hur sådana relationer bland många är viktiga för att förstå geografiska olikheter i företags konkurrenskraft. Avhandlingen utgår ifrån antagandet att familjen är en resurs som är viktig för att öka företags konkurrensförmåga, framförallt i regioner som karakteriseras av agglomerationsnackdelar eller regioner som saknar de fördelar som kommer av samlokalisering av företag, vilket vanligtvis är små regioner.

Effekten av familjesamförekomster och EC på företags konkurrensförmåga och regional utveckling har en viktig geografisk dimension. Denna dimension har inte fått tillräcklig uppmärksamhet inom ekonomisk geografi. Den roll familjelationer och
dess samförekomst spelar påverkas av regionen, dvs. det finns en potentiell variation i utfallet av familjerelationer beroende på kontexten. På grund av att storstadsregioner karakteriseras av exempelvis hög agglomeration av både specialiserade och diversifierade sektorer och arbetskraft, finns det potential för en effektivare arbetsmarknadsmatchning mellan jobb och arbetstagare i dessa regioner. Detta betyder att i storstadsregioner läggs mindre vikt vid nyanställningar genom familjerelationer i jämförelse med i landsbygdsregioner där agglomerationsfördelarna är svagare. Då landsbygdsregioner karakteriseras av problem med arbetsmarknadsmatchning och en brist på t.ex. variation avseende kompetenser förefaller det som att familjesamförekomst i företag möjligen är mer utbredd där. Följaktligen påverkar geografin förekomsten av familjerelationer, men också den roll som dessa familjeband spelar. Dessutom finns det belägg för att agglomerations inte är homogena utan snarare varierar i flera olika dimensioner, och att olika resurser inom företaget påverkar konkurrensförmågan. Detta tyder på ett behov av empiriska analyser kring effekten av familj och familjeföretag, vilket är det som denna avhandling avser att göra.

**Forskningsfrågor**

För att uppnå avhandlingens syfte har tre olika men relaterade frågor analyserats: den första analyserar förekomsten av familjesamförekomst mellan olika regioner och hur den påverkar företags konkurrenskraft; den andra undersöker å ena sidan relationen mellan entreprenörers familjerelationer (samförekomst av olika familjerelationer) och olika uppsättningar av kompetenser, och å andra sidan hur dessa relationer påverkar företags konkurrensförmåga; och den tredje undersöker effekterna av familjerelationer (familjeföretag) och entreprenörskapital (EC) för överlevnad och tillväxt hos nyetablerade företag.

**Data och metoder**

Analysen i de tre artiklarna är baserade på data från ASTRID databasen, som finns vid Institutionen för geografi och ekonomisk historia vid Umeå universitet. I denna datainfrastruktur kombineras flera olika register från Statistiska Centralbyrån (SCB). Den innehåller relationell mikro-data för alla företag, arbetsplatser och individer från 1960 och framåt. Eftersom ASTRID data sträcker sig över en längre tid möjliggörs longitudinella studier av företag, sektorer och regioner i den svenska ekonomin. Varje företag och anställd i databasen har en unik identifieringskod, vilken dessutom gör det möjligt att länka individer och arbetsplatser. ASTRID innehåller även longitudinella familjeregister som innehåller information om varje familj i Sverige. Familjeregistret innehåller information om varje individsexcellenta partner och biologiska familjemedlemmar – föräldrar, barn, syskon, etc. (ingen distinktion görs mellan biologiska och adopterade barn). Det som möjliggör dessa studier är att familjeregistret dessutom omfattar unika identifikationsnummer för varje familj, samt upplysningar om vilken typ av familjerelation det handlar om, och om dessa är länkade
till respektive arbetsplats för varje enskild familjemedlem. Familjens och arbetsplatsens identifikationsnummer möjliggör identifiering av familjesamförekomst i en och samma arbetsplats eller företag.


Resultat

Resultaten i artikel I visar att det finns en högre andel samförekomst av familjemedlemmar i företag i mindre regioner och sektorer med låga inträdeskrav, där anställning primärt är baserad på sociala kontakter. Detta resultat bekräftar uppfattningen att större regioner karakteriseras av överspänningsfaktorer som kommer av agglomerationer av företag och människor, vilket innebär att det kan vara ineffektivt att förlita sig på familjenätverk som anställningsmodell. Oavsett region och sektor visar resultaten att med tiden minskar andelen familjeanställningar och familjesamförekomster successivt. Analysen indikerar dessutom att familjesamförekomster påverkar företags konkurrenskraft positivt. Resultaten visar


Resultaten i artikel 3 tyder på att det inte är familjeföretagen per se som är mer motståndskraftiga utan att det är entreprenörerfarenheter eller EC från egenföretagande föräldrar som spelar roll. Detta resultat går emot tidigare rapporterade resultat om mer motståndskraftiga familjeföretag. Denna faktor har vidare större betydelse för företag på landsbygden och i mindre regioner. Resultaten visar också att familjeföretag växer mer än andra företag. Däremot kunde inte identifieras några tydliga regionala effekter av familjeföretag på jobbskapande. Sammanfattningsvis bidrar artikel III till litteraturen om regional utveckling och motståndskraften hos familjeföretag genom att visa att nuvarande och förflutna familjerelationer förklarar olika aspekter av regional utveckling. Denna resultat banar förhoppningsvis väg för ytterligare empiriska studier om motståndskraften hos familjeföretag i relation till entreprenörskapitalets roll.

Avslutande diskussion

Avhandlingens syfte är att bidra till det underteoretiserade forskningsfältet om den ekonomiska nyttan av familjesamförekomster och EC för företags konkurrenskraft, och de konsekvenser detta får för analysen av det ekonomiska landskapet. I analysen av företags konkurrenskraft och ojämn regional utveckling, har stor uppmärksamhet riktats mot geografiska och kognitiva avstånd, medan andra dimensioner såsom sociala avstånd har åsidosatts. Många studier har bekräftat vikten av geografisk närhet för företags konkurrenskraft i argument som refererar till exempelvis ökat samarbete och utveckling av det sociala kapitalet. Andra har visat på relationen mellan kognitiv
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Why some firms are superior performers than other firms, and why some regions are more prosperous than other regions are key questions in policy planning and research. Economic geographers and regional economists often strongly associate these questions with agglomeration economies and proximity dimensions chiefly on geographical proximity and cognitive proximity to the neglect of other proximity dimensions, such as social proximity – family relationships (or family co-occurrences). In this thesis, using a Swedish longitudinal register data, a systematic analysis of the role of family co-occurrence on firm performance and how it contributes in explaining the uneven regional development is in focus.