Essays on Family Firms and Firm Growth Barriers

To my lovely family
Malin, Olof and Melker

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Abstract

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This thesis concerns the implications of family ownership and perceived growth barriers for firm decision-making and performance. The *first* article examines the inclusion of family business in economics doctoral programs in the United States and Sweden, as well as the views of professors and textbook authors and research on family business. It is found that family business is not included in the examined curricula. Furthermore, professors and authors do not publish research on family business and generally do not see a need to incorporate it into economic theory. The article concludes by discussing the causes of this omission, as well as strategies to overcome them in order to further our understanding of economic action. The *second* article presents a novel strategy for identifying domiciled family firms using total population data. By applying this strategy to Swedish data, family firms are found to contribute to one-third of Swedish employment and gross domestic product, and a significant share of Sweden's largest firms are family-owned. In general, family firms are found to be smaller than their non-family equivalents, although they are more profitable. Meanwhile, differences between family firms and non-family firms are found to diminish with firm size. The *third* article examines whether family firms have a comparative employment growth advantage over non-family firms in regions with relatively low population density. As a group, family firms are found to be the main source of job creation in rural regions, largely as a result of their large numbers. Nevertheless, the average family firm is found to grow more slowly than the average non-family firm. Meanwhile, in line with the study's conjecture, this difference is found to decrease across the urban-rural context, i.e., across metropolitan, urban and rural regions. The *fourth* paper examines the representation of women in top management teams[1] in family firms and non-family firms. Moreover, the share of women in a firm's top management team is found to be positively associated with the additional appointment of female managers. Lastly, kinship bonds between the owning families and prospective managers are found to be positively associated with the appointment of women on top management teams. The *fifth* paper aims to capture the relationship between perceived growth barriers and firm size, which is achieved by developing a novel data-driven strategy for identifying firm size groups. It is found that smaller firms typically face accessibility constraints on equity financing, whereas larger firms generally face barriers related to competition and accessibility to qualified staff. These results are benchmarked against those using prevailing strategies for measuring firm size, whereby it is suggested that there may be a need for methodological rethinking in the field regarding its treatment of firm size.

Keywords: entrepreneurship; family firm; family ownership; firm growth; institutions; perceived growth barriers

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[1] The top management team is defined as a firm's chief executive officer (CEO) and members of its executive board.

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1. Introduction and scope of the thesis

—"The origins of a firm lie in the family – specifically, in the family of its founder. Admittedly, some firms begin life as fully fledged joint stock companies with many shareholders. But the vast majority of firms are founded by just one individual, and their early development is very much tied up with the founder's family."

- Mark Casson (1982)

A key focus of this thesis concerns the impact of family ownership on firm decision-making and performance. The motivation for this particular pursuit comes as theoretical and empirical research suggest that family business is integral for understanding firm behavior and the creation of economic value, where recent academic advances have led to an upsurge of research in the field. Moreover, family business is intimately related to concepts of entrepreneurship and small business, whereby it is also a key notion in discussions on economic development (Henrekson and Johansson 2010; Nordqvist and Melin 2010; Acs et al. 2012; Andersson and Klepper 2013; Haltiwanger et al. 2013; Urbano et al. 2019). However, although there has long been a growing sentiment that family business plays a fundamental role in economic progress, its real-world importance has historically proved difficult to substantiate due to difficulties in empirically identifying family ownership (Andersson et al. 2018a). In addition, certain aspects of family business have also proven difficult to reconcile with standard economic assumptions, which is likely to have impeded research in the field. It is, in turn, against the background of these sentiments and limitations that the current thesis has been conceived.

So, why should an economist be concerned with family business? The possible answers to this question are numerous. Nevertheless, a prominent reason is that family has proven fundamental for explaining firm decision-making. Therefore, a firm grasp of family business is arguably essential to ultimately understand the cause and nature of economic action. The fundamental economic role of family business can be observed throughout history, from the conception of the Anglo-Saxon church in the 16th century to the development of contemporary business empires, such as IKEA, Volkswagen and Wal-Mart. Meanwhile, by failing to acknowledge the influence of family in these developments, we risk neglecting both drivers of and barriers to economic change. Hence, similarly to the way in which the

Prince of Denmark is arguably needed to understand the story of Hamlet, family business is arguably needed to make sense of economic action.[1]

This thesis concerns Sweden — and although the Swedish have had a proud tradition of detesting past Princes of Denmark, the above analogy is still highly valid: Sweden's economic history is largely a testament to the influence of families. Notably, in modern history following the industrial revolution, Sweden has seen the rise of a number of influential entrepreneurial families, such as the Ax:son Johnsons (Nordstjernan), Perssons (H&M) and Wallenbergs (SEB, Investor), which have emerged not only as key national players but also as core contenders on a rapidly expanding global market. In turn, these family-owned businesses and others have likely been fundamental for the development of the modern Swedish economy (Colli 2003; Sjögren 2017).

Despite its historical pedigree and its economic significance, however, family business has received relatively scant attention in economics. This is, in turn, noteworthy given that questions regarding family business lie at the very heart of the economic problem, i.e., the allocation of scarce resources. Notably, central issues concern the influence of family owner preferences on the employment, financing, investment and succession decisions of firms, as well as the role of knowledge spillovers, trust and institutions in firm longevity and performance (Bennedsen et al. 2007; Bornhäll et al. 2016b; Baù et al. 2018; Chirico et al. 2018). Meanwhile, a likely reason for this theoretical and empirical exclusion is that contemporary economic discourse is limited in its ability to capture family business characteristics.[2]

Research suggests that a considerable source of conflict between family business and standard economic theory arises from the economic assumption that business activity is carried out with the ultimate goal of maximizing profit (Johansson et al. 2019). Meanwhile, this statement has been found to correspond poorly to firms' real-world behavior, and family firms in particular have been noted to consistently and deliberately prioritize non-financial goals, such as longevity, independence and family control over financial goals, such as profit (e.g., Gómez-Mejía et al. 2007; Naldi et al.

[1] This argument alludes to a famous analogy coined by American economist William Baumol while describing the role of the entrepreneur in economic discourse, i.e., "The theoretical firm is entrepreneurless—the Prince of Denmark has been expunged from the discussion of Hamlet" (Baumol 1968).

[2] This his has not always been the case, however. On the contrary, until the second half of the last century, entrepreneurship and thereby, indirectly, family business held a central role in economic theory (Hébert and Link 2007). Notably, in his seminal work on the role of entrepreneurship in economic development, Austrian economist Joseph Schumpeter explicitly discussed the role of dynastic ambitions in carrying out entrepreneurial activity (Schumpeter 1934).

2007; Zellweger et al. 2013; Campopiano et al. 2014; Rau et al. 2019). In turn, given the sheer macroeconomic significance of family business, these limitations are likely to have considerable academic and political consequences, as they imply that theory currently fails to capture the behavior and needs among a majority of firms (Acs et al. 2016; Åstebro 2017; Andersson et al. 2018a; Tsuruta 2018; Johansson et al. 2019).

However, although family business has traditionally been sparsely covered in economics, recent trends nonetheless suggest that its relative position within the field may be improving. Notably, family business concepts have recently been featured in a number of prestigious economics journals, as well as among well-known textbooks in the field (Levine and Rubinstein 2016; Chakraborty and Raveh 2018; Bandiera et al. 2019; Johansson et al. 2019; Li and Goetz 2019). This may, in turn, indicate an increased awareness in the literature towards family business issues. However, the current discussion is limited in the sense that it offers only a limited theoretical understanding of family business. Specifically, analyses are currently either descriptive or, alternatively, delimited to a narrow range of economic phenomena, such as agency conflicts, inheritance and savings, where family firms are generally used as an empirical example rather than their own theoretical construct (e.g., Pérez-González 2006; Bennedsen et al. 2007; Bloom and Van Reenen 2007; Doepke and Zilibotti 2008; Ellul et al. 2010; Bloom et al. 2015; Mullins and Schoar 2016).[3] Nevertheless, and despite their possible current limitations, recent developments provide an encouraging indication that the field may be moving towards an increased awareness of family business and its role in economic activity.[4]

Lastly, to gain a comprehensive understanding of firm decision-making and performance, it is central to consider not only *facilitators* of firm growth but also possible *impediments* to firm growth. Therefore, a secondary focus of this thesis is thereby devoted to these factors, i.e., firm growth barriers. This implies an institutional approach, where researchers consider not only the markets where firms operate but also the legal framework and social setting in which economic action occurs. Surprisingly, despite being a fundamental aspect of firm performance, growth barriers have received

[3] Through this, central questions in family business and entrepreneurship are still eluded, such as family firm goal conflicts and the role of owner competence, judgment and entrepreneurial skill in economic change (Knight 1921; Pelikan 1993; Gómez-Mejía et al. 2007; Braunerhjelm et al. 2010; Williams et al. 2019).

[4] The crudeness of the current discussions may be a sign of early-stage adoption. Business administration scholars testify of similar resistance and limitations in mainstream discourse before family business research became established (e.g., Poutziouris et al. 2006).

relatively little attention in the overall firm performance literature. Therefore, it is crucial that the concept be studied further.

The remainder of this chapter is disposed as follows. The next section will be dedicated to the discussion and presentation of core concepts of the thesis. Thereafter, Section 3 presents the data used, as well as methodological considerations that have been made. Next, Section 4 presents the respective chapters of the thesis, and Section 5 describes its limitations. Finally, Section 6 discusses the implications of the thesis for policy and future research.

2. Conceptual and institutional aspects

2.1 Defining family firms

What constitutes a family firm? This question does not necessarily have an immediate or definitive answer. Rather, there are numerous ways to define family firms, and there is generally limited consensus on which particular methodology to use. Consequently, the boundaries of family business have invoked considerable academic debate, and a broad range of principles have been laid forward (Chua et al. 1999; Astrachan et al. 2002; Chrisman et al. 2009; Rau et al. 2018).

In its most basic form, the discussion on family control can be divided into three fundamental methodologies, namely, those that depart from 1) firm ownership; 2) firm governance, or 3) a combination of firm ownership and governance.[5] The perhaps most common approach for defining family firms is to assign control based on the largest owners' share of ownership and/or governance (e.g., Donckels and Fröhlich 1991; Gallo and Sveen 1991; Lyman 1991; La Porta et al. 1999; Bjuggren et al. 2011; Andersson et al. 2018a). Meanwhile, related traditions have also considered the characteristics of the controlling family, where family control has been discerned based on whether the founding family is represented in the firm or, alternatively, on whether two or more generations are involved in its governance

[5] Family ownership is generally measured in terms of the owning families' share of firm votes or capital, whereas family governance is often based on the representation of family members in the top management team, i.e., the chief executive officer and board of directors. For the sake of brevity, psychological ownership will not be considered here.

(Handler 1989; Tagiuri and Davis 1996; Anderson and Reeb 2003; Miller et al. 2007).[6]

In response to the empirical ambiguity surrounding the definition of family firms, the European Commission (EC) has compiled a review of European definition of family firms with the intent to establish a European standard. This review resulted in the conception of the EC (2009) definition of family firms, which is also the definition that has been applied throughout this thesis.[7] The EC (2009) definition states that a family firm is one that meets the following criteria:

1. The majority of decision-making rights are in the possession of the natural person(s) who established the firm, or in the possession of the natural person(s) who has/have acquired the share capital of the firm, or in the possession of their spouses, parents, child, or children's direct heirs.
2. The majority of decision-making rights are indirect or direct.
3. At least one representative of the family or kin is formally involved in the governance of the firm.
4. Listed companies meet the definition of a family enterprise if the person(s) who established or acquired the firm (share capital) or their families or descendants possess 25% of the decision-making rights mandated by their share capital.

Following the EC (2009) definition, a family firm is therefore one in which an individual or family controls a majority of the firm's decision-making rights (or, in the case of listed firms, a quarter of its decision-making rights) and where at least one family member is formally involved in its governance. Lastly, within the confines of this thesis, the term "family" is defined as all individuals who share kinship bonds across up to four generations, e.g., the

[6] In a third tradition, family firms have been defined based on the whether the firm was founded based on the needs of the owning family or, alternatively, with the intention to be passed on to the next generation (Churchill and Hatten 1987; Lea 1998).

[7] The EC (2009) definition is chosen based primarily on its reoccurring use in research (Bjuggren et al. 2011; Grundström et al. 2012; Backman and Palmberg 2015; Bjuggren 2015; Andersson et al. 2018a; Karlsson 2018). Moreover, it is also backed by several influential organizations, including the EU, the Family Firm Institute (FFI) and the International Family Enterprise Research Academy (IFERA).

grandparents, parents, aunts, uncles, cousins, siblings and children of a given individual, including spouses, in-laws, and children to the above.[8]

2.2 What signifies a family firm?

As implied in the introduction to this chapter, family business plays a fundamental role in firm decision-making. Accordingly, the characteristics and behavior of family firms have given rise to a rich and diverse literature. A selection of findings from this literature will be discussed briefly in this section. Specifically, the section will be dedicated to discussing the long-term orientation of family firms, as well as the role of trust, social capital, family control, family values, succession and social responsibility in their decision-making.

2.2.1 Long-term orientation

A distinguishing trait of family firms concerns the long-term orientation of their decision-making, such as in terms of their investment, recruitment and innovation strategies (Le Breton-Miller and Miller 2006; Breton-Miller and Miller 2016; Sun et al. 2018). Specifically, family firms have been noted to promote long-term goals, such as financial solvency and succession, over short-term performance outcomes, such as profit and annual growth (Astrachan 2010; Lumpkin et al. 2010; Bornhäll et al. 2016b; Williams Jr et al. 2018). Owing to this long-term focus, family firms have also been inferred to be more risk averse than non-family firms, who are instead more likely to prioritize short- or intermediate-run goals (Hiebl 2012, 2014).

Meanwhile, the long-termism of family firms is likely to be a source of sustained competitive advantages (Barney 1991). Notably, following their long-term orientation, family firms are thought to make long-term commitments to employees, where the acquisition and maintenance of in-house competence is a key determinant for sustained competitiveness. This is manifested, for example, in terms of a higher overall persistence in employment tenures than among non-family firms (Amann and Jaussaud 2012; Bjuggren 2015). Moreover, because of their decision-making sovereignty, family firm owners are also thought to have greater freedom to pursue entrepreneurial ventures than their non-family equivalents, where these entrepreneurial activities are fundamental for firm competitiveness and for long-term overall macroeconomic development (Schumpeter 1934; Chrisman et al. 2015).

[8] The upper boundary of four generations comes due to the structure of Swedish administrative data rather than to model assumptions. In reality, most family firms are confined within two generations (Andersson et al. 2018a).

2.2.2 Trust and social capital

Another central aspect of family firms concerns the role of trust and social capital in their decision-making.[9] This topic ties closely to the previous point regarding their longevity and risk preferences. Specifically, family firms have been found to form tight-knit organizational networks that are built on reciprocity, loyalty and trust rather than on formal agreements (Astrachan 2010; Zellweger et al. 2012; Karlsson 2018). As a consequence, family firm owners are also particularly likely to combine professional and personal networks. Their firm-internal networks are also believed to benefit from the long-term interaction among family members (Fama and Jensen 1983; Tagiuri and Davis 1996; Habbershon and Williams 1999; Arregle et al. 2007; Danes et al. 2007; Pearson et al. 2008). These relational characteristics are likely to be a source of strength in situations where monitoring possibilities are limited, such as in rural regions with long distances between firms (Habbershon and Williams 1999; Zellweger et al. 2010; Soleimanof et al. 2017). However, and in contrast to the above, the tight-knit nature of these networks may also potentially hamper economic growth, as they also imply that firms may forego profitable outside options in favor of network solutions (Morck and Yeung 2004).

2.2.3 Family control and family values

Another distinguishing feature of family firms concerns the central role of family control and family values in their overall goal formulation. As in the previous case, this feature is again closely connected to their long-term orientation. Specifically, a driving ambition of many entrepreneurs is independence, as well as the accumulation of wealth for future generations (Schumpeter 1934). Therefore, family firms tend to prioritize family control and long-term survival over financial performance. This is manifested, for example, in a relatively low demand for external financing compared to non-family firms despite the fact that external funds are likely to enable high overall performance (Romano et al. 2001; Bornhäll et al. 2016b; Michiels and Molly 2017; Andersson et al. 2018a; Schickinger et al. 2018). In turn, this outcome is likely because external financing invites risk and jeopardizes family control.

2.2.4 Succession

A core question for many family firms concerns succession; the previous literature suggests that this process is among the most important stages of firm development and one that is often associated with significant financial

[9] Social capital refers to entrenchment in the network between agents, such as goodwill, sympathy, trust and reputation (Ostrom 1990; Putnam 1995)

and organizational stress (Bennedsen et al. 2007; Gomez-Mejia et al. 2011). Specifically, in the process leading up to succession, owners face a number of challenges.

First and foremost, owners must ultimately decide whether to appoint a successor. Here, the outside option in practice is to either sell or to liquidize the business.[10] Second, given that a family firm chooses to undergo succession, the next step consists of identifying a suitable candidate. This search process can include both family and non-family members, whereby owners need to carefully weigh their possible preferences of family control against the potential financial gains of utilizing an expanded pool of external candidates.[11] Next, having successfully identified a candidate, owners must also find a way to transfer relevant knowledge between the firm's current and future management, which can be expected to be a complex and time-consuming process, as much of the relevant knowledge is likely to be tacit and many of the firm's strategic resources, such as industry practices, brand identity and personal networks, are intangible (Cabrera-Suárez et al. 2001).[12]

Lastly, given that owners manage to successfully identify and prepare a successor, there are significant contractual issues associated with the transfer of operative control. Specifically, to align the incentives of owners and successors, the successor must be given a stake in firm profits (Knight 1921; Holmstrom 1979), which is perhaps most directly addressed by transferring assets to the successor. However, this task is likely to be associated with a range of uncertainties in itself, such as *how much* ownership is necessary to align incentives, as well as how it should be transferred, e.g., which assets should be transferred and at what price. Recent research suggests that this latter choice is particularly important for family firms, where the medium for succession financing has been inferred to be instrumental in shaping their future strategies and performance (Janssen et al. 2019).

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[10] However, evidence suggests that family owners rarely sell their firms, whereby the choice of owners upon retirement typically stands between succession or market exit (Akhter et al. 2016; Chirico et al. 2019). Closely related to this topic, a growing concern in Sweden is that a significant share of firm owners state that they do not *want* their children to take over the business. As a consequence, approximately one in ten Swedish businesses are expected to shut down in the coming decade following their owners' transition into retirement (Swedish Federation of Business Owners 2016)

[11] Moreover, given that multiple parties are interested in taking over the firm, owners must also consider possible family tensions following their succession decision.

[12] These issues can, nevertheless, partly be mitigated by introducing family members to the business at an early age.

2.2.5 Social responsibility

A fifth aspect of family business concerns its intimate connection to social responsibility. Specifically, family firms tend to be invested in their local community through social and/or financial engagement in community activities (Astrachan 1988; Basco 2015). Meanwhile, this engagement comes as owners often live and work in the same community, whereby they have financial and social incentives to promote their family and business on the local level, as well as to facilitate a healthy community culture (Astrachan 1988). Moreover, owing to this integration of business, family and society, family firms are also likely to include both community and family values in their strategic planning, whereby their actions tend to align with community objectives (Astrachan 1988; Tagiuri and Davis 1996; Basco 2015).[13]

2.3 Family business and the economic problem

What is the potential value of family business for economic analysis? As implied in the introduction to this chapter, economics concerns the use of scarce resources, where research in the field is typically categorized based on two overarching headings: micro- and macroeconomics. Microeconomics is concerned with the decision-making of and interactions between firms and individuals, whereas macroeconomics studies the aggregate outcomes of microeconomic behavior. Based on these core interests, it would therefore seem that family business should fall well within the field's line of enquiry. Surprisingly, however, and despite numerous common areas of interest, family business has historically been largely absent in economics (Johansson et al. 2019).

In turn, there is little reason why family business cannot be integrated into economics. Rather, its exclusion is arguably unwarranted, and the intellectual shortcoming that this implies is likely to be damaging to the field over time. In turn, family business holds a dominant economic role in society and has bearing on fundamental economic problems. Meanwhile, by developing theory to be more reflective of family business and thereby of economic reality, researchers stand to ultimately gain new and more meaningful insights into the cause and nature of economic activity.[14]

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[13] Nevertheless, there are notable exceptions. See, for example, Shapira and Zingales (2017) and Hodge and Gostin (2019) on the litigations against DuPont and Purdue Pharma. Admittedly, however, these organizations are among the largest in the U.S., whereby their operations are not localized to a single region.

[14] The apparent disjunction between economic theory and reality has been discussed on a number of occasions and across a range of contexts. See, for example, Leijonhufvud (1973), Romer (2016) and Blanchard (2018).

Notably, a substantial shortcoming of the current economic discussion is that firms are generally assumed to have diversified ownership and to be externally managed. This assumptions stands in contrast with reality, where firms are instead typically controlled by a limited number of owners that are also present in the firms' day-to-day management, i.e., owner-managers. Meanwhile, by instead departing from the notion that firms are generally owned-managed, researchers may yield fundamental insights into their decision-making. Specifically, by equating the roles of owner and manager, economic researchers are likely to come to similar insights as business administration scholars before them, i.e., that the decision-making and goals of firms are often inseparable from the decision-making and goals of individual owners. This reality implies, in turn, that the private goals of owners, other than profit maximizing, must also be reflected in an informative model of firm behavior in some way.

For example, by unifying firm and individual goal setting, researchers may explain the long-term orientation of family firms, where this concept can be understood in terms of owner decisions on consumption and wealth accumulation over time, rather than as "suboptimal" business strategies. In turn, and on a similar note, the role of trust and social capital in family firms can be used to gain insights into the role of owner risk preferences in firm decision-making. Moreover, these concepts may also prove useful to explain the formation of business networks, where researchers can potentially draw insights from the existing literature on social distance (Akerlof 1997; Greif 2006).

Next, by departing from the perspective of owners, researchers may also gain an increased understanding of phenomena related to family control, succession and social responsibility. Specifically, many owners are likely aware of the trade-off between family goals and financial performance, whereby an implication of this awareness is that they actively choose to forego a certain amount of profit in favor of pursuing family-based objectives. To facilitate these aspects of economic modeling, the personal preferences of owners can, again, be used to guide our understanding. In this regard, it may be useful to think of the pursuit of non-financial and family-oriented goals not as *suboptimal* business strategies but rather as *optimal* consumer choices, where the pursuit of non-financial family goals can be thought of as the owners' consumption of intangible goods, such as "family culture", "family control" or "family cohesion". Equivalent conceptualizations have previously been proposed in the business administration literature, where these intangible family-oriented goods are commonly referred to as "socioemotional wealth" (Gómez-Mejía et al. 2007).

As a result of the disjuncture between economic theory and empirical evidence on family business, as well as the fundamental role of ownership in economic activity, the literature on family business is hence argued to represent a substantial and currently underutilized source of insights into economics. The field's key takeaways are perhaps mainly applicable to microeconomic discussions because of its predominant focus on individual firms. Nevertheless, given the dominant economic role of family business and its relevance for economic policy, these insights are also likely to hold substantial implications for macroeconomics (La Porta et al. 1999; Anderson and Reeb 2003; Colli 2003; Andersson et al. 2018a).

2.4 Why has family business been excluded from economics?

Given the statement that there is a large literature on family business that has implications for economic research, one question is likely to emerge, namely, "Why has family business not previously been included in the economic discussion?". By reviewing the foundations of contemporary economic discourse, a number of plausible reasons for this omission emerge. Previous research has identified five aspects that are likely to have obstructed the pursuit of family business concepts in economics, namely, a lack of paradigmatic pluralism, axiomatic incompatibility, path dependency, institutional bias and data constraints (Johansson et al. 2019). These concepts will be briefly discussed in this section.

First and foremost, a significant obstacle to studying family business in economics lies in the field's current lack of paradigmatic pluralism. By this, it is specifically noted that discussions in top economics journals subscribe almost exclusively to a single intellectual paradigm, namely, that of so-called "neoclassical" economics (Backhouse 1998; Kelly and Bruestle 2011; Rath and Wohlrabe 2016).[15] Meanwhile, paradigms that have challenged or been on the outskirts of this discourse have historically been dismissed or ignored (Thompson 1997; Hodgson and Rothman 2001; Romer 2016; Dequech 2017). This has implications for economic research on family business, as its discussions are often interdisciplinary and originate from a diverse range of paradigms. As a result, economists that conduct research on family business are instead likely to publish their research through other scientific outlets, such as in field journals.

Second, another likely reason that family business is excluded from economics is that it is partially incompatible with economic methodologies. Specifically, neoclassical economic theory relies on a number of core, so-called "axiomatic", assumptions on the nature of economic life. These assumptions underlie the majority of contemporary economic discourse, and

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[15] Put simply, neoclassical economics is a brand of theory that focuses on the study of welfare maximization among individuals and firms, as well as antecedents of economic equilibria (Becker 1976, p. 5; Winter 2016). Following its focus on maximization and equilibria, its methodology is typically characterized by the use of mathematical modeling.

they are typically taken as given. In this, it is specifically assumed that all business activities are conducted with the ultimate goal of maximizing profits, which stands in contrast with findings on family business; these findings instead suggest that many family firms consistently and deliberately diverge from their (hypothetical) profit maximum. Hence, by assuming a neoclassical standpoint, researchers are likely to impose considerable methodological constraints on analyses of family business concepts, which is likely to partially explain why the topic has largely been absent from the mainstream economic debate.

Third, even if economic researchers are aware of the importance of family business and can overcome issues of paradigmatic pluralism and axiomatic incompatibility, they are still likely to encounter substantial obstacles to pursuing a career in the field. Specifically, a significant constraint for economists to pursue research in family business derives from the fact that research tends to be path dependent and self-replicating. Because of this, economists are unlikely to be engaged in family business precisely because they have not been engaged in it previously. The reason for this outcome is that junior researchers are shaped by their research environments and disciplines, after which they typically develop specialized profiles of their own within these traditions. Consequently, given their entrenchment in the literature, any change in researchers' focus is associated with considerable opportunity costs, i.e., to enter a new literature, they must divert focus from research in their respective fields and thereby forego research opportunities. Owing to these adjustment costs, economists are hence unlikely to pursue family business concepts. Path dependency is also likely to hinder young or prospective researchers from pursuing family business research, as their supervisors and professors are unlikely to address family business issues. Moreover, even if young researchers find their way into the family business literature, they are likely to face difficulties in developing their research precisely because it is disparate from prevailing traditions.

Fourth, another constraint to economic research on family business relates to institutional bias.[16] This constraint is driven largely by the evaluation practices of academic institutions. Specifically, departments and researchers are subject to reoccurring research evaluations, where the quality and quantity of their scientific output is assessed. These assessments are, in turn, used in decision-making on future research grants and in the appointment of faculty positions. The basic goal of these exercises is to strengthen influential researchers and departments, where funds are typically assigned

[16] Institutional bias refers to when the "rules of the game" are designed in such a way that they favor a particular agenda. The term is typically used derogatorily to voice concerns of disproportionate or unfair skewness in institutional frameworks.

based on their relative impact. However, a considerable flaw of these exercises is that they are often restrictive in their design. Prominently, many rankings place a disproportionate emphasis on whether researchers have published papers among top-tier journals in their respective fields (Henrekson and Waldenström 2011). Meanwhile, top publications in adjacent fields are given considerably lower weight, which has implications for family business research, as its nature is often interdisciplinary and the resulting output is not always oriented towards economics journals. As a result, economists engaged in family business run the risk of being poorly ranked in research assessments, whereby junior researchers may be deterred or even obstructed from pursuing a career in the field.

Lastly, a fifth constraint to economic research on family business deals with the empirical issues with identifying family firms in practice. Specifically, economists typically rely on large quantitative datasets to conduct their research. However, large-scale data on family ownership are rarely available because they are not included in official statistics. Therefore, researchers interested in family business must either identify ownership manually or through use of indirect methods and administrative data. Meanwhile, large-scale manual identification of family ownership is generally unfeasible, as it is likely to be time-consuming, expensive and subject to measurement issues. Conversely, indirect identification strategies place considerable requirements for data quality, whereby they can be used only in certain settings. Nevertheless, recent advancements in Swedish data have produced a novel method to facilitate this identification process, where the research project that underlines this thesis has resulted in the establishment of the world's first total population register on family business (Andersson et al. 2018a). This situation does, moreover, raise hopes for the future development of similar data in other countries. The EU has also recently granted funds to a number of European countries for the development of official family business statistics, whereby accessibility to family business data may be expected to improve in the future (European Commission 2015a).

2.5 What are firm growth barriers, and how do we identify them?

Firm growth barriers are generally conceptualized as factors that limit or deteriorate firm performance. These constraints may be both internal, such as a lack of market information or a lack of entrepreneurial and managerial skill, and external, such as competition and unfavorable institutions (Storey 1994; Davidsson et al. 2005).

In practice, there are two prevailing methods to identify firm growth barriers. The perhaps most common of these is to use survey data where top managers or firm owners are explicitly asked whether they perceive a certain factor to constitute a barrier to growth (Levy 1993; Coad and Tamvada 2012; Lee 2014; Lee and Cowling 2015; Lee and Luca 2018). An advantage of this method is that it allows researchers to directly identify a wide range of constraints on firm performance. However, a downside of the former is that perceptions are inherently subjective, whereby the causality between perceived growth barriers and firm performance is not necessarily unidirectional. Meanwhile, an alternative method to identify firm growth barriers is to identify quasi-experiments, such as by studying economic outcomes in the periods before and after the implementation of new policy (Bornhäll et al. 2016a; Bjuggren 2018). An advantage of this strategy is that it allows researchers to closely identify the causal mechanisms that drive versus impede firm growth. Meanwhile, a shortcoming of this strategy is that it implies that the analyses are limited by the scope of past economic change.

3. DATA AND METHOD

3.1 Data

To study firm ownership and decision-making, this thesis utilizes a wide range of data sources. The second, third, fourth and fifth articles are based on so-called linked employer-employee data (LEED). These data are collected from the Swedish Labor Market Statistics (RAMS) and cover all active firms in Sweden for a given year that have at least one employee. The scope of RAMS has, moreover, been used to delimit the population of the aforementioned articles.

To identify family firms, articles two, three and four also include data on all Swedish residents collected from the Swedish Total Population Register. Next, to identify families, this information is matched with genealogical data from the Swedish Multiple Generation Register. Through this, it is possible to identify kinship relations for all Swedish residents born in 1932 or later, given that they have been Swedish citizens at some point since 1968. Furthermore, to identify family ownership, all kinship relations are matched with data on firm owners. The latter data are collected from four sources: the Swedish Tax Authorities' Statistics of Earnings and Deductions, which covers ownership of closely held firms, the Swedish Ownership Register and the Swedish Financial Supervisory Authority's Central Register for Investments and Investor Alerts, which cover ownership of listed Swedish firms, and the Swedish Statistical Business Register, which contains information on enterprise group structures. Finally, to identify family firms according to the EC (2009) definition, data on kinship and ownership are matched with information on firm governance from the Companies Registration Office's Executive Board Register. This register contains information on all executive board members and CEOs in Sweden for a given year.

Next, to make statements on the financial structure, internationalization and regional conditions of firms, articles two, three and four include data on financial statements from Swedish firms, which is retrieved from the Swedish Structural Business Statistics and the Swedish VAT Statistics.[17] These data are collected by the Swedish Tax Authority to calculate the taxable income of firm owners, and they cover all non-financial and non-agricultural firms in Sweden for a given year. Moreover, article number three utilizes GPS road map data to calculate time distances between Swedish regions. These data have been obtained using OpenStreetMap and the methodology of Huber and Rust (2016).

The fifth article uses data on perceived growth barriers, which are included in the biannual business survey called The Situation and Conditions of Enterprises. These data are collected on behalf of the Swedish Agency for Economic and Regional Growth and constitute a stratified, randomized and representative sample of Swedish firms.

The data used in the second, third, fourth and fifth articles are all secondary, i.e., they are not collected by the authors themselves. Meanwhile, the first article is based solely on primary data. First, it involves data on scholarly publications that use family business terminology, which have been collected from Scopus and Google Scholar. These data were selected following the Chartered ABS Academic Journal Guide of 2018, where publications published between 2010 and 2017 were collected and analyzed, for a total of approximately 200,000 articles. Moreover, it also utilizes data on the curricula of economics doctoral programs in Sweden and the U.S., which have been collected manually through correspondence with professors and students at the respective universities. Finally, it also includes data on the views of teaching professors and textbook authors regarding the role of family business in economic theory. These data were collected through a non-incentivized questionnaire with two reminders, each sent two weeks apart. Table 1 presents a summary of the utilized data.

[17] Exports are studied in terms of whether or not firms have paid value added tax (VAT) on exports during a given year.

Table 1. Databases used in the thesis.

Database name	Data source	Data coverage
Academic Journal Guide (2018)	Chartered ABS	Sample
Curricula of Swedish and American doctoral programs[1]	Professors and students at Swedish and American universities[φ]	Sample
Google Scholar[2]	Google	Sample
GPS road map data	OpenStreetMap	Total population
Scopus[2]	Elsevier	Sample
Survey on family business in economics[3]	Teaching professors and textbook authors in Sweden and the U.S.[φ]	Sample
The Situation and Conditions of Enterprises[4]	Swedish Agency for Economic and Regional Growth	Sample
As well as the *Swedish*:		
– Companies Registration Office's Executive Board Register[5]	Swedish Companies Registration Office	Total population
– Financial Supervisory Authority's Central Register for Investments and Investor Alerts[5]	Swedish Financial Supervisory Authority	Total population
– Labor Market Statistics[4],[5]	Statistics Sweden	Total population
– Multiple Generation Register[5]	Statistics Sweden	Total population
– Ownership Register[5]	Euroclear Sweden AB	Total population
– Statistical Business Register[5]	Statistics Sweden	Total population
– Structural Business Statistics[4],[5]	Swedish Tax Authority	Total population
– Tax Authorities' Statistics of Earnings and Deductions[5]	Swedish Tax Authority	Total population
– Total Population Register[5]	Statistics Sweden	Total population
– VAT Statistics[5]	Swedish Tax Authority	Total population

Notes: Databases used in the thesis, including their name, source and coverage (sample or total population).
[1] These data cover the period 2014-2015.
[2] These data cover the period 2010-2017.
[3] These data cover the year 2018.
[4] These data cover the years 2011, 2014 and 2017.
[5] These data cover the period 2004-2010.
[φ]These data cover curricula, professors and textbooks involved in economics doctoral programs at all Swedish universities with a full doctoral program in economics, as well as the top ten ranked U.S. universities based on the U.S. News and World Report's (2015) ranking of American graduate programs.

3.2 Method

The first article of the thesis is based on descriptive and qualitative analyses of cross-sectional data on research and doctoral programs in economics. A benefit of using primary data is that it allows researchers to tailor data to their specific needs, although it generally implies a small sample size. Moreover, the benefit of conducting a qualitative analysis is that it allows for the analysis of factors that are difficult to define and measure. However, a drawback of the former is that it leaves the findings of the analysis open to interpretation to a greater extent than when quantitative analyses and statistical inference are applied.

The second, third, fourth and fifth articles are based on ordinary least squares regressions (OLS), as well as probit and logit estimates using repeated cross-sections and panel data. The advantage of these regression models is that they are efficient and unbiased, given appropriate conditions. Meanwhile, a disadvantage of the former is that the findings of OLS and probit models are likely to contain a certain degree of endogeneity. In an effort to reduce this endogeneity, analyses have been conducted using vast and rich data, as well as industry- and region-specific fixed effects.

In addition to using the above methods, the third article uses an accessibility approach to estimate firm employment growth in the presence of spatial autocorrelation, e.g., the fact that the economic conditions of a given region not only depend on factors and resources available in the region itself but also factors and resources accessible through its neighboring regions. Spatial autocorrelation is adjusted by constructing a spatial weighting matrix that controls for heterogeneity in market densities, which is achieved by calculating wage sums of Swedish municipalities, which are then discounted for by time distances between regions, measured as travelling time by car in minutes. An advantage of an accessibility approach is that it allows for easily interpretable and intuitive results of both firm characteristics and spatial autocorrelation (Karlsson and Gråsjö 2013). Next, to compare parameters across regressions, the analysis is supplemented with a seemingly unrelated regression framework.

The fifth article presents a novel, data-driven method to determine the relationship between firm size and perceived growth barriers. This method is achieved by use of stepwise OLS regressions across consecutive firm size groups where size classes are evaluated in terms of their goodness-of-fit (adjusted R^2). Through this, it is possible to discern which firm sizes are similar, versus dissimilar in terms of their perceptions on firm growth barriers, whereby it provides a basis to establish an empirically motivated firm size nomenclature to study these phenomena. A substantial benefit of this method is that it provides a transparent and flexible way to define firm size groups that allows researchers to extract detailed insights on the antecedents to firm performance. Meanwhile, a downside of this strategy relative to standardized nomenclatures is that its results are not particularly comparable across analyses.[18]

4. Chapter summaries

4.1 Chapter I. Family business—A missing link in economics?[19]

This article aims to analyze the inclusion of family business concepts in the curricula of doctoral programs in economics. It is co-authored with Dan Johansson and Arvid Malm. The motivation to study family business in particular comes based on the authors' own observation that these concepts are absent from undergraduate, graduate and doctoral programs despite their substantial economic significance and deviation from economic assumptions.

The article examines the inclusion of family business in economics doctoral programs in the United States and Sweden as well as professors' and textbook authors' views and research on family business. It encompasses curricula at all Swedish universities with a full doctoral program in economics, as well as the top 10 highest ranked doctoral programs in the U.S., according to the U.S. News and World Report's (2015) ranking. Textbooks, articles and course offerings used in doctoral programs are considered to determine the state of established knowledge in the field. The findings show that family business is not included in the examined curricula. Furthermore, professors and authors do not publish research on family business and generally do not see a need to incorporate it into economic theory. It is concluded that family business is likely excluded from 'core' economic theory due to a lack of paradigmatic pluralism, axiomatic incompatibility, path dependency, institutional bias and data constraints. Lastly, it is speculated that the integration of family business theory into standard economic modeling is likely to occur outside prestigious universities due to path dependency in research.

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[18] Two of the most common ways to measure firm size is to use the OECD (2005) or World Bank (2001) definition. The OECD (2005) definition divides firms into the categories "micro-" (0-9 employees), "small-" (10-49 employees), "medium-" (50-249 employees) and "large-sized" (> 249 employees). Meanwhile, the World Bank (2001) definition divides firms into the categories "micro-" (0-4 employees) "small-" (5-50 employees), "medium-" (51-500 employees) and "large-sized" (> 500 employees).

[19] Johansson, D., Karlsson, J., & Malm, A. (2019). Family business—A missing link in economics? *Journal of Family Business Strategy, 100306.*

4.2 Chapter II. The characteristics of family firms: Exploiting information on ownership, kinship, and governance using total population data[20]

This article aims to develop a novel method to identify family firms in total population data. Next, a secondary focus is to produce stylized facts on the characteristics and economic significance of family firms. This article is co-authored with Fredrik W. Andersson, Dan Johansson, Magnus Lodefalk and Andreas Poldahl. Prior studies on family firms have been confined to case studies or the study of listed firms, whereby knowledge of the aggregate population is limited. Therefore, there is a considerable need for large-scale data and evidence to further theory and policy on the subject.

The developed method is applied to Swedish data concerning firm ownership, governance and kinship over the years 2004-2010. It is found that the family firm is the prevalent organizational form. Family firms are noted to contribute to over one-third of all employment and GDP; see Figure 1 below. These firms are also found to be common across industries and firm sizes, where approximately one-fourth of Sweden's listed firms are found to be family-owned. Family firms are found to be smaller on average than private non-family firms in terms of total assets, employment and sales and carry higher solidity, even though they are more profitable. However, the differences in characteristics between family firms and non-family firms are found to diminish with firm size. It is concluded that the term "family firm" contains a large variety of firms and calls for increased attention to their heterogeneity.

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[20] Andersson, F.W., Johansson, D., Karlsson, J., Lodefalk, M., & Poldahl, A. (2018). The characteristics of family firms: exploiting information on ownership, kinship and governance using total population data. *Small Business Economics, 51*(3), 539-556.

Figure 1a and 1b. Family firm share of aggregate employment and gross domestic product (percent). Year 2010.

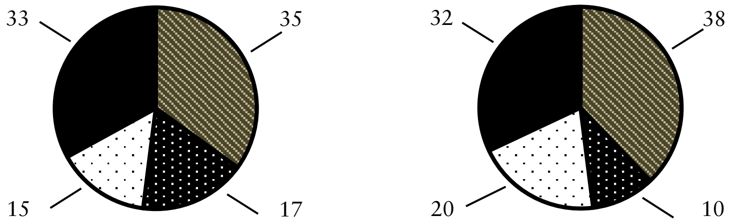
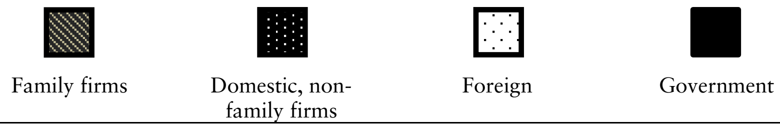


Figure 1a. Family firm contribution to aggregate employment, percent

Figure 1b. Family firm contribution to gross domestic product, percent



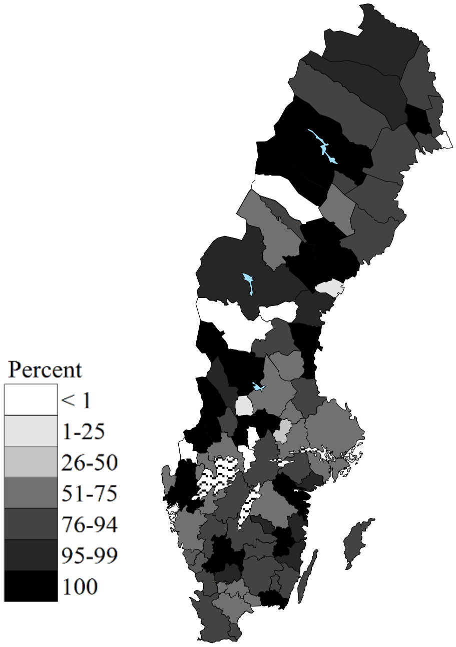
Notes: Figure 1a and 1b. Family firm contributions to aggregate employment, percent (Figure 1a, left). Family firm contributions to gross domestic product, percent (Figure 1b, right). ”Family” refers to domiciled family firms according to the European Commission (2009) definition. “Government” refers to the government sector, including both local and central government agencies and government-owned firms. “Foreign” refers to firms that are owned from abroad. “Domestic, non-family” refers to all non-family firms that are owned by Swedish residents. Values are reported for the year 2010.
Source: Andersson et al. (2018a).

4.3 Chapter III. Does regional context matter for family firm employment growth?[21]

This article investigates the proposition that family firms have comparative employment growth advantages in relation to non-family firms in regions with relatively low population density. This premise is tested across metropolitan, urban and rural regions using total population data on domestically and privately owned, single-plant, non-listed limited liability firms in Sweden. A panel of more than 89,000 firms is followed over a seven-year period from 2004 to 2010. Family firms are found to be the primary source of rural job creation for the studied firms and time period; see Figure 2 below. Meanwhile, the average family firm is found to grow more slowly than the average non-family firm across the urban-rural context. However, in line with the study’s conjecture, these differences are found to decrease across metropolitan, urban and rural regions.

[21] Karlsson, J. Does regional context matter for family firm employment growth? *Journal of Family Business Strategy, 9*(4), 293-310.

Figure 2. Family firm share of net employment growth, domiciled single-plant limited liability firms, 2004-2010.



Notes: Family firm share of net employment growth across domestically owned, single-plant, non-listed limited liability firms. Family firms and non-family firms. Local labor market regions, 2004-2010.
Source: Karlsson (2018).

4.4 Chapter IV. Female top management in family firms and non-family firms: Evidence from total population data[22]

The aim of this article is to analyze the representation of women in top management teams among family firms and non-family firms. It is co-authored with Fredrik W. Andersson, Dan Johansson, Magnus Lodefalk and Andreas Poldahl. The analysis covers Swedish family and non-family firms among domiciled limited liability firms from 2004 to 2010. The share of female top managers is analyzed across listed and non-listed firms as well as across industries. Thereafter, the likelihood that a woman is elected into

[22] Andersson, F.W., Johansson, D., Karlsson, J., Lodefalk, M., & Poldahl, A. (2018). Female top management in family firms and non-family firms: Evidence from total population data. *International Journal of Entrepreneurship and Small Business, 35*(3), 303-326.

the top management team is estimated for family and non-family firms using a probit regression model that controls for firm- and individual-level characteristics, including the gender distribution of the firm and kinship relations to existing board members and firm owners. It is found that non-listed family firms are more likely to appoint female top managers than non-listed non-family firms, whereas no differences are established among listed firms. Moreover, the share of women in a firm's top management team is found to be positively associated with the additional appointment of female managers. Lastly, kinship bonds between the owning families and prospective managers are found to be positively associated with the appointment of women in top management teams.

4.5 Chapter V. Firm size and growth barriers: A data-driven approach[23]

This article aims to capture the relationship between perceived growth barriers and firm size. This aim is pursued by developing a novel data-driven identification strategy that assigns firm size groups based on their statistical relationships to perceived growth barriers. The developed identification strategy constructs and evaluates the model fit of consecutive firm size groups in terms of adjusted R^2, weighted by their kernel density; this procedure is visualized in Figure 3 below. This method is applied to data for approximately 44,000 Swedish SMEs (0-249 employees) for 2011, 2014 and 2017. The results suggest that firms with 0-19 typically face constraints on equity financing, whereas firms with 41-249 employees face barriers regarding competition and recruitment. As a benchmark, the performance of the developed method is compared to prevailing strategies that use *ad hoc* firm size groups.[24] The findings show that *ad hoc* groups fail to accurately capture size thresholds at which firms incur barriers, and they yield a consistently lower model fit compared to the method proposed here. Consequently, there may be a need for methodological rethinking in the field regarding its treatment of firm size.

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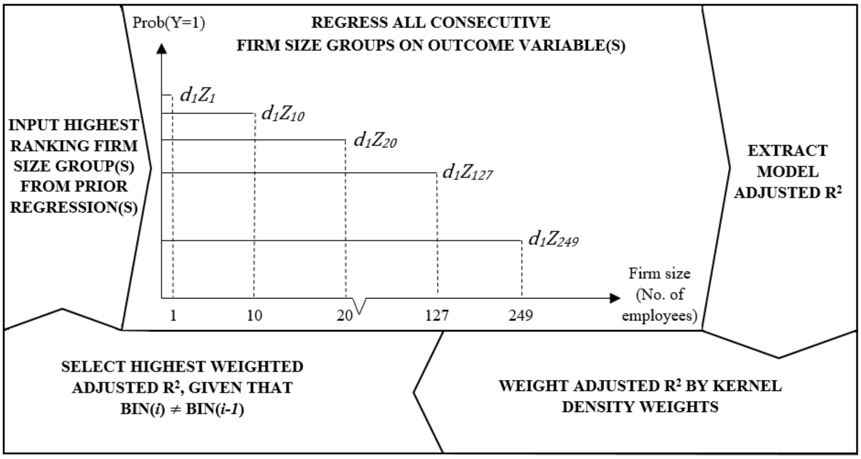
[23] Karlsson, J. (2020). Firm size and growth barriers: A data-driven approach. Under review. *Small Business Economics*.

[24] The term "*ad hoc* firm size groups" refers to the OECD (2005) and World Bank (2001) definitions of firm size, which are the two most commonly used size nomenclatures in the perceived growth barrier literature. The OECD (2005) definition divides firms into the categories "micro-" (0-9 employees), "small-" (10-49 employees), "medium-" (50-249 employees) and "large-sized" (> 249 employees). Meanwhile, the World Bank (2001) definition divides firms into the "micro-" (0-4 employees) "small-" (5-50 employees), "medium-" (51-500 employees) and "large-sized" (> 500 employees) categories.

Figure 3. Structure of method for assigning firm size groups.



Note: Firm size increments are not represented to scale. The method for assigning firm size groups is based on their statistical relationship (weighted adjusted R^2) to a given outcome variable. The developed method cycles through all consecutive firm size groups, ranging from 0 to 249 employees, i.e., 0-1, 0-2, 0-3, (…), 0-249 employees.
Source: Karlsson (2020).

5. Limitations

The presented studies have a number of limitations, which are perhaps most predominantly related to the following areas: the use of administrative and observational data, limitations to conventional parametric estimators, the use of binary family firm definitions and the use of perception-based data.

First, a simultaneous strength and limitation is that four out of five articles are based on administrative data. By using administrative data, researchers can conduct analyses at an unparalleled scale and scope. However, because the data are administratively collected, there are also certain limitations to the type of questions that their corresponding analyses can answer. Specifically, administrative data are unlikely to capture intangible resources that are known to explain firm governance and performance, such as entrepreneurial orientation and entrepreneurial ability. This argument has previously been offered as an explanation for why administrative data tend to perform relatively poorly in analyses on firm growth rates (Coad 2009; Karlsson 2018; Coad and Srhoj 2019). In turn, a plausible strategy to overcome these limitations could be to augment administrative data with that of other sources, such as manually collected data. Through this process, it may be possible to combine the benefits of administrative sources, i.e., large scale, consistency and transparency, with the benefits of non-administrative data, i.e., flexibility and depth.

Next, a limitation of using observational data is that economic action rarely occurs in isolation, whereby analyses of economic outcomes are likely also to partially capture the effects of outside influences, such as cultural factors or changes in foreign markets. Given the methods used in the included articles, confounding influences are likely to affect the presented analyses to a certain extent. However, efforts are nevertheless made to reduce these outside influences, including the use of rich, large-scale data, as well as the use of industry- and region-specific fixed effects. By the use of alternative methods, such as difference-in-differences or instrumental variable (IV) estimation, researchers have greater opportunities to establish causality. Through this, it is possible to gain deeper insights into the causal mechanisms that underlie economic action. Because of its empirical benefits, causal inference has been considered in the design of the presented articles. However, causal designs require certain prerequisites, such as quasi-experiments or instrumental variables, which were unfortunately not identified. The absence of causal evidence in the presented articles constitutes, in turn, a potential gap to be addressed in future research.

A third issue derives from the fact that conventional parametric methods may be limited in their ability to compare family firms and non-family firms. Specifically, family firms make up the vast majority of all firms worldwide (La Porta et al. 1999; Anderson and Reeb 2003; Astrachan and Shanker 2003; Bjuggren et al. 2011; Andersson et al. 2018a). Therefore, the distribution of firm ownership is heavily skewed, which, in turn, imposes constraints on parametric estimators, as family firms are likely to only have a limited number of non-family equivalents to which they can be compared. This, in turn, affects the possibility of conducting empirical analyses across groups. Specifically, when analyzing family firms and non-family firms, researchers ideally seek to identify organizations that are virtually indistinguishable apart from their ownership. Through this, it would then be possible to make assertive statements on family ownership, such as that it is, *ceteris paribus* ("all things equal"), associated with certain economic characteristics and outcomes. However, given the limited number of non-family firms, this condition is unlikely to be fulfilled. In turn, and as a consequence of this, researchers thereby inadvertently run the risk of comparing "apples" and "pears" when carrying out comparative analyses between these groups.

The lack of counterfactuals is likely to remain a considerable challenge to family business research for the foreseeable future, and there is unlikely to be a universal solution to this problem. Nevertheless, there are a number of established strategies that may mitigate it. Prominently, through the use of matching estimators, researchers can restrict their analyses to analyze firms that are similar in terms of observable factors. Next, an alternative approach may be to reconsider the family ownership construct, whereby it may be possible to accurately capture family business traits. A third strategy may be to use big data sources and methods, such as social network data and/or Least Absolute Shrinkage and Selection Operators (LASSO), to further disentangle firm heterogeneity, whereby the influence of unobservable factors can be reduced.

A fourth limitation to the thesis concerns the fact that three out of five papers apply a binary definition of family ownership, i.e., in that firms are either categorized as "family firms" or "non-family firms". Meanwhile, family firms are likely to be heterogeneous, whereby a binary construct of family ownership can be expected to yield only approximate insights (Andersson et al. 2018a, 2018b). Researchers have suggested the use of continuous measures of family control to disentangle their heterogeneity (Astrachan et al. 2002; Rau et al. 2018). However, although they in part appeal from an econometric and theoretical standpoint, a downside of these strategies is that they introduce a considerable amount of model complexity, whereby they are likely to also give rise to a number of empirical and theoretical constraints of their own. Meanwhile, despite its drawbacks, a binary construct of family ownership has the appealing property of facilitating theoretical and empirical simplicity.

A fifth limitation of the thesis concerns the use of top manager perceptions to study firm growth barriers. In turn, the subjective nature of perceived growth barriers may give rise to endogeneity issues. For example, firm growth rates and entrepreneurial orientation are likely to differ across firm size, whereas both of these factors are likely to shape top manager experiences. However, regardless of their subjectivity, perceptions do also arguably reflect the expectations of top managers, whereby they are also likely to guide the firm's day-to-day activities and the formulation of business strategies. Hence, although it may be difficult to discern their exact causal relationship to firm growth, the occurrence of perceived growth barriers is still likely to convey valuable information on firm decision-making and performance.

6. Implications for policy and future research

A core focus of this thesis concerns the role of family ownership in firm decision-making and performance. By employing total population data, this thesis shows that family firms are a dominant source of employment, rural job creation and GDP. In turn, and as a consequence, the results of the thesis suggest that there may be significant net benefits from considering family ownership in the design of economic policy. Meanwhile, previous research suggests that such considerations have been limited in the past (Basco and Bartkeviciute 2016).

Notably, a recurring ambition among policy makers is to induce high firm growth through subsidies on innovation and financing, where financing subsidies have recently been implemented through the instatement of government venture capital and credit funds (European Commission 2008, 2011; U.S. Small Business Administration 2013; European Commission 2015b). However, the persistence of high firm growth, let alone the efficiency of innovation subsidies or government venture capital financing, is highly debatable (Grilli and Murtinu 2014; Bertoni and Tykvová 2015; Brautzsch et al. 2015; Daunfeldt and Halvarsson 2015; Gustafsson et al. 2016; Aristei et al. 2017). Moreover, given that family firms have strong preferences for sustainable and internally financed growth, rather than high, short-term growth through external financing, these initiatives are likely to have only a marginal impact. In contrast, by instead devoting resources to family business-relevant issues, such as those concerning internal resource accumulation or succession, government resources may potentially be put to more efficient use.

Next, another central insight of the thesis concerns the methodologies used in economic evaluations across firm size. Specifically, the findings of the thesis suggest that prevailing, so-called "*ad hoc*", measures of firm size tend to omit relevant information on perceived growth barriers. Due to these limitations, it is suggested that there may also be a need to reconsider the use of these measures in other policy evaluation exercises, as they may hinder the development of economic insights. Meanwhile, by instead adopting a detailed and empirically motivated approach to analyze firm size, policy makers may ultimately stand to gain a better understanding of the cause of economic action. Moreover, by more precisely measuring firm size, government resources may also be used more efficiently. In turn, they may be targeted towards specific, well-defined groups, rather than arbitrary firm size intervals, as is currently the case.

This thesis concerns Sweden—a small, open economy with a history of a relatively large government sector, strong employment protection, centralized wage setting and high taxation on wealth and capital income (Henrekson and Johansson 1999, 2009; Fredriksson and Topel 2010; Henrekson et al. 2010; Bornhäll et al. 2016a; Johansson et al. 2018). Hence, a relevant concern is therefore whether these results are generalizable to other economies. Nevertheless, although the thesis itself is based on Swedish data, its research questions confer to a wider international scholarly debate, whereby they are likely also transferrable across institutional and empirical settings. Moreover, by comparing these results to those of the previous literature, the studied mechanisms are largely consistent across economies and time, which further speaks to the merit of the above argument.

The results of the thesis have a number of implications for future research. First, the theoretical scope of this thesis is limited to a microeconomic perspective. However, there are few reasons why equivalent analyses cannot be carried out on the macro level. Through this, institutional aspects of family business and firm growth barriers may, for example, be elaborated upon. Second, a significant result concerns the fact that family business is largely absent from core economic theory. As a consequence, a promising venue for future research would be to address this disjuncture and thereby bridge the gap between the two fields. Given that the strategic management literature derives largely from microeconomic theory, there should be numerous potential areas for cross-fertilization between disciplines. Finally, the current analysis focuses largely on the juxtaposition between family firms and non-family firms. However, given the sheer size and scope of the family business sector, it may be at least equally informative to conduct comparative analyses *among* family firms. Therefore, it may, for example, be possible to gain new insights on the distinctiveness of family business, as well as the implications of business strategies and policy design on family firm longevity and performance.

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