Family Firms: In All Shapes and Sizes

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Abstract

We study the heterogeneity of family firms using registry data on all private firms in Sweden. We restrict our sample to firms with at least one employee, and we define a family firm as a firm where two or more individuals among the owners or the board of directors are related. We focus on the heterogeneity in ownership, employee, and firm characteristics among family firms. We provide several new facts about family firms. The number of family members in family firms varies, consisting predominantly of two relatives, but a substantial share feature four or more. The share of multigenerational family firms has increased over time as has the share of women as owners and CEOs. Family firms employ more old and young workers, have a more compressed wage structure with a lower mean, and have a less compressed tenure distribution with a higher mean. The family firm age distribution is less compressed with a higher mean, and their location distribution is more equally distributed among metropolitan, urban, and rural areas.

Keywords: Family Firms, Firm Organization, Employee Characteristics

JEL: D22, D24, L25, L60, M11, M50

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1 Introduction

Globally, family firms are the most common ownership type in the business sector (La Porta et al., 1999). The literature has proposed two explanations for why family firms are dominant. One explanation is that family firms evolve as an efficient response to institutional and market environments, such as a lack of formal institutions to solve principal-agent problems (Bertrand & Schoar, 2006). The other explanation is an outcome of cultural norms that fulfill different needs than profit-maximization (Alesina & Giuliano, 2010). Both theories of the existence of family firms suggest that family firms might behave differently than non-family firms. Indeed, the general picture that emerges from the research literature on family businesses is that they do differ on average from non-family firms in several dimensions: family firms tend to have fewer employees, less capital, lower turnover, and lower leverage (Claessens et al., 2000, 2002; Faccio & Lang, 2002; Anderson & Reeb, 2003; Bertrand & Schoar, 2006; Mishra & McConaughy, 1999). However, most of this literature has not examined the heterogeneity among family firms and the difference in heterogeneity between family firms and non-family firms. Understanding the variations, not just the differences in means, between firms is relevant for understanding the role played by family firms in the business sector and is of crucial importance when evaluating different economic policies affecting the business sector and, in particular, family firms. The purpose of this paper is to provide new knowledge of the heterogeneity among family firms.

We use linked employer-employee registry data covering all Swedish firms from 2003–2017. Instead of focusing on average differences between family and non-family firms, we provide new knowledge on the heterogeneity among family firms and how this heterogeneity differs from that among non-family firms (Miller et al., 2007; Chen & Steinwender, 2021; Kölling, 2019). Unlike most studies in the literature, we use full firm population data to identify family firms in the business sector (Villalonga & Amit, 2006; Stavrou et al., 2007; Feldman et al., 2016).

We provide several new facts about family firms and how they differ from non-family

firms. We first examine the characteristics of active family members in family firms, where an active family member is defined as a family member with a substantial ownership share or a family member sitting on the board. The number of active family members in family firms varies, consisting predominantly of two active relatives at a given time, but a substantial share feature four or more. In 2017, approximately 50 percent of the active family members were from the same generation; the other half consisted of two generations, with three being uncommon. In 2003, approximately 60 percent of the active family members were from the same generation. The identity of the active family members varies, with the most common being husband and wife, followed by father and child. Most of the family members are men, but the share of women has increased over time.

Heterogeneity in employment characteristics in family firms is high and differs from that in non-family firms. Most of the employees in family firms are men, but the share of women has increased over time. Family firms have more young and old employees than non-family firms, and the share of highly educated employees in family firms increased during our study period. Moreover, we find that the wage distribution in family firms is more compressed than in non-family firms and that the average wage is lower in the former. In small family firms, however, the employees tend to have higher earnings than those in non-family firms. We also find that tenure distribution in family firms is more varied than in non-family firms and that the average tenure is higher.

Heterogeneity in firm characteristics in family firms is high and differs from those in non-family firms. The family firm age distribution is less compressed than those in non-family firms and has a higher mean. Family firms' location distribution is more equally distributed among metropolitan, urban, and rural areas than those in non-family firms. Moreover, the survival rate of family firms is higher, but entry rates are lower than those in non-family firms. We also find that family firms are common in all parts of Sweden and all industries.

This paper is structured as follows. In Section 2, we discuss results from previous research and outline what makes family firms differ from other private firms. Section 3, presents the

data and how we identify family firms from the full population of firms in Sweden. Section 4 documents the distribution of different ownership characteristics of family firms and what types of family members are active in the family firm. In Section 5, we document the distribution of different employee characteristics in family firms and relate them to those at non-family firms. Section 6 documents the distribution of different firm characteristics in family firms and relates them to those in non-family firms. Section 7 concludes the paper.

2 Family and non-family firms

While family firms are most common in countries with less advanced market institutions (La Porta et al., 1999), they nonetheless make up a substantial share of firms in advanced market economies (Villalonga & Amit, 2009).

The literature on family firms suggests that family firms tend to have fewer employees, less capital, lower turnover, and lower leverage and be less productive and more common in more concentrated and regulated sectors (Claessens et al., 2000, 2002; Faccio & Lang, 2002; Bertrand & Schoar, 2006; Mishra & McConaughy, 1999). Furthermore, several studies show that family firms in some countries, and above all founder-controlled family businesses, can be more productive than other firms (Khanna & Palepu, 2000; Anderson & Reeb, 2003; Sraer & Thesmar, 2007; Amore et al., 2022). When a relative inherits control of a large firm in the U.S., firm performance decreases (Pérez-González, 2006), but this is not the case in Japan (Mehrotra et al., 2013). A large meta-analysis finds that family firms are more efficient than non-family firms, but the difference is small and dependent on the business cycle (Hansen et al., 2020). The difference in efficiency between family and non-family firms also hinges on data selection and the definition of a family firm (Miller et al., 2007).

For the family owner, there might be a difference between utility-maximizing and profit-maximizing choices, which may not exist in, for example, listed and publicly owned companies (Burkart et al., 2003; Villalonga & Amit, 2006). For example, the family might want

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to prioritize inheritance and succession (Casson, 1999), create job opportunities for family members (Pérez-González, 2006; Bennedsen et al., 2007), take significant responsibility for their employees and their immediate environment (Stavrou et al., 2007; Berrone et al., 2010; Block, 2010), and maintain a high social status for the family (Arregle et al., 2007). Research also shows that family businesses are more likely to avoid winding down operations during crises than other businesses (Chen & Steinwender, 2021) and have more exports (Minetti et al., 2015). Large family firms are often controlled through a combination of methods that increases control relative to ownership, such as dual-class stocks (Gompers et al., 2010).

Family businesses tend to have a different view of financial risk than non-family businesses and are more risk-averse, especially for the risk of losing control of the company (McConaughy et al., 1998; Mishra & McConaughy, 1999). Agrawal & Nagarajan (1990) show that family-controlled U.S. listed firms have lower leverage ratios than comparable non-family firms. Family firms could have better access to debt due to lender beliefs that they have a long-run perspective (Díaz-Díaz et al., 2016). Publicly traded U.S. family firms also spend less on long-term capital expenditures than comparable firms with diversified ownership (Anderson et al., 2012). These family businesses prefer to invest in physical assets rather than riskier R&D projects.

As family businesses often seem to have goals other than profit maximization and appear to be more risk-averse, it is reasonable to believe that this will make them more cautious in terms of both new hires and layoffs. These propositions seem consistent with empirical evidence; U.S. Fortune 500 companies that make employment cuts do so to a lesser extent if they are family-owned (Stavrou et al., 2007). Similar results are found in German family firms with fewer than 20 employees (Kölling, 2019).

Family businesses generally offer more secure employment, especially in countries where unemployment insurance is less generous and when the firm's CEO is from the family, compared to when the CEO is a non-family member (Feldman et al., 2016; Ellul et al., 2018). However, when they make cuts in operations, it has a more significant positive effect on

the firm's valuation, which may indicate that family firms postpone such cuts longer than is rational. Family firms fire fewer employees and prefer to reduce new hires when necessary (Bassanini et al., 2013). Furthermore, the employees in family businesses receive lower wages, which could be explained by the higher job security that they receive (Bach & Serrano-Velarde, 2015; Ellul et al., 2018). Employees in French family businesses have lower average wages but a lower risk of losing their job in a recession (Sraer & Thesmar, 2007; Bassanini et al., 2013). Research also shows that family businesses experience fewer strikes than non-family businesses. A possible explanation for this could be a better relationship between the employees and the management of the companies (Mueller & Philippon, 2011). Employees seem to prefer working for a founder-led firm over a firm run by an heir, highlighting the difficulty an heir faces running a firm (Huang et al., 2015).

The definition of a family firm is not universally acknowledged, and different studies use different methodologies. One commonly used definition is the European Commission (2009) definition, according to which a family firm is a firm where an individual or a family controls a majority of the decision-making rights and where at least **one** family member is formally involved in firm governance. Other definitions are possible and, e.g., Bjuggren (2015) define a family firm as *a firm in which a family or a single individual controls more than 50 percent of the ultimate voting rights.*. The results from previous Swedish research on family firms show that family firms account for over half of the employment in the private business sector, constitute a large part of business operations in most regions and industries, and differ from non-family firms in terms of several firm characteristics such as size, age, loan-to-value ratio, profit levels, and net job creation (Bjuggren et al., 2011; Bjuggren, 2015; Bjuggren et al., 2013; Andersson et al., 2018; Karlsson, 2018). These papers have, however, focused on comparing the mean difference between family and non-family firms and, largely, not studied the heterogeneity among family firms, an important aspect that this paper addresses.

3   Data and definitions

Unlike previous Swedish research on family firms, we depart from the E.C. definition and use a more restrictive definition. Our method defines a family as at least **two** related people. We consider the relations between parent-child, siblings, grandparent-grandchild, cousins, or a married couple. These relatives may be found among the current owners or on the board of directors. In the board of directors, we consider partners, board members, chairman, vice chairman, CEO, and deputy directors. On the ownership side, we focus on closely held firms. Closely held firms have at most four owners with shares corresponding to more than half of the decision-making rights. Our definition has the benefit of focusing attention on firms with genuine family relationships that could affect the objective function of a firm and not firms that are better defined as sole proprietorships.

We combine several different data registers to identify and analyze family firms. We start with the Structural Business Statistics provided by Statistics Sweden. This registry contains all firms in the Swedish business sector besides those in the financial, public, and non-profit sectors. To identify family firms in the Swedish business sector, we combine ownership data from the Swedish Tax Authority, covering qualified ownership in all limited liability firms registered in Sweden, with board information on all firms in Sweden provided by the Swedish Companies Registration Office. To link owners, board members, and CEOs to the same family, we use the Swedish multigenerational registry provided by Statistics Sweden. This registry covers the Swedish population and holds information on parents and their children born in 1932 or later, provided that both parents and children have been registered in Sweden at some point from 1961 or later. We obtain family links from the multigenerational registry.

Finally, we obtain individual information from the Longitudinal Integration Database for Health Insurance and Labor Market Studies (LISA) database. LISA contains yearly information on all Swedish residents older than 15 years of age. It provides individual-

level data on labor earnings[1], sickness benefits, unemployment days and firm tenure and demographics such as gender, highest attained educational level, and age. Importantly, LISA contains an employer-employee link in November each year, enabling us to analyze how worker-level outcomes differ between family and non-family firms.

We exclude firms with no employees from our sample, effectively excluding self-employed. Additionally, we exclude consultancy firms and counseling and bookkeeping firms. We also exclude government-owned firms from our sample. Since the quality of the board data is poor before 2003, we restrict our sample to the years 2003 to 2017.
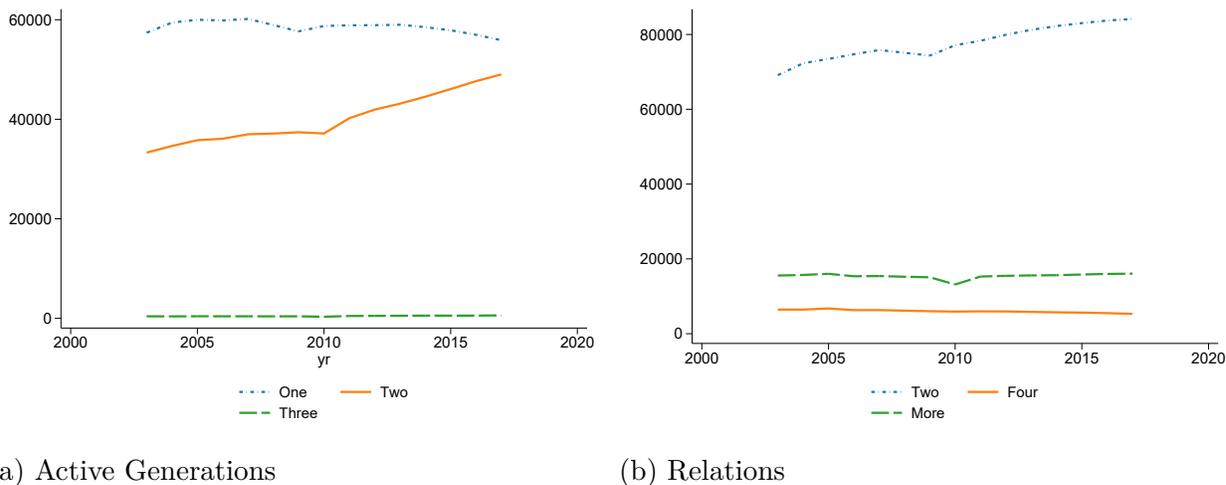
4   The family in family firms

According to our definition, the family in a family firm consists of two or more people active in the firm at a given time forming various relationships with each other. Below, we map out some of these relationships. A one-generation family in our setting implies relationships between siblings, cousins, and spouses. A two-generation family is one where two generations are present in the firm at a given time, i.e., parent-child. A three-generation family effectively implies that the relationship between grandparent and grandchild exists within the firm. A family containing parent-child and grandparent-grandchild relationships is categorized as a three-generation family. Our data only track families for up to three generations. However, previous research extending back as many as five generations shows that most family firms only have one- to three-generation families (Andersson et al., 2018).

Panel A in Figure 1 shows the number of family firms having a one-, two-, or three-generation family among the board of directors or owners between 2003 and 2017. The number of firms with a two-generation family increased from approximately 33,000 to 49,000, while the other two categories see no substantial changes. Consequently, the next generation seems to become active in family firms during this period.

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[1]Labor earnings refer to gross earnings and must be reported to the Swedish Tax Authority if it exceeds 100 SEK per year.

Figure 1: Active generations and family relationships

| (a) Active Generations | (b) Relations |

Note: Frequency of family firms having one, two or three active generations (a) and number of relations (b) on the board if directors or among the owners.
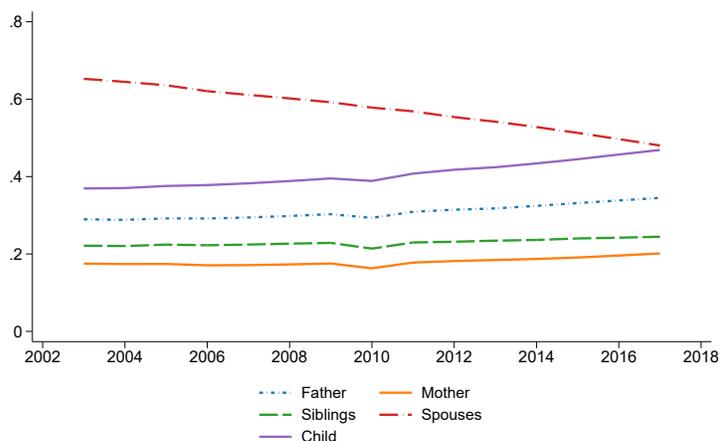
Panel B shows the frequency of family firms having two, four, or more relations in the family[2]. Since a specific relationship always implies two people, the number of relations must be even. Two relations indicate two family members, such as husband and wife or parent and child. The majority of family firms have two relations, followed by four relations. The family in family firms tends to be small, consisting predominantly of two to three people. In 2017, more than 80 percent of the family firms had a family consisting of two to three members.

Moreover, as Figure 2 shows, 48 percent of the family firms had a family that, in part or whole, consisted of spouses in 2017. Of course, a family might consist of several relations, making the shares in Figure 2 sum to more than 100 percent. In the same year, 25 percent of the family firms had a family that partly or wholly consisted of siblings. Notably, as much as 34 percent had a father, while only 20 percent had a mother. The more distant relationships mentioned in the data section are uncommon.

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[2]Since increasing the number of relations beyond four quickly complicates the interpretation, we categorize all families with more than four relations into one category. This category entails families consisting of three people, such as a husband/father and a wife/mother with a common child and larger families. Four relations indicate three people, for example, a husband/father, having a wife and a child from another marriage.

The family might be found either among the owners, among the board of directors, or in both groups simultaneously. In 2017, 27 percent of the family firms in our sample had family placed only on the board of directors; 72 percent of family firms had the family placed both among the owners and on the board of directors. Thus, only a small share of the family firms in our sample had the family placed only among the owners. These shares are quite stable over the entire time period.

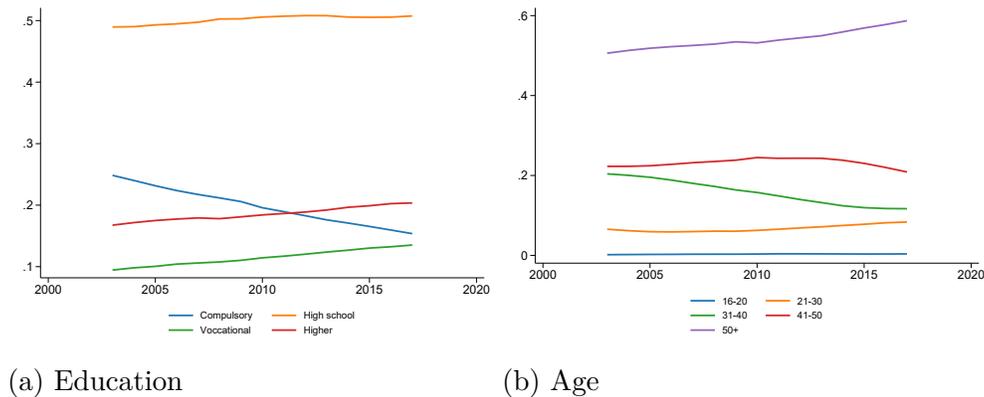Figure 2: Types of relatives in family firms

Note: Share of family firms (partly or fully) consisting of a specific relationship. Since there might exist more than one relationship in a family, the share will sum to more than 100 percent.

Figure 3 presents the education and age distributions of all family members on the board of directors. In 2017, out of all family members on the boards of directors, 51 percent had a high school education as their highest education level. Approximately 14 percent had vocational training, and approximately 20 percent had higher education. The share having only a compulsory education decreased from 25 percent to 15 percent. Moreover, out of all family boards of directors, 51 percent were 50 years old or more in 2003. This share increased to 59 percent by 2017. The share of directors being 21-30 years old increased somewhat, while the share of 31-40 and 41-50 year-olds decreased. Consequently, the mean age increased slightly for family members on the board of directors, from 50 years in 2003 to 53 years in 2017. Focusing on the more prominent positions on the board of directors,

namely the CEO and the Chair, in 2017, 22 percent of the family firms had a family member CEO, and 25 percent had a family member Chair. These shares had increased from 19 and 17 percent, respectively, in 2003.

Figure 3: The family on the board of directors

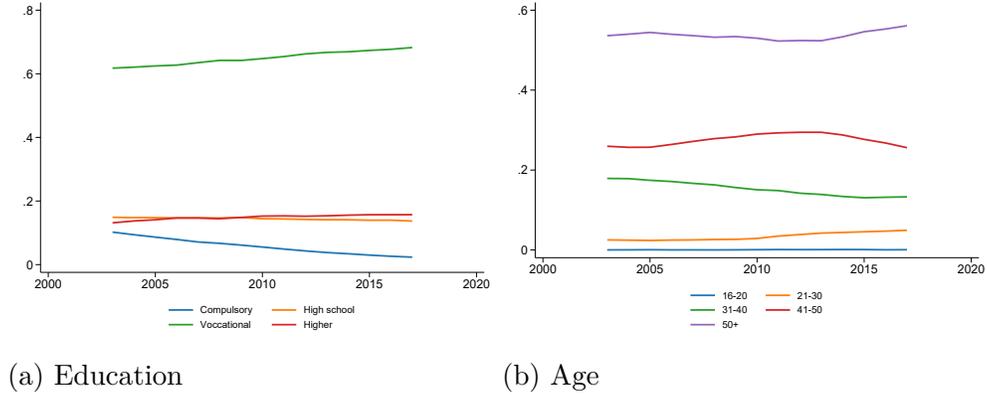
(a) Education   (b) Age

Note: The educational and age distribution of the population of family members on the board of directors (including the CEO). The share belonging to a certain education or age group is calculated by $S_g = n_g/N$, where n_g is the number of total family board members in that group and N is the total number of family board members in a given year.

Figure 4 shows the mean educational level and age of CEOs that are family members. In 2017, out of all family member CEOs, more than 68 percent had vocational training, 16 percent had a university degree, and 14 percent had a high school education at most. The share of family CEOs only having compulsory schooling is decreasing, from 10 percent in 2003 to 2 percent in 2017. Most of the family CEOs are 50 years old or more, from 54 percent in 2003 to 56 percent in 2017. Although not explicitly shown in this paper, the pattern for the family chairpersons is similar. The mean age of family CEOs increased since 2003 from 50 to 51 years. The mean age for family chairpersons increased slightly, from 51 to 54 years.
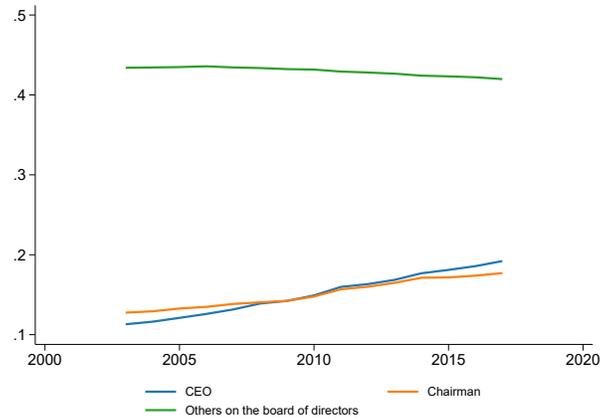
Figure 5 shows the share of women among all family member CEOs, family member chairpersons, or family members in the other positions on the board of directors. The shares of women among family CEOs and chairpersons increased over the period. In 2003, they were 11 and 13 percent, respectively. In 2007, they were almost 20 percent. When considering the other positions on the board of directors, in 2017, women represent a much larger share, 42 percent.

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Figure 4: The family CEOs

(a) Education

(b) Age

Note: The educational and age distribution of the population of family member CEOs. The share belonging to a certain education or age group is calculated by $S_g = n_g/N$, where n_g is the number of total family CEOs in that group and N is the total number of family CEOs in a given year.

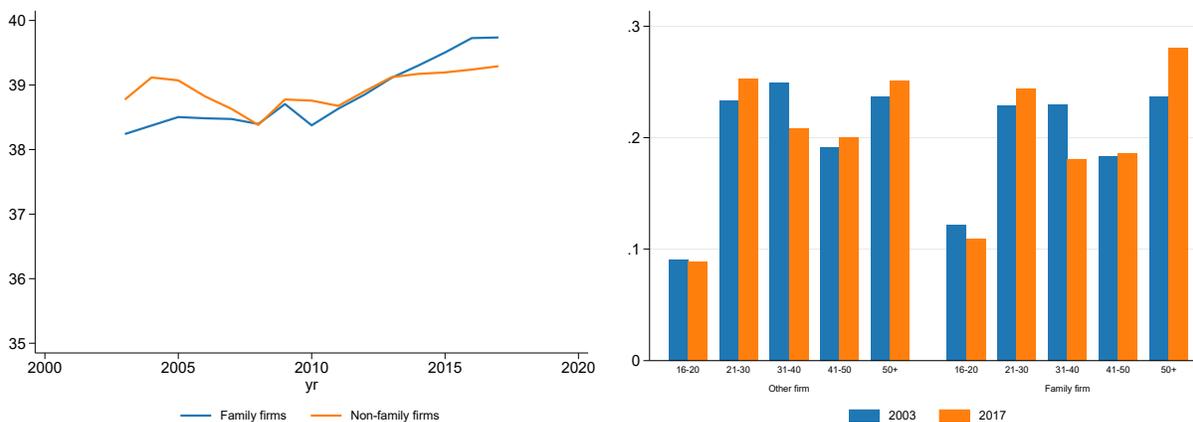Figure 5: Female family members on the board of directors

Note: The gender distributions of the family member CEOs, the family member chairpersons, and of the rest of the family members on the board of directors. The share of women is calculated by $S_g = n_g/N_g$, where n_g is the number of women in that group and N_g is the total number of family members in that group in a given year.

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5 The employees in family firms

Turning to the employees in family firms, Figure 6 shows the mean age among employees and their age distribution for family firms and other firms. Panel A shows that the mean age is lower for family firms at the beginning of the period but higher at the end. Moreover, as shown in Table A3, 66 percent of the employees in non-family firms were between 21 and 50 years old in 2017. For family firms, 61 percent were between 21 and 50 years old, with the rest either being 16-20 or above 50 years old. Furthermore, in 2003, the family firm employee age distribution is less concentrated in the middle ages. In 2003, the share of 16-20-year-old employees was higher for family firms. In 2017, the shares of employees both 16-20 years and 50 years and above were higher for family firms. Family firms might thus tend to have a higher share of young and old employees. Panel B shows the distribution depending on firm type.

Figure 6: Employee age

(a) Mean age

(b) Age distribution

Figure 7 shows that the mean tenure has increased in both family firms and non-family firms over time. This is mechanical since we only measure tenure from 1990. Interestingly, tenure is, on average higher for family firms than for other firms, and this difference increases during economic crises such as 2009-2010.

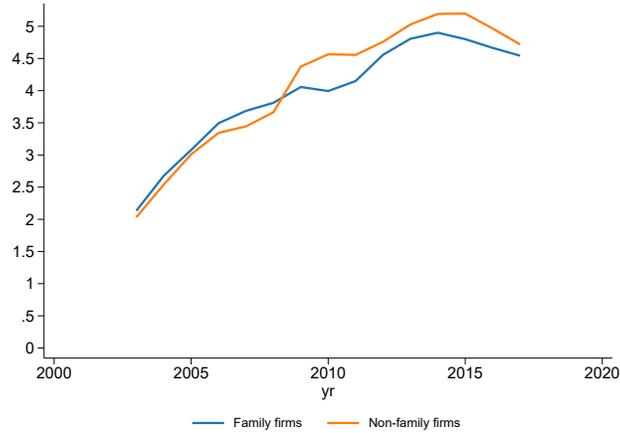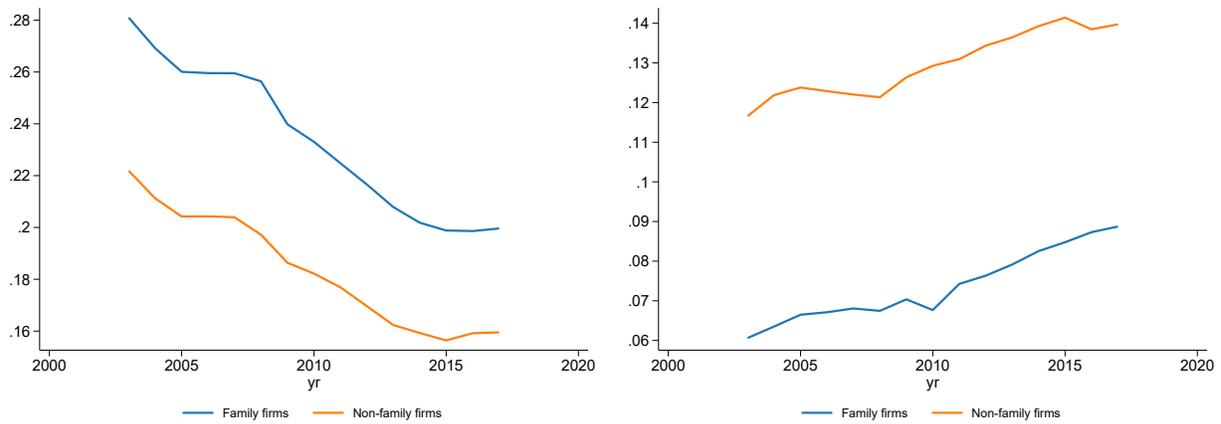Figure 7: Mean employee tenure in family and non-family firms

Figure 8 shows the employee mean share having either compulsory or university education. The trends over time are similar for both family firms and non-family firms. However, family firms have a higher mean share of employees that only have compulsory schooling and a lower mean share that have a university degree.

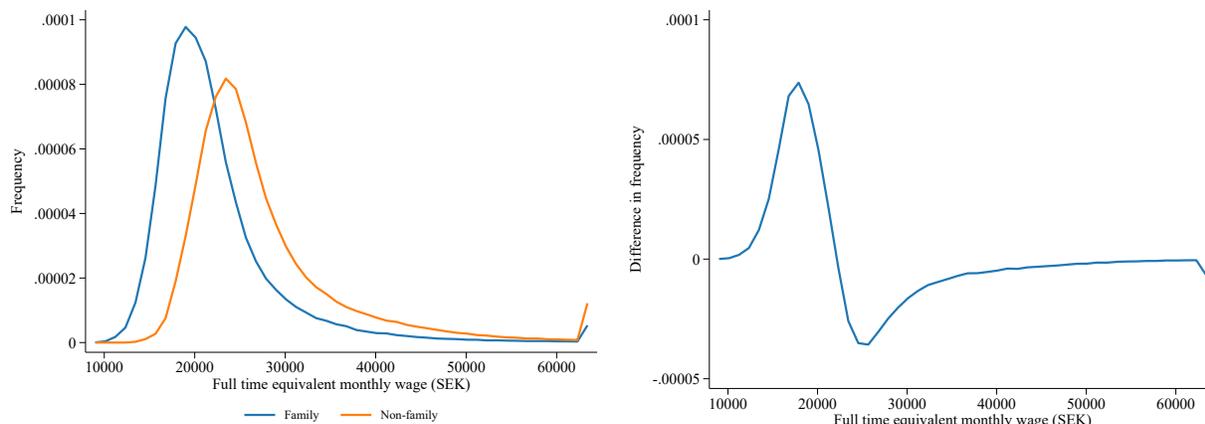Figure 8: Employee education

(a) Compulsory

(b) University

Note: The mean share of employees having compulsory of university education.

Figure 9 shows the distribution of full-time-equivalent monthly wages for employees in family and non-family firms using data from the Wage Structure Statistics provided by Statistics Sweden. The data on wages, as opposed to total income, are not available for all

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firms. While the database covers all employees in larger firms in our panel, it only has a sample of the smaller firms. We can match approximately 22% of our sample. However, since the lack of observations from smaller firms should be random, the general pattern should be representative. The benefit of using data on full-time-equivalent monthly wages, over using labor income, is that they account for differences in labor supply. To avoid extreme outliers, we winsorized the top one percent of observations. Family firms have more employees that earn low wages and fewer employees that earn high wages. This could either be sorting of workers, a more compressed wage structure for similar employees, or a combination of both.

Figure 9: Monthly wage income

(a) Monthly wage

(b) Differences between FF and non-FF

Note: Distribution of full-time-equivalent monthly wage earnings for employees. The top one percent are winsorized to avoid outliers.

5.1 Regression analysis of employees

Thus far, the analysis has been based on raw statistics. Using simple regression analysis, we seek to add additional information by isolating the family firm effect. We estimate the following equation:

$$Y_{ift} = \alpha + \beta Family +_{it} + \delta_i + \tau_t + \theta_{it} + \epsilon_{it} \tag{1}$$

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were Y_{ifmt} is the outcome of employee i in firm f in year t. $Family_{ft}$ is a dummy taking value one if firm f is family-owned, zero otherwise. BX_{it} is a vector of control variables at the employee level including age, sex, tenure, higher education, and immigration status, δ_{ft} contains firm controls including firm age, number of employees, and municipality and industry fixed effects, and τ_t is a year fixed effect. The results are presented in Table 1, where the estimate for $Family_{ft}$ gives the conditional yearly average difference in outcome Y between employees in family and non-family firms. Column 1 shows the log labor earnings, while the dependent variables in Columns 2, 3, and 4 are binary, taking value one if the employee has received sickness benefits that year[3], leaves the firm (for any reason) in the following year, or has left the firm specifically into unemployment the following year. For variable means, see Table A3 in the Appendix.

Our results show that people employed in family firms have on average 3.7 percent lower earnings than employees in non-family firms. Moreover, employees in family firms have, on average, a lower probability of receiving sickness benefits. They also seem to have a lower probability of leaving the firm. The reason for leaving a firm could vary, including moving to a new firm, becoming unemployed, or leaving the labor force. The latter could refer to retirement, starting full-time studies, or long-term sickness. The underlying reasons for those events could be being fired by the firm, a firm shutdown, or personal reasons for the individual. Arguably, however, becoming unemployed should be less of an individual choice and more of something imposed[4].

Column 4 in Table 1 shows that the probability of leaving the firm to unemployment does not differ between family firms and other firms. The results from Column 3 should therefore mainly be driven by changing jobs or leaving the labor force.

Figure 10 shows the heterogeneous effects for the same size groups and set of controls as described previously. On average, the probability of leaving the firm is lower in family firms

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[3]According to Swedish regulations, an employee starts receiving sickness benefits from Försäkringskassan after seven days of absence from work due to sickness.

[4]Statistics Sweden defines an unemployed person as someone without employment who has applied for a job within some reference period.

Table 1: Employee outcomes

	(1) Earnings	(2) Sick	(3) Leave	(4) Unemp
Family firm	-0.037***	-0.005***	-0.013***	0.001
	(0.006)	(0.001)	(0.002)	(0.001)
Constant	3.633***	0.005*	0.385***	0.004
	(0.041)	(0.003)	(0.010)	(0.006)
R^2	0.478	0.030	0.146	0.074
Observations	28708890	28708890	26625219	26508762

Note: All specifications use OLS and control for year, industry, and munici-
pality fixed effects, as well as firm age and size. Individual controls include
employee age, sex, tenure, higher education, and immigration status. Standard
errors are clustered at the firm level. *** $p<0.01$, ** $p<0.05$, * $p<0.1$
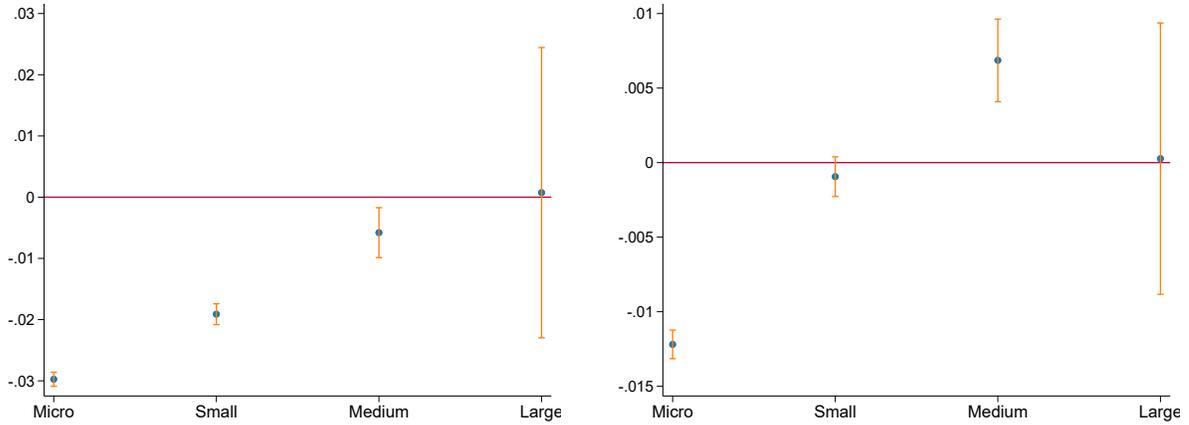
for micro, small, and medium-sized firms. The most considerable difference occurs for micro firms, where the probability of leaving the firm is estimated to be approximately 0.03 lower in family firms than in other firms. For large firms, there are no differences between family and non-family firms. For unemployment, there are no differences between family firms and non-family firms for small and large firms, while the probability of unemployment is higher in medium-sized firms. Among micro firms, the probability of becoming unemployed is lower for employees at family firms.

Turning to earnings in Figure 11, we see that micro family firms pay their employees more than similarly sized non-family firms. With each size category, the wages paid by family firms decrease, with the largest differences observed for the largest firms. If earnings are correlated with firm size (Bloom et al., 2018), this result suggests that the distribution in Figure 9 is not only due to sorting but also due to a different wage-setting policy within firms.

6 The firm in family firms

Turning to the firm itself, Panel A in Figure 12 shows that the number of family firms has increased slightly over time. However, the number of non-family firms has increased even
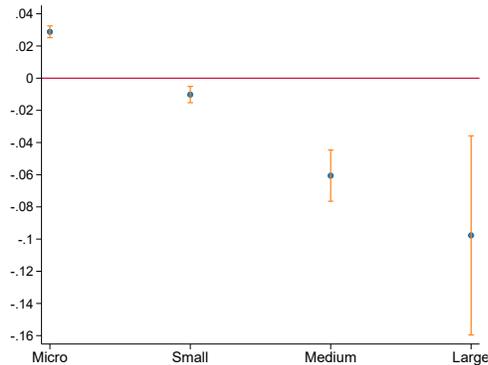
Figure 10: Size heterogeneity

(a) Probability of leaving firm

(b) Probability of unemployment

Note: Coefficient plots of the effect of being a family firm by different firm sizes. Orange lines show 95 percent confidence intervals. Estimation output can be found in the Appendix. A micro firm has no more than 9 employees, a small firm has 10-49 employees, a medium firm has 50-249 employees, and a large firm has 250 or more employees.
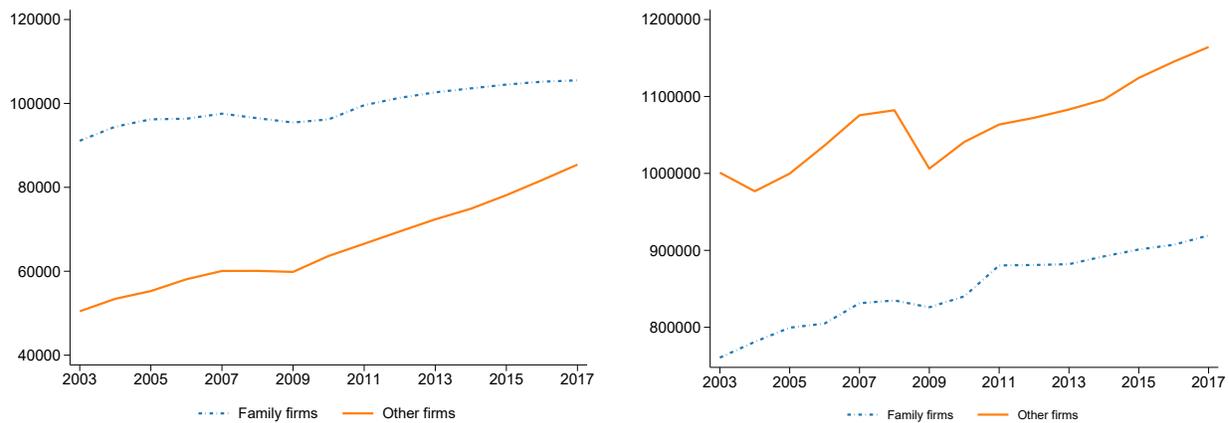
Figure 11: Log earnings by firm size

Note: Coefficient plots of the effect of being a family firm by different firm sizes. Orange lines show 95 percent confidence intervals. Estimation output can be found in the Appendix.

more. Consequently, the share of family firms decreased from 64 percent in 2003 to 55 percent in 2017. Panel B shows the number of employees in family firms and non-family firms. In 2017, 44 percent of those employed in Swedish private firms were employed in a family firm. This share has not experienced any trend since 2003, ranging from 43 to 45 percent. Notably, for non-family firms, there was a decline in the number of employees in 2009 during the pinnacle of the financial crisis. The same sharp drop does not happen for family firms, indicating some higher resilience to this crisis and a reluctance to reduce the number of employees in a crisis.

Figure 12: Family firm prevalence

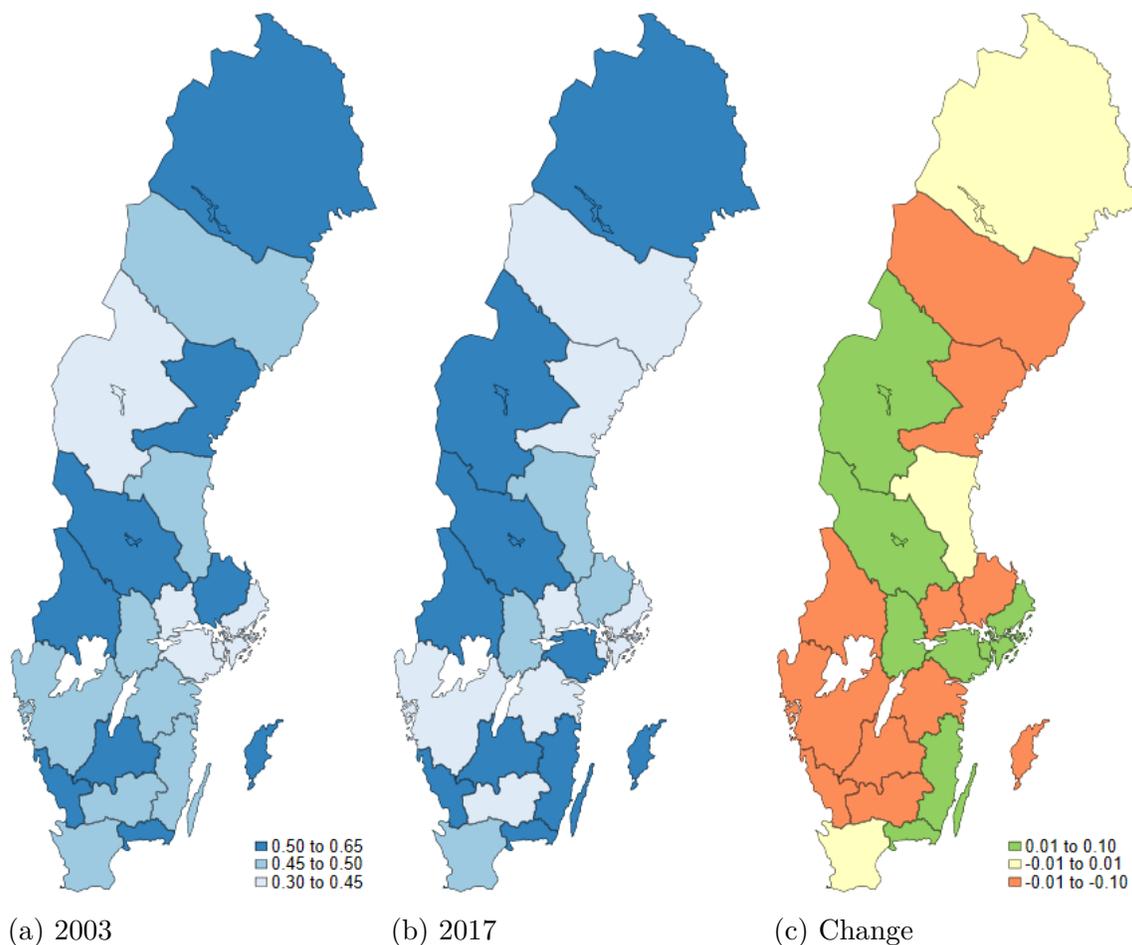(a) Number of firms   (b) Number of employees

Note: Number of firms and employees for family firms and non-family firms.

Although at the national level, the share of people being employed in family firms has remained relatively constant since 2003, Figure 13 shows changes at the regional level.[5] The employment share in family firms ranged from approximately 30 to approximately 60 percent in both 2003 and 2017. However, the share employed in family firms decreased in approximately half of the regions from 2003 to 2017, a decrease that largely occurred after

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[5]Sweden is divided into 21 regions and 290 municipalities. The Swedish Board of Agriculture divides them into metropolitan, urban, and rural municipalities. Metropolitan municipalities are, in practice, represented by the functional regions of the three large cities Stockholm, Gothenburg and Malmö. Urban municipalities implies smaller cities and some suburbs. Rural municipalities do not belong to either of the mentioned groups (Karlsson, 2018).

2014. Nevertheless, in 2017, family firms employed a substantial share of people in the private sector in all parts of the country.

Figure 13: Regional family firm prevalence

(a) 2003	(b) 2017	(c) Change

Note: Share of the labor force employed in family firms over Swedish municipalities, as well as the change in share between 2003 and 2017.

Despite being present throughout Sweden, family firms are less concentrated in metropolitan municipalities than non-family firms. Among family firms in 2017, 37 percent were found in a metropolitan municipality. The equivalent number for a non-family firm was 46 percent. This is consistent with previous Swedish research, finding that family firms are relatively less frequent in metropolitan municipalities (Bjuggren, 2015). Detailed statistics are presented in Table A3.

Family firms are important in all industries, as Figure 14 shows. For exact figures, see

Table A2. Over time, we see the same pattern, as at the aggregate level with the number of family firms increasing (or remaining constant), the share of the total population of firms is decreasing for most industries.

Figure 14: Number of firms over industries

(a) 2003

(b) 2017

Note: Number of firms over industries.

Panel A in Figure 15 shows that family firms tend to be older than other firms and that this difference has increased over time. In addition, Andersson et al. (2018) also finds that family firms, on average, are older than other private firms.

The age variable in Panel A, Figure 15 starts counting the firm age from 1990 (making the increasing trend at least partly mechanical). For a subsample of the data, we know firm age since the 19th century. While average firm age is increasing over time, the difference between family a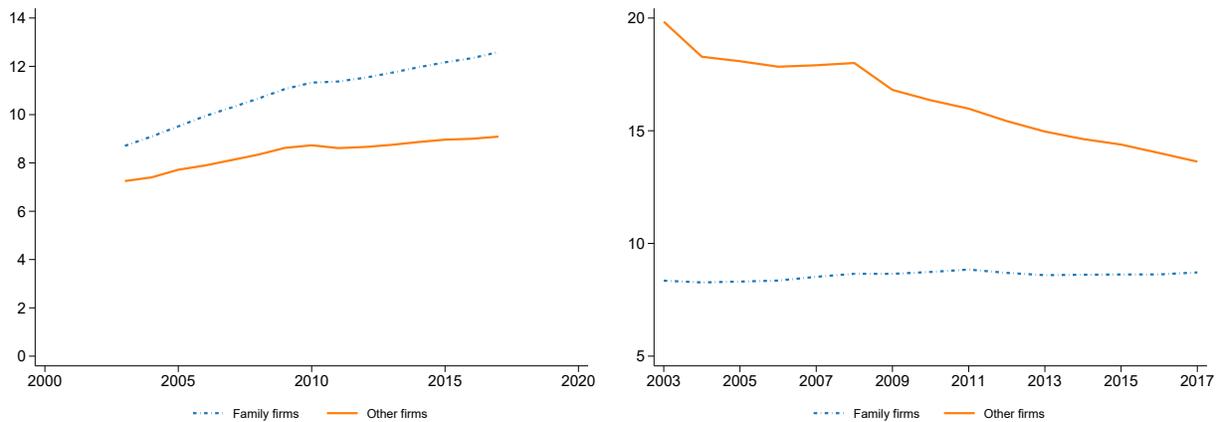nd non-family firms is diverging, with family firms becoming relatively older. Panel B in Figure 15 shows the trends in the average number of employees. It becomes evident that the average number of employees is decreasing for non-family firms, while it remains reasonably constant for family firms (for exact figures, see Table A3 in the Appendix.

The pattern in Figure 15 does not necessarily imply that non-family firms tend to decrease in size; instead, the reason could also be the characteristics of exiting and entering firms. For example, it is consistent with a high entry rate among non-family firms since new firms tend to be small. In fact, Karlsson (2018) finds that Swedish non-family firms, on average, have higher annual employment growth than family firms, not taking into account any changes in the market composition of firms. Moreover, our data show that exiting firms, on average, are larger than entering firms, especially for non-family firms.

Figure 16 shows the density plots for family firms and other firms, as well as the difference between these density plots. Panel B displays the difference in Panel A and shows that family firms are less prevalent among young firms and more prevalent among relative older firms.
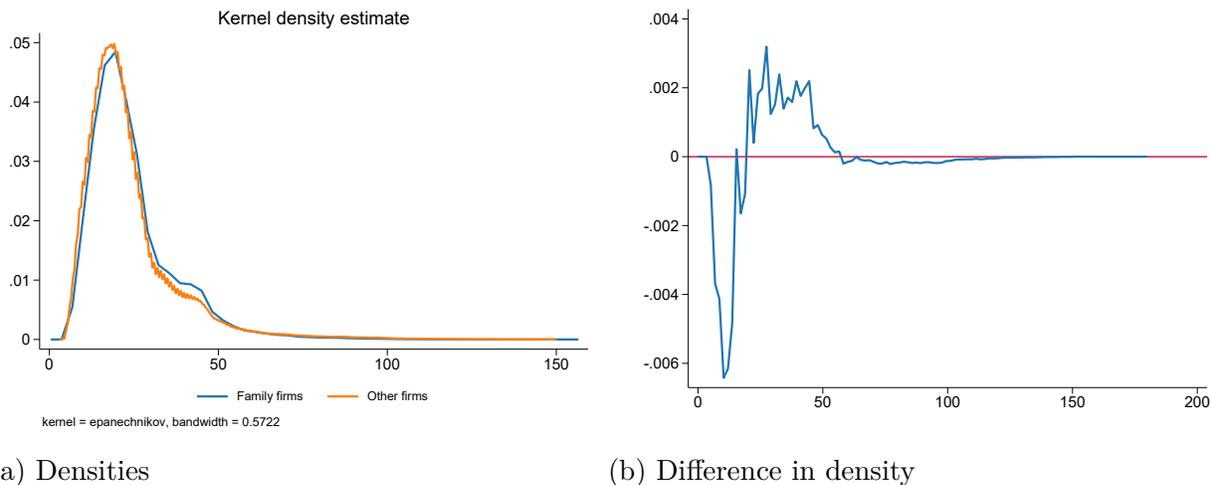
Figure 15: Firm trends in means

(a) Firm age

(b) Number of employees

Note: Mean trends for firm age and number of employees in the firm.

Figure 16: Firm age distribution

(a) Densities

(b) Difference in density

Note: Kernel density plots over firm age for the entire time period.

7   Conclusions

In this paper, we use registry data to identify family firms in the entire population of Swedish firms. We restrict our sample to (mainly closely held) firms in the business sector with at least one employee, and we define a family firm as a firm where two or more individuals among the owners or the board of directors are related. First, we present descriptive statistics on the family itself in family firms and then compare family firms with non-family firms on a set of firm-level and employee-level dimensions between 2003 and 2017.

Our results show that the family in family firms tends to be small, consisting predominantly of two relatives. The share of family firms having two active generations on the board of directors or among the owners is increasing. Thus, there could be some indications that a second generation is increasingly taking an active part in the family business. Although on the decline, the most common relationship in the firm is spouses. Moreover, 34 percent of the family firms had a family containing a father, whereas only 20 percent contained a mother. Focusing on the population of the family board of directors, the shares of women among the family CEOs and chairs were just under 20 percent in 2017. However, the shares

had increased from 11-13 percent in 2003. Among the other family board of directors, 42 percent were women in 2017. Moreover, the mean age in the population of family board of directors has increased, from 51 to 54 years old. The share of family members only having compulsory schooling on the board of directors is decreasing.

The characteristics of the employees in family firms differ from those in non-family firms in some respects. They have, on average lower education and longer work tenure. Although small differences, family firms also tend to be more likely to employ the very young and older members of the labor force. Moreover, family firms tend to have more stable employment since the probability of not being at the firm the following year is estimated to be lower. Those employed in family firms also tend to have lower earnings.

Turning to the firm in family firms, our results show that 55 percent of all private firms in Sweden were family firms in 2017. This share has been decreasing since 2003, with the reason potentially being that relatively fewer family firms are entering the market than non-family firms. In 2017, 44 percent of the people employed in private firms were employed in a family firm. Family firms are important in all parts of the country and all industries.

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A Appendix

Table A1: Number of firms and employees in 2003 and 2017

	Family firm		Other firm	
	2003	2017	2003	2017
Firms				
Metropolitan	30831	38715	22563	39672
Rural	27370	29319	11539	18131
Urban	32899	37469	16357	27617
Employees				
Metropolitan	249542	334426	479667	575273
Rural	232089	252115	208274	215330
Urban	278964	332869	313086	373658

Table A2: Number of Firms over industries in 2003 and 2017

	Family firm		Other firm	
	2003	2017	2003	2017
Harmonized industry code				
Agriculture, fishing and forestry	4208	4344	976	1706
Mining	160	140	66	59
Manufacturing	13593	11639	7067	7240
Electr./Gas/Water	34	103	122	155
Construction	14237	21991	5480	15804
Wholesale/Repair	27119	23576	12865	16496
Hotels/Restaurant	4666	6596	3832	8015
Transport/Communication	7944	7601	3321	4833
Financial interm.	14	31	29	30
Real estate/Renting	3950	6022	2429	4328
Business activities/Computer/R&D	6997	9801	7450	12843
Education	1381	1693	1902	2394
Health	3509	6103	2065	5053
Personal care/Culture/Sports	3288	5863	2855	6464

Table A3: Means, firm-level data, in 2003 and 2017

	Family firm		Other firm		Full sample	
	2003	2017	2003	2017	2003	2017
Age	8.71	12.59	7.25	9.09	8.19	11.02
Number of employed	8.35	8.71	19.84	13.63	12.44	10.91
Size groups						
Micro (1-9)	0.80	0.80	0.73	0.78	0.77	0.79
Small (10-49)	0.18	0.17	0.22	0.19	0.20	0.18
Medium (50-249)	0.02	0.02	0.05	0.03	0.03	0.03
Large (250+)	0.00	0.00	0.01	0.01	0.00	0.00
Municipality types						
Metropolitan	0.34	0.37	0.45	0.46	0.38	0.41
Urban	0.36	0.36	0.32	0.32	0.35	0.34
Rural	0.30	0.28	0.23	0.21	0.27	0.25

Table A4: Means, individual-level data, in 2003 and 2017

	Family firms		Other Firms		Full sample	
	2003	2017	2003	2017	2003	2017
Women	0.35	0.37	0.37	0.40	0.36	0.38
Immigrants	0.12	0.19	0.14	0.23	0.13	0.21
Age	38.29	40.04	38.82	39.53	38.59	39.76
Age groups						
16-20 years	0.12	0.10	0.09	0.08	0.10	0.09
21-30 years	0.23	0.24	0.23	0.25	0.23	0.25
31-40 years	0.23	0.18	0.25	0.21	0.24	0.20
41-50 years	0.18	0.19	0.19	0.20	0.19	0.20
50+ years	0.24	0.29	0.24	0.26	0.24	0.27
Education groups						
Compulsory School	0.28	0.20	0.22	0.16	0.25	0.18
High School	0.56	0.57	0.52	0.53	0.54	0.55
Vocational education	0.10	0.14	0.14	0.18	0.12	0.16
Higher education	0.06	0.09	0.12	0.14	0.09	0.12
Tenure	1.73	4.35	1.64	3.60	1.68	3.93
Wage Income	1810	2756	2163	3017	2011	2902
Received sick pay	0.11	0.08	0.12	0.09	0.12	0.09
Sick pay (days)	48.46	37.32	54.68	40.25	52.00	38.96
i_leavefirm	0.25	0.28*	0.25	0.31*	0.25	0.29*
i_unem_t1	0.15	0.08*	0.14	0.09*	0.15	0.09*

Note: *Mean in 2016, since the variable denotes status in the following year.