Income Inequality Early in Life: Underage Children as Owners of Privately Held Firms *

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Abstract

We present new evidence that privately held firms are used to transfer income to underage children. This exacerbates wealth and income inequality among children and persists at least into early adulthood. Underage children at the top 1% of the parental income distribution are 20 times more likely to be owners of a privately held firm compared to children in the bottom 90%. The average age of these underage firm owners is 12 years, with ownership occurring across all ages from 0 to 17. Tracking data across generations shows that nearly half of these underage children come from non-entrepreneurial family backgrounds suggesting that childhood ownership is not entirely explained by anticipated family succession. We further study the intergenerational persistence in incomes and find that, conditional on observable parental characteristics, childhood owners with a parent from the top 1% are 15 percentage points more likely to be in the top of their cohort's gross income distribution as young adults than a non-childhood owner with similarly affluent parents. Childhood ownership of firms is strongly associated with having a larger share of total income as capital income in the age of 30. We also discuss potential tax savings obtained by managing family wealth within a privately held firm, and find support for tax motivated income shifting within the family. (JEL: D3, H2, H3, M1)

Keywords: privately held firms, income inequality, income mobility, family business, dynastic wealth

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1 Introduction

Privately held firms, defined here as incorporated limited liability companies, offer a flexible means for entrepreneurs to organize their business activities. In addition, through co-ownership with their children – even when they are underage – parents can transfer entrepreneurial attitudes, skills, or a broader culture of ownership and family legacy to their children. However, privately held firms can also be used to affect one's tax liabilities and manage family income and wealth by providing more opportunities for tax avoidance through income-splitting and gift and inheritance tax planning.

There is plenty of evidence on the intergenerational correlation of income and wealth, and previous research has identified that part of the correlation runs through channels such as children's future investment behaviour and direct wealth transfers from parents, including in early childhood (e.g. Charles and Hurst, 2003; Corak, 2013; Adermon et al., 2018; Boserup et al., 2018; Black et al., 2020; Fagereng et al., 2021). Nonetheless, the potential role of firm ownership already in childhood as a transmission channel has remained understudied. This can be partly related to data constraints, as many countries lack detailed data on firms and their owners. In the tax policy context, the phenomenon of minors' firm ownership is nevertheless recognised, as illustrated by tax reforms some countries have implemented to curb tax avoidance through underage owners (e.g. Bauer et al., 2015).

In this paper, we examine how underage ownership of privately held firms relates to fiscal incomes, both during childhood and as these individuals transition into adulthood, and how this contributes to inequality. We focus on underage children since their true role in a firm's business operations is bound to be negligible due to their young age. For adult children and spouses, for whom it is possible to work for the firm, it is much more difficult to establish whether income drawn from a firm reflects the true level of their contribution to the firm.

We present results on the prevalence and characteristics of underage owners. In addition, we examine associations between various background factors and the inclusion of underage children as firm owners, which offer insights into the possible influence of tax considerations, entrepreneurial family traditions, or related influences. We also examine the income trajectories of childhood firm owners and non-owners up to age 30. Lastly, we study intergenerational income inequality and consider taxation perspectives. Together, these results elucidate both the potential motives for underage ownership and its implications. We analyze this question in the context of Finland, a high-tax country where the taxation of dividends from privately held firms creates strong incentives for wealth management through these firms. However, the use of privately held firms for wealth management is a common practice worldwide (see e.g. Kopczuk and Zwick, 2020).

By exploiting comprehensive Finnish total population tax records and detailed information on firm ownership, we find that children with a parent in the top 1% of the adult income distribution are 20 times more likely to be owners of a privately held firm compared to children

¹There is a strong association in intergenerational entrepreneurship (Dunn and Holtz-Eakin, 2000; Lindquist et al., 2015) which may originate from specific traits passed down from parents to children through genetics (Nicolaou et al., 2008) or environmental influences, such as parental role modeling (Lindquist et al., 2015; Abbasian-chavari and Moritz, 2021). Bertrand and Schoar (2006) discuss the role of family legacy behind the prevalence of family firms in a broader sense. Villalonga and Amit (2020) further develop the literature on family ownership.

whose parents are in the bottom 90% of the distribution. This pattern is stronger among children whose parents are majority owners of a privately held firm: at the top nearly one in ten of children are listed as co-owners. We find that ownership occurs at all ages between 0–17 and the mean age of an underage owner is 12 years. Underage children who are owners of privately held firms have considerably higher fiscal incomes in their childhood, even among the richest 1% of parents: children at the top who do not own firms earn less than 10% of the income of firm-owning children. These incomes of underage owners are largely formed of capital income, of which approximately 3/4 is due to dividend income from the firm.

To shed light on what types of families include their underage children in business ownership, we examine parental and grandparental characteristics. We find that roughly one sixth of underage firm owners appear to be part of a "family legacy" in that firm ownership extends back to their grandparents. One third have active entrepreneur parent(s) but no observable grandparental involvement in the firm. Notably, around half of underage owners have neither entrepreneurial parents nor a grandparental ownership background, indicating that a significant share of underage ownership relates to non-entrepreneurial families, consistent with tax-motivated ownership allocation within the family. Firms where children are co-owners most commonly operate in human capital-intensive industries like finance or professional services. Furthermore, there is a decline in children's ownership upon reaching adulthood. The income trajectories into early adulthood show that children who were firm owners when they were underage continue to differ from others in the same cohorts with respect to their income formation, especially in terms of capital income flows.

We find interesting heterogeneities in intergenerational persistence in incomes between parents and children when accounting for childhood ownership status and observable parental characteristics: the association between parental gross income and child earnings appears weaker among children who were underage firm owners, while for capital income the association is stronger. A young adult around age 30 who owned shares of a privately held firm as a child and whose parent was in the top 1% of adult gross income distribution is 15 percentage points more likely to be in the top 1% of their cohort's gross income distribution than a non-owner with similarly affluent parents. As the differences between childhood owners and non-owners stem in particular from income composition, this implies higher inequality in disposable income and in consumption possibilities due to the lower taxation of capital income. With respect to tax implications, we show evidence that while some parent majority owners locate just below the individual dividend tax threshold, the total dividends of such owners and their underage children and other family members exceed the threshold. This indicates that tax system incentives also play a role, and that underage ownership can be one tool for reducing the dividend tax burden. We further discuss the role of gift and inheritance tax considerations.

Our paper fills an important gap in the inequality literature by documenting privately held firm ownership as a previously overlooked source of income inequality among children, which furthermore carries over to income and wealth inequality in early adulthood. Our findings complement the paper by Boserup et al. (2018) on wealth concentration in early childhood in Denmark. Compared to their paper, which focuses on income (cash) transfers from relatives, we are able to identify an important additional source of income through ownership of privately

held firms. We are the first to document the share of underage children as owners of privately held firms in a comprehensive manner.

Our paper is also related to the literature studying taxation, firms, and family members. Firms can be used for tax purposes and firm owners are active in tax minimization (Alstadsæter et al., 2014, 2016; Agostini et al., 2018; Harju and Matikka, 2016; Koivisto, 2025; Pirttilä and Selin, 2011). In our context, underage children as co-owners enable parent owners in particular to avoid gift taxation and/or inheritance taxes, if the wealth is accumulated within a firm. In Spain, a more favourable tax treatment of family firm equity led to asset-shifting towards family firms (Micó-Millán, 2024). In income tax planning, underage ownership has been reflected in legislation aimed to prevent wealthy parents from reducing their taxes by shifting investment income to their children. This type of "kiddie tax" legislation has been studied in Canada by Bauer et al. (2015) who showed a substantial reduction in children's reported dividend income following an increase in the tax rate on minors' dividends from relatives' private firms. While they cannot directly link minors' ownership of assets or firms, our high-quality administrative registers for total population allow us to link owners regardless of their age.

In addition to tax-related motivations, our data can shed light on the role of "family legacies" (Bertrand and Schoar, 2006) in underage ownership.² We use data on family member links to characterize types of families, documenting the relative shares of families with at least three generations of firm owners, those with shorter entrepreneurial histories, as well as those with no obvious entrepreneurial linkages.

2 Data and definitions

We employ administrative data from Statistics Finland covering the full population residing in Finland. The different datasets can be linked together to form comprehensive data on incomes, background characteristics, family members, firm ownership, and firm information. A detailed description of the datasets used and the variable definitions can be found in the Online Appendix.

Individual-level information. The tax register data, from 1995 onwards, contain information on wages and salaries, self-employment income, capital income, and transfers received and paid. We convert all monetary values to 2018 real terms using a cost-of-living index. Our preferred income concept is total gross income excluding realized capital gains.³ In the main analysis we define all incomes at the individual level. This avoids mixing income developments with changes in household formation and composition. This is also consistent with the tax system, as Finland has individual-based taxation.

We characterize children's background by the income rank of the higher-earning parent in the overall adult (20+) income distribution. We also verify the robustness to alternative rank specifications, including individual 5-year average income rank, and the rank at age 45 among individuals in the same cohort, always selecting the higher rank of the child's parents. These alternative rankings avoid the problems of strongly fluctuating incomes, in particular at the top

²While the role of family legacies has received limited attention in economics, this topic has been more extensively studied in other social sciences; see Kuusela (2023) and references therein.

³We exclude realized capital gains because of the typically fluctuating nature of such income.

of the distribution, and varying earnings potentials at different ages. We also use the household's income percentile. Finally, when following children into their early adulthood (until age 30), we use the parental income rank when the child was 17 years old.⁴

Firm ownership. To identify owners of incorporated privately held businesses, we employ the ownership database available since 2006, which provides information on both individual and firm owners. If a person owns a firm indirectly, via another firm, we loop the layers of ownership and find the ultimate individual owner for each firm. In our analyses, we define firm ownership either at an annual level for each child, or based on whether the child ever owned a firm in at least one year during childhood ages 0–17, contrasting to children who never owned a firm during childhood.

Firms' financial statements. The dataset of firms' financial statements provides information on profit and loss accounts and balance sheet information at the firm level. These data also contain background characteristics of the firms, such as their industry. These data can be linked with the firms' owners using the unique firm identifiers.

3 Institutional context

Regulation on minors' work and firm ownership. We focus on incorporated businesses, representing roughly 90% of the relevant firm stock (excluding sole proprietorships). These firms can be founded by a single shareholder, individual or legal, with no minimum capital requirement. In Finland, forming a privately held firm is relatively easy across most industries, including regulated fields like medicine and law, where professionals may operate through such entities and have e.g. family members as co-owners. Individuals of all ages are allowed to be owners of a privately held firm. Minors, however, cannot independently perform legal acts and are instead represented by their guardians, usually parents. A minor also cannot be a member of the board or the CEO of a limited liability firm. Children are allowed to start "light work" in the calendar year when they turn 14 years old. There are legal restrictions on daily and weekly working hours (for example on school days a maximum of 2 hours of work is allowed) as long as the child has not completed compulsory schooling (this was up to the age of 15 prior to 2021 and 18 afterwards).

Gift and inheritance taxation. Finland has gift and inheritance taxation but no wealth tax. Recipients of inheritance are liable to pay a progressive inheritance tax if the value of the inheritance exceeds the taxable threshold (EUR 20,000 in 2025), with rates for close relatives ranging from 7% to 19%. Similarly, the recipient of an intervivos gift needs to pay gift tax if the

⁴Note that the income percentiles do not contain an equal number of children, and as we select for each child the higher-income parent's income percentile, underage children are more concentrated towards the top of the parental income distribution. Roughly half of children are located in the top 20% when defined this way. However, we always compare children within parental rank.

total value of transfers from the same donor during three consecutive years exceeds the taxable threshold (EUR 5,000 in 2025), with rates for close relatives ranging from 8% to 17%.⁵

Firm taxation. At the firm level, firm profits are taxed at a flat corporate tax rate, which is 20% (in 2025). At the individual level, the dividend tax rate depends both on the value of the net assets of the firm as well as on the individual's total dividend income from all privately held corporations. When a firm's distributed dividends are below a predetermined rate of return (8% in 2025) on the firm's net assets, they are partly taxable at the capital income tax rate. The tax-free part depends on the individual-level dividend threshold: if an individual's total dividend income is below a monetary threshold (EUR 150,000 in 2025), 25% of the dividends are taxable as capital income and the rest is tax-free, while above monetary threshold 85% of the excess dividends are taxable as capital income. Capital income tax rate is 30% up to 30,000 euros and 34% above it (in 2025). And, if dividends from a firm are above the net asset threshold, 75% of them are taxable, but at the more progressive labor income tax rate (highest rate \sim 55%). Note that the rate of return threshold is firm-specific but the monetary threshold is individual-specific and takes into account dividend income from all privately held firms. The effective tax rates below the monetary threshold have been around 15 percentage points lower than above the threshold (Koivisto, 2025).

4 Results

4.1 Firm ownership among underage children

Ownership patterns. Figure 1 reveals a striking relationship between parents' position in the income distribution and the probability of being an underage firm owner. Among underage children whose highest-earning parent is in the bottom 90% of the gross income distribution, the share of child owners is only 0.1%. The share of underage owners rises steadily in the top decile and is 1.9% among children with a parent in the top 1% (excluding the top 0.1%), and reaches 6.1% among children with a parent in the top 0.1%. Among underage children whose parents own privately held firms with majority ownership⁶, owning firms is more likely throughout the parental income distribution, and in the top 0.1% up to 10% of children own shares in a privately held firm.⁷

Firm ownership occurs at all ages between 0–17 – even some newborns own shares in privately held firms. The average age across firm-owning children in our sample period is 11.8 years (median 13) and roughly constant across parental rank.

⁵If a gift or bequest includes a transfer of privately held firm shares to an *adult* child who engages in active business operations in the firm, partial tax relief can be granted, which can be a considerable benefit to recipients.

⁶On average 4% of these parents own a firm with majority ownership, while the share is 12%, 27%, 40% for top decile, top 1% and top 0.1%, respectively.

⁷Appendix Figure A1a shows that the pattern is very similar using alternative parental income rankings and Figure A1b that underage boys and girls are equally likely to own privately held firm shares across the parental income distribution. Furthermore, families do not differentiate their underage children's firm ownership: if one underage child is an owner, the other underage children are typically too.

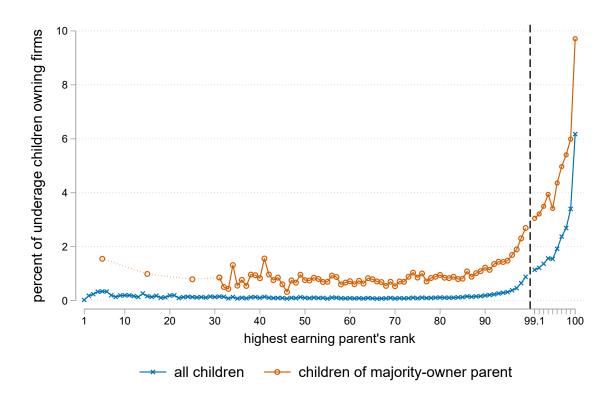


Figure 1: Share of underage children with ownership in a privately held firm, by parent's income group

Note: The figure shows the share of children who own shares in privately held firms across the parental income distribution and parent's ownership status. Majority owner parent refers to a parent who holds at least 50% ownership in a privately held firm. The horizontal axis is the child's highest-earning parent's position in the individual gross income distribution of all adults, percentiles 1-99 and per mille within the top 1 percent. Dotted lines indicate regions where percentiles are grouped into averages in each decile due to the smaller number of observations. Total population, 2006-2022 pooled.

Parent's characteristics and firm types. 90% of underage owners are co-owners alongside their parents or grandparents. Examining the characteristics of parents and the types of firms these children own sheds light on what types of families include their children as owners and whether this is driven e.g. by entrepreneurial families. We classify families based on the entrepreneurial and business owner status of parents and grandparents. The first group refers to family legacies, where we observe ownership of the firm in older generations. This includes both active successions – where at least one parent is an active entrepreneur in the firm and a grandparent is an owner of the same firm – and passive legacies (e.g. family offices) – where ownership of the firm can be traced to at least one grandparent, but the child has no entrepreneurial parents. When only a parent(s) is an entrepreneur in the firm and the grandparents are not current owners of the firm, we label these children into an entrepreneur-parent family. Children without entrepreneurial parents and whose grandparents do not own the firm fall into the other category. In this group, parents' main activities include, e.g., being an employee or out of the labor force.

Table 1 presents descriptive statistics by family type. The distribution of children across these family types is similar in both the top and bottom of the parental income distribution: roughly one-sixth of children belong to the family legacy group and one-third fall into the entrepreneur-parent category. It is noteworthy that almost half of the children come from families without an apparent entrepreneurial background. At the top of the distribution, firms with underage owners – in particular those in the family legacy group – exhibit substantially higher net wealth than firms with no underage owners, suggesting a significant accumulation of dynastic wealth within these firms. Also, these firms are larger in size and activity (sales). Firms operating in human capital-intensive fields and in particular in finance are more prevalent among top-earners, especially in the Other category, and finance is also clearly overrepresented among firms with underage owners compared to the rest of firms. We illustrate parental characteristics in Appendix Table B1. In the family legacy group, the highest-earning parent of firm-owner children tends to be slightly younger and, at the top of the income distribution, is more likely to be female, compared to the two other categories. Among top-earning parents in the Other category, individual gross income is substantially higher compared to families with an entrepreneurial link.

Childhood income. Whereas the inclusion of underage children as co-owners could at least partly be related to long-term planning involving e.g. transferring family businesses to the next generation, it is also evident that these children accrue significant income already during their childhood. Figure 2 illustrates the scale difference between firm-owning and non-owning children, and additionally the role of parental income rank. Children are placed in the percentile of their higher-earning parent's 5-year average income rank to lessen the correlation between a child's and a parent's annual incomes. Across the parental income distribution, it is obvious that both capital and wage income are much more common for firm-owning children compared to other children (Figure 2a). It is striking how large the differences are even among the children in the richest families: even within the top 10% excluding the top 1%, children who own firms

⁸Entrepreneurial status is based on socioeconomic status defined using register data by Statistics Finland. It reflects an individual's main activity during the year.

Table 1: Firm characteristics by family type

Family type of child owners Family Entrepreneur-Firms w/o legacies parent Other underage Bottom 90% Sales (1,000 eur) 1,172.8 (3,372.9) 605.7 (1,779.4) 926.8 (3,232.7) 297.3 (910.8) Profits (1,000 eur) 51.9 (254.2) 11.3 (131.3) 27.9 (216.6) 8.3 (66.0) Net wealth (1,000 eur) 578.0 (1,916.1) 194.6 (858.0) 421.5 (1,553.9) 75.5 (464.8) **Employees** 8.5(40.7)3.9(9.4)5.9 (27.0) 2.2(10.4)Construction & manufac. (%) 25.018.8 20.527.7Retail & hospitality (%) 21.530.9 33.323.9Financial, IT, prof. service (%) 50.446.1 47.331.711.2-only finance (%) 20.3 19.7 6.2Other industry (%) 7.3 3.1 4.1 8.3 Firm-child-year observations 5,033 7,743 1,323,422 9,544 # distinct firms 844 1,711 2,336 234,009 # distinct children 852 1,794 2,435 Share (children) 16.8 35.3 47.9 91 - 99%Sales (1,000 eur) 1,726.0 (4,573.4) 1,046.4 (2,714.4) 1,274.8 (3,464.6) 725.4 (1,699.7) Profits (1,000 eur) 76.4 (308.4) 62.3 (226.7) 64.8 (276.6) 35.0 (112.6) 560.7 (1,650.8) 237.4 (582.6) Net wealth (1,000 eur) 805.7 (2,145.3) 379.0 (1,060.0) 8.6 (28.6) 4.6(15.0)**Employees** $15.0\ (71.9)$ 5.9 (16.6) Construction & manufac. (%) 14.0 17.0 14.524.024.126.2 Retail & hospitality (%) 21.217.4Financial, IT, prof. service (%) 59.2 58.2 63.3 44.6-only finance (%) 21.9 13.6 19.5 10.1 Other industry (%) 2.8 3.7 4.8 5.2 Firm-child-year observations 9,081 12,58814,108 903,789 # distinct firms 1,190 2,785 3,281 182,904 # distinct children 2,495 1,169 3,066 Share (children) 17.437.145.6**Top 1%** Sales (1,000 eur) 5,107.9 (8,649.5) 2,974.4 (6,283.9) 3,387.2 (7,265.0) 2,551.0 (5,546.0) Profits (1,000 eur) 233.8 (560.0) 193.1 (475.7) 169.3 (494.2) 145.3 (371.6) Net wealth (1,000 eur) 3,222.1 (5,123.4) 1,482.6 (3,080.8) 1,899.2 (3,873.1) 1,306.4 (2,869.2) Employees 77.7 (466.9) 11.7 (31.9) 28.6 (157.9) 14.4 (63.2) Construction & manufac. (%) 18.2 17.417.3 22.1Retail & hospitality (%) 25.9 22.5 12.3 24.2 Financial, IT, prof. service (%) 51.8 56.6 66.9 50.2 -only finance (%) 27.0 23.231.5 19.5 Other industry 4.1 3.5 3.5 3.5 Firm-child-year observations 7,913 12,05719,525 512,940 # distinct firms 1,131 2,487 3,824 97,344 # distinct children 629 1,544 2,257 Share (children) 14.2 34.9 50.9

Notes: Columns 1-3 display firm characteristics for firms where at least one owner is underage, and column 5 for firms where all owners are 18 or older (standard deviation in parentheses). Income groups refer to the underage owners' highest-earning parent. For firms without underage owners, income group refers to the highest-earning owner. Share (children) refers to family type distribution among underage owners. Years 2006-2022 pooled together and monetary amount presented as 1,000 of 2018 euros. The euro to US dollar exchange rate during the observation period was around 1.22.

are 8 times more likely to have capital income (61% vs. 7%), and a significant difference persists until the very top (4 times more likely among the top 1%).

The magnitudes of these incomes are also starkly different between firm owners and non-

owners, as illustrated in Figure 2b. Children who own firms and whose parent is in the top decile but below the top 1% receive on average 2,611 euros of capital income per year, and those with a parent in the top 1% on average 11,843 euros per year (mean annual capital income among all adults is 1,793 euros). Children in the top percentile who do not own firms earn on average only 262 euros of capital income annually. Approximately 3/4 of capital income among firm-owner children is due to dividend income from their privately held company. In gross income, firm-owning children with a parent in the top 1% would be placed in the second decile in the adults' gross income distribution (in 2018).

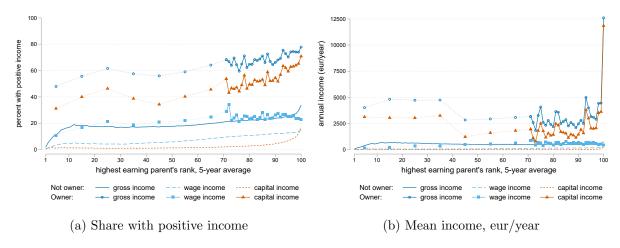


Figure 2: Underage children and different income types, by firm ownership and parent's position in the gross income distribution

Note: Figure shows the share of children who have positive incomes by income type, and mean incomes of each type, for children who own firms and children who do not own firms. Income information is averages over years when the child is (is not) a firm owner. Parent's income ranking is averaged over that and the four preceding years, and the higher average ranking of the parents is selected. Dotted lines indicate regions where percentiles are grouped into averages in each decile due to the smaller number of observations. Total population data, 2006–2022 pooled. Monetary amounts in 2018 terms. The euro to US dollar average exchange rate over the observation period was 1.22.

4.2 Income and Firm Ownership from Childhood to Early Adulthood

Figure 3 examines the differences between childhood owners and non-owners as they age and move into early adulthood. Given the length of our sample period, we consider here children and young adults who we observe at least at age 17 and follow them at most to age 30. We categorize them based on whether we observe them to own privately held firms at least in one year in their childhood years or not. We further divide the sample into children with a parent in the top 1% when the child was 17, and those whose parents are in the bottom 90%.

Panels (a)–(d) in Figure 3 display the unconditional means for all children in each category and (e) and (f) conditional on owning a firm at a given age (by definition, non-childhood owners do not own firms at ages below 18). Panels (a) and (b) reveal that the earnings trajectories between owner children and non-owner children as they age are similar, and especially for the top group there are no differences between the two groups. However, there is a stark difference when we look at gross income, which is driven by patterns of received capital income.⁹ At age

⁹Appendix Figure A2 shows that children from high-income families are in general active owners of other

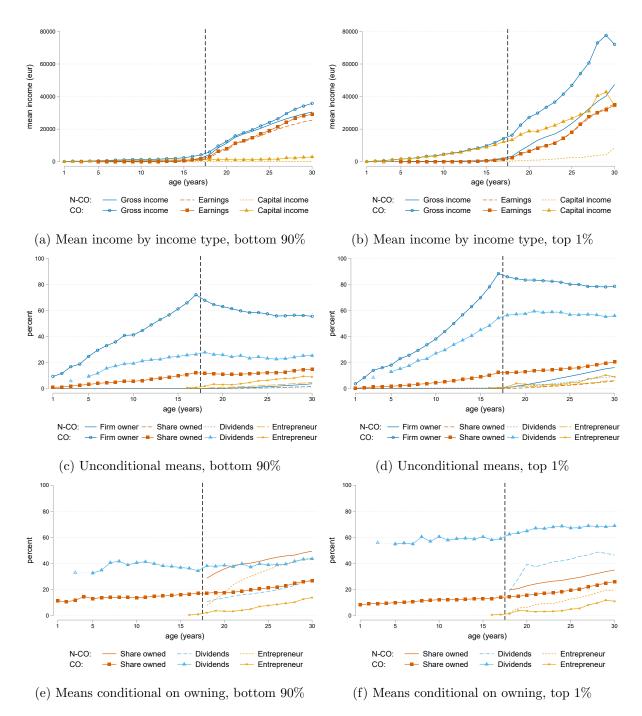


Figure 3: Ownership dynamics in childhood and young adulthood

Note: N-CO refers to non-childhood owners, while CO are individuals who were childhood owners, i.e. were observed owning privately held firms at least in one year during ages 0–17. Bottom 90%/Top1% is the income rank of the child's highest-earning parent at age 17. Firm owner is dummy for owning shares in a privately held firm. Share owned is the proportion of firm shares the child owns in a given year, or the highest proportion of a firm owned if owning multiple firms. Dividends is a dummy for having dividend income from privately held firms. Entrepreneur is a dummy for being classified as an entrepreneur (available from age 16 onwards). Panels (e) and (f) are conditional on owning shares in a privately held firm at each age (by definition N-COs do not own firms at ages < 18). Years 2006-2022 pooled together and monetary amounts are in 2018 terms. The euro to US dollar average exchange rate over the observation period was 1.22. The vertical line divides the graphs into childhood (< 18) and adulthood (18+). Dotted lines indicate regions where ages 1–4 are grouped into a group average due to the smaller number of observations.

financial assets as well. For real estate ownership, the pattern by parental rank is similar but the baseline is much lower.

30, former child owners in the bottom group receive capital income of on average 2,979 euros and in the top group 34,270 euros, while non-childhood owners receive capital income of on average 310 euros and 8,673 euros, respectively. Among former child owners, dividends from their own firms still account for a large share of their capital income: around 65% for the bottom and 80% for the top. These patterns highlight that firm ownership remains a significant and persistent source of capital income for those who were owner children.

To understand whether the persistent role of owning a privately held firm in income formation stems from higher business activity and entrepreneurship by the former child owners, we turn to studying these outcomes in panels (c) and (d). Among childhood firm owners, the probability of owning shares in a privately held firm increases with age, but after turning 18 there is a small decline in the likelihood of ownership. This indicates that some children immediately give up their shares when they obtain the legal power to do so; in both income groups the drop in firm ownership is around 10 percentage points between ages 17 and 30. The likelihood of owning firms increases slowly for young adults who did not own firms as children (being 16 percent at age 30 in the top group and 4 percent in the bottom group). However, ownership of privately held firms, receiving dividends from such firms, or being an entrepreneur as an adult is more likely for childhood owners across income groups. The share of entrepreneurs rises in early adulthood but remains below 10% in all groups.

Panels (e) and (f) illustrate that young adults who did not own firms as a child but do so as an adult own a larger share of their firm than childhood owners. Conditional on ownership, the non-childhood owners are also much more likely to be active entrepreneurs in their 20s. Nevertheless, childhood owners earn more often dividend income in their adulthood. These observations likely indicate differences in the purpose of owning firms: childhood ownership is more related to owning family firms with multiple owners and hence a single owner's share remains smaller. On the other hand, those who do not own firms in their childhood but do so as young adults likely own a business for livelihood purposes, where they themselves have a more active role.

4.3 Implications of underage ownership

Intergenerational persistence in income and wealth. We turn to studying intergenerational persistence in incomes, separately for children's gross income, earnings, and capital income, conditional on observable parental characteristics. Capital income reflects returns on assets, and so indirectly speaks about persistence in wealth as we lack a comprehensive measure for net wealth. We focus especially on whether the association is different for those families in which children were underage owners. We restrict our analysis to the 1990–1992 birth cohorts, for whom complete income data are available up to age 30.

We present two types of regression results. First specification relates the rank of children to the rank of their higher-earning parent's gross income rank (rank-rank regression). Second specification uses binary indicators for both generations (top percentile regression): the dependent variable takes value one if the child is in the top 1% of the income distribution, and the explanatory variable takes value 1 if the parent is in the top 1% of the parental gross income distribution. Parental position is measured as the average rank in the adult gross income distribution when

the child was aged 16–17 and the child's position is measured within their birth cohort using average income at ages 28–30.¹⁰ The second specification aims to capture non-linearities at the top of the distribution as childhood ownership is concentrated for the top 1% parents. For the same reason, we focus only on parents' position in the gross income distribution.

The regressions are based on the following linear equation:

ChildOutcome_i =
$$\beta_0 + \beta_1 \operatorname{ParentPosition}_i + \beta_2 \operatorname{ChildhoodOwner}_i + \beta_3 (\operatorname{ParentPosition}_i \times \operatorname{ChildhoodOwner}_i) + \gamma \operatorname{Controls}_i + \varepsilon_i$$
 (1)

where *ChildOutcome* is either percentile rank or dummy for being in top 1% either in gross earnings, earnings or capital income distribution, and *ParentPosition* is measured either as the higher-earning parent's percentile rank or a dummy for being in the top 1% in the gross income distribution. *ChildhoodOwner* is a dummy equal to 1 if the child was an owner in a privately held firm during childhood. The interaction of *ParentPosition* and *ChildhoodOwner* captures the question of interest, whether the intergenerational income association differs for underage owners compared to non-owners, keeping parent characteristics fixed. The controls include parent's age, gender, tertiary education, region, civil status, privately held firm ownership dummy as well as child's gender, birth cohort and privately held firm ownership dummy in adulthood.

Table 2 presents these regression results. Panel A shows that across all income measures, parental income rank is correlated with children's income rank, consistent with intergenerational persistence. Existing literature has found relatively low intergenerational rank-rank correlations in the Nordic countries, similar to our estimates. Adermon et al. (2018) estimate a parental wealth-rank correlation of 0.39 for young adults (age 20), and around 0.3 for older ages (age 45+) in Sweden. Boserup et al. (2018) similarly estimate a parental wealth-rank correlation for children in their 40s of between 0.07-0.15 for Denmark. For earnings, Chetty et al. (2014) report a parental income-rank correlation of 0.18 for Danish children whose income rank is measured at age 30.

For gross income rank, the coefficients for childhood ownership and its interaction with parental rank are very close to zero. The interaction terms for earnings and capital income rank however reveal interesting heterogeneous intergenerational associations: for earnings, the interaction is negative and significant, indicating that among children with underage firm ownership, the correlation between parental income rank and children's earnings is weaker. In contrast, for capital income, the interaction is positive but imprecisely estimated, giving some support that underage firm ownership strengthens the intergenerational association of parental income and child's capital income. Since childhood ownership is concentrated among children from the upper part of the parental distribution, the interaction estimates primarily reflect differences within higher parental ranks. Thus, we illustrate the model's linear prediction for the rank difference of childhood owners versus non-childhood owners, evaluated at the mean parental rank among childhood owner children. At the mean (≈ 80 th percentile), childhood ownership is associated

¹⁰We cannot consistently measure parents' income position before the child becomes an owner. If ownership transfers towards underage children lower parent's income rank, this may mechanically bias our coefficients downward. For a subsample with observable pre-ownership data, we find a small, temporary drop (around 1 percentile) in parents' income rank at the time of transfer, which later reverts. We also run these regressions with household income position and these results support similar conclusions (Appendix Table B2).

with slightly lower earnings rank (reduction of 4.4 percentiles) but higher capital income ranks (increase of 7.6 percentiles) in adulthood.

Panel B of Table 2 presents the top percentile regression results. For all income items, having a parent in the top 1% increases the likelihood of reaching the top 1% as an adult. The interaction terms show that this advantage is amplified among children who were childhood firm owners. Specifically, childhood owners with a top-percentile parent are about 15 percentage points (for gross income) and 25 percentage points (for capital income) more likely to belong to the top of the respective distributions than non-owning children from top-percentile families. In contrast, the interaction is negative for earnings (-4 percentage points), suggesting together with the coefficient on parent position a reduced likelihood of early owners reaching the top of the earnings distribution.

Table 2: Intergenerational income regressions

	Child's outcome in the distribution of:				
	Gross income	Earnings	Capital income		
Panel A: rank regression					
Parental gross income rank	0.194	0.216	0.191		
	(0.003)	(0.004)	(0.005)		
Childhood owner	-1.354	5.299	1.387		
	(3.280)	(3.187)	(4.352)		
Parental rank \times Childhood owner	0.005	-0.121	0.079		
	(0.039)	(0.039)	(0.052)		
Predicted difference between Childhood owner status					
at mean parental rank $= 80$	-0.884	-4.390	7.670		
	(0.843)	(0.828)	(1.134)		
Obs.	192844	192844	192844		
R2	0.061	0.079	0.074		
Panel B: top percentile regression					
Parent in top 1%	0.043	0.028	0.050		
	(0.004)	(0.004)	(0.005)		
Childhood owner	0.004	0.002	0.047		
	(0.007)	(0.005)	(0.010)		
Parent in top $1\% \times \text{Childhood owner}$	0.154	-0.039	0.255		
	(0.038)	(0.015)	(0.043)		
Obs.	192844	192844	192844		
R2	0.027	0.009	0.106		

Note: Analysis based on cohorts 1990–1992. Results from OLS regressions, dependent variable is income rank or a dummy for being in top percentile based on average income at ages 28–30, calculated within child age cohort and year. Parental position is the average position in the years when the child was 16–17 in the gross income distribution. Controls for parental privately held firm ownership, education level, region, civil status, and age included as well as child's gender, birth cohort and privately held firm ownership status (in adulthood). Predicted difference calculated at mean parental ranking among owner children and for top 1%. Standard errors in parentheses and clustered at family level.

Together, these results imply that childhood firm ownership offsets the earnings correlation, while simultaneously reinforcing intergenerational persistence in wealth-related income streams such as capital income. The results point to income composition differences, which can originate from differences either in early-career labor market outcomes between childhood owners and

non-owners or from firm-related income shifting (e.g., working for own firm but compensated in the form of capital income). However, income compositional differences contribute to greater inequality in disposable income and in consumption possibilities due to capital income being taxed at lower rates.

Tax considerations. Given the very young age of underage firm owners, it is possible that underage firm ownership is in part a form of income transfer to children, and could be related to tax optimisation motives. In countries with individual and progressive taxation (such as Finland), if families are able to distribute income from the highest-earning family member to lower-income family members, the total tax burden will be lower.¹¹

For example Koivisto (2025) and Harju and Matikka (2016) have shown that there is substantial excess bunching at the monetary threshold of dividend taxation (see Section 3) among Finnish majority firm owners. Zooming into this threshold and at majority parent owners who have underage children as co-owners we observe clear bunching of dividend income just below the relevant monetary threshold for the main owner, but when total dividends paid to all family members are accounted for, the distribution shifts noticeably to the right (Appendix Figure A3). When the main owner is located very close to the threshold (between -5,000 and 0 eur distance), in 70% of cases his/her familys' total dividends cross the threshold. This pattern is consistent with strategic income shifting: if the main owner exceeds the threshold, this on average results in a 15 percentage points higher effective tax rate than when distributing dividends in excess of the threshold to their underage family members (whose incomes fall well below the threshold). From a tax minimization perspective, there is a clear incentive to use family members as income recipients, and the observed data suggest that this practice is utilized by firm owners with high dividend incomes.

In addition to addressing contemporary tax considerations, firm co-ownership – which is often also advised in inheritance tax planning – means that a family can reduce their children's gift or future inheritance tax burden. Consider for example that the average running three-year sum of dividends paid per child is around 9,400 euros in our data (20,715 euros if the parent is in the top 1%). This can be contrasted with the tax-free gift threshold, which has varied between 3,000–5,000 euros per three years. A back-of-the-envelope calculation illustrates that with a 4,000 euro tax-free threshold gift taxation would amount to 7% on this 3-year sum (9% at the top 1%) if these transfers were made as gifts instead of dividend payments.

Moreover, we need to take into account that the net wealth accrued through a firm is not subject to inheritance tax in the future if a child is a co-owner. If a child becomes a shareholder when the firm's valuation is low, and the firm's net wealth grows over time, the resulting tax savings can be substantial. Because a firm's wealth increases through the accumulation of retained profits, we allocate these retained earnings in our data to the underage owner in proportion to their ownership share.¹² On average, during the childhood ownership years, this amounts to about 6,900 euros per year for a child owner, and about 28,800 euros per year for those with a

¹¹Stephens Jr. and Ward-Batts (2004), LaLumia (2008) and Alan et al. (2010) have shown evidence of such income-splitting between family members.

¹²We follow the methodology in Alstadsæter et al. (2016), Fairfield and Jorratt De Luis (2016) and Paukkeri et al. (2023), who have estimated the impact of wealth within firms on inequality. See also Kopczuk and Zwick (2020) for a discussion on wealth retained within firms.

parent in the top 1%. This yearly firm wealth alone would place these children roughly in the third to fourth decile of the adult wealth distribution.¹³

In sum, for some families, a significant amount of wealth can be transferred tax-free through privately held firms already during childhood. Moreover, this accumulation often continues into early adulthood, as many children remain shareholders at least during the early stages of adulthood.

5 Conclusions

We have documented a strong association between parental income rank and the likelihood of underage children being co-owners of privately held firms. Consequently, a small subset of children begins accumulating substantial wealth during childhood through family-owned firms and continue to differ from their peers in early adulthood especially by having a larger fraction of income in the form of capital income.

This previously underexplored channel sheds light on the formation of wealth gaps and is likely driven by a combination of ownership culture and tax planning factors. Given prior research showing that observable, reported, and taxed inheritances and gifts account for only a small share of life-cycle wealth disparities — even among the wealthiest families (Black et al., 2024) — our results highlight a more subtle way of transfering wealth at an early stage.

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Income Inequality Early in Life: Underage Children as Owners of Privately Held Firms

Tuuli Paukkeri and Terhi Ravaska

Online Appendix

A Additional Figures

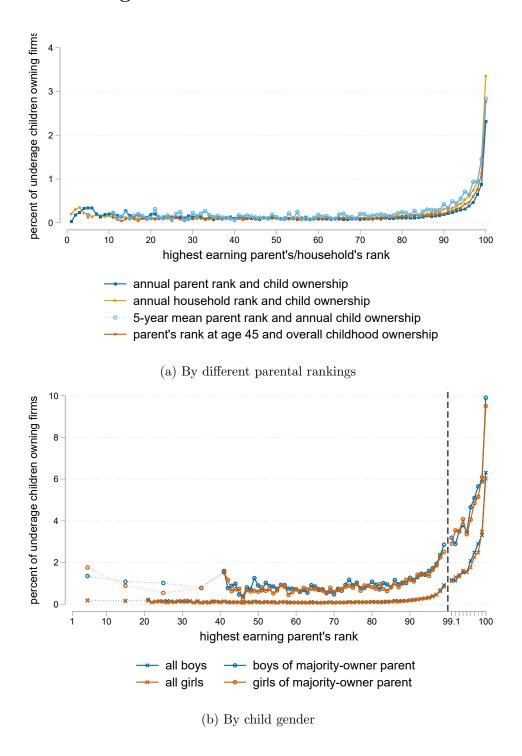


Figure A1: Share of underage children owning privately held firms by parent's income rank, with different parental rankings and gender

Note: Figure shows the share of underage children owning privately held firms with different parental ranking definitions and by gender. Majority owner parent refers to a parent who holds at least 50% ownership in a privately held firm. Dashed lines indicate regions where percentiles are grouped into averages in each decile (scatter point displayed at the center of that decile) due to to the smaller number of observations. Total population, 2006–2022 pooled.

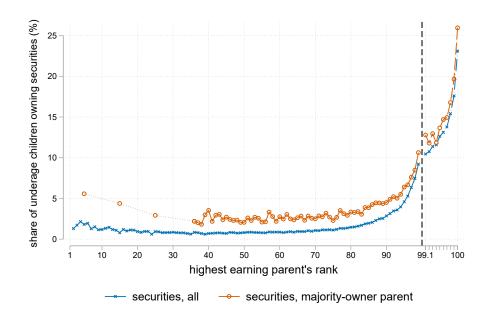


Figure A2: Share of children owning securities by parental income rank

Note: Figure shows the share of children who own securities (excl. shares from privately held firms), by parental ranking and parental firm ownership status. Majority owner parent refers to a parent who holds at least 50% ownership in a privately held firm. Horizontal axis is the child's highest-earning parent's position in the individual gross income distribution of all adults, percentiles 1–99 and per mille within the top 1 percent. Dashed lines indicate regions where percentiles are grouped into averages in each decile (scatter point displayed at the center of that decile) due to the smaller number of observations. Total population, 2011–2017 pooled.

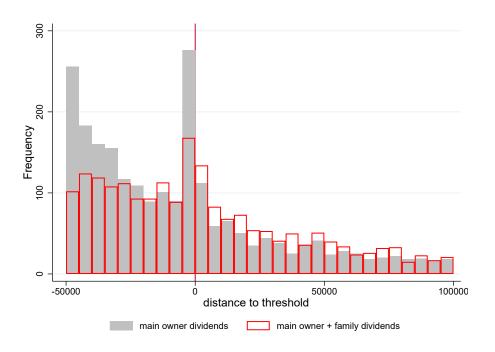


Figure A3: Bunching at the individual dividend tax threshold

Note: Gray bars: frequency of main owner dividend sum by distance to individual dividend tax threshold. Red bars: frequency of main owner's family's total dividend sum relative to individual dividend tax threshold. 5,000 euro bins, showing bins close to the threshold. Sample is all firms with a majority owner (>50%) with underage children as co-owners, who are located between -50,000 and +100,000 relative to the threshold (in red bars, 15% of observations fall in the long right tail which is excluded from the graph for scaling purposes).

B Additional Tables

Table B1: Characteristics of underage children's highest-earning parent by family type

		ily type of child o	owners	=
	Family	Entrepreneur-	Parents of	
	legacies	parent	Other	non-owners
Bottom 90%				
Age	41.5 (6.7)	45.4 (6.8)	45.2 (7.5)	$39.3\ (7.8)$
Women (%)	46.5	49.6	58.0	39.5
Tertiary ed. (%)	42.0	38.2	37.3	28.3
Gross income, 1000 euros	$39.2\ (11.5)$	$39.1\ (12.0)$	36.9 (12.6)	37.5 (11.0)
Managers (%)	6.9	14.4	4.8	1.7
Professionals (%)	44.5	46.1	38.4	30.2
Administrative and office (%)	16.4	16.9	20.3	18.3
Manual (%)	13.6	13.6	8.6	24.9
Other occupations (%)	6.8	5.8	10.6	9.7
Missing occupation (%)	11.9	3.4	17.3	15.2
Child-year observations	3,033	4,994	6,444	12,804,197
# distinct children	852	1,794	2,435	1,714,315
Share (children)	16.8	35.3	47.9	, , , ,
		33.3	-1.10	
91–99%				
Age	42.9 (5.7)	46.4 (6.0)	46.0 (6.7)	42.5 (6.5)
Women (%)	26.0	27.8	26.7	19.7
Tertiary ed. (%)	69.3	57.8	68.4	60.3
Gross income, 1000 euros	$83.4\ (19.8)$	83.7(20.2)	85.7(20.4)	75.7 (17.4)
Managers (%)	25.0	26.8	27.5	16.6
Professionals (%)	56.0	54.6	51.0	58.8
Administrative and office (%)	4.5	4.3	5.3	4.7
Manual (%)	4.3	8.2	3.2	11.5
Other occupations (%)	7.1	4.8	6.3	6.5
Missing occupation (%)	3.1	1.3	6.6	2.0
Child-year observations	4,424	7,050	8,226	4,658,394
# distinct children	1,169	2,495	3,066	860,460
Share (children)	17.4	37.1	45.6	•
m 107				
Top 1% Age	44.0 (5.1)	48.6 (6.4)	47.2 (6.6)	44.5 (6.1)
Women (%)	18.8	11.8	13.1	13.0
Tertiary ed. (%)	73.6	62.8	76.1	73.0
Gross income, 1000 euros	299.0 (318.1)	362.6 (1487.7)	417.0 (1518.6)	211.1 (279.3
Managers (%)	53.3	47.1	48.3	49.1
	31.5	37.1	32.1	
Professionals (%)				37.9
Administrative and office (%)	2.4	3.5	3.2	2.0
Manual (%)	1.9	3.6	1.2	2.5
Other occupations (%)	7.3	7.6	8.5	5.9
Missing occupation (%)	3.6	1.1	6.7	2.5
Child-year observations	2,287	4,586	6,958	586,134
# distinct children	629	1,544	2,257	141,915
Share (children)	14.2	34.9	50.9	•

Notes: Characteristics of highest-earning parent for child owners and non-child owners (standard deviation in parentheses). Income groups refer to the highest-earning parent. Family types: Family legacy: at least one grandparent co-owner; Entrepreneur-parent family: at least one parent is an entrepreneur and co-owner but grandparents are not co-owners; Other: parents are not entrepreneurs, grandparents not current co-owners in the firm. Tertiary refers to highest education degree comprising university-level education (bachelor or master's). Managers, Professionals, Administrative and office, Manual, Other and Missing occupation are based on occupational register data. Share (children) refers to family type distribution among underage owners. Income in 2018 euros. The Euro to US dollar average exchange rate over the observation period was 1.22.

Table B2: Intergenerational income regressions with household income rank

	Child's outcome in the distribution of:		
	Gross income	Earnings	Capital income
Panel A: rank regression			
Household rank	0.205	0.224	0.212
	(0.003)	(0.003)	(0.004)
Childhood owner	-2.985	7.561	-7.400
	(3.207)	(3.151)	(4.648)
Household rank \times Childhood owner	0.019	-0.155	0.176
	(0.038)	(0.038)	(0.053)
Predicted difference between Childhood ov	wner status		
at mean household rank $= 82$	-1.423	-5.147	7.005
	(0.847)	(0.836)	(1.132)
Obs.	191591	191591	191591
R2	0.0640	0.0811	0.0768
Panel B: top percentile regression			
Household in top 1%	0.067	0.038	0.079
	(0.005)	(0.004)	(0.006)
Childhood owner	-0.003	-0.001	0.040
	(0.006)	(0.005)	(0.010)
Household in top 1% \times Childhood owner	0.175	-0.014	0.268
	(0.037)	(0.019)	(0.041)
Obs.	191591	191591	191591
R2	0.032	0.010	0.112

Note: Analysis based on cohorts 1990–1992. Results from OLS regressions, dependent variable is average rank or a dummy for being in top percentile at ages 28–30 calculated within child age cohort and year. Household position is the average position in the years when the child was 16–17 in the gross income distribution. Controls for household include privately held firm ownership, education level, region, civil status, and age included as well as child's gender, birth cohort and privately held firm ownership status (in adulthood). In two parent households, age is average over the two and other controls come from the higher-earning parent. Predicted difference calculated at mean household ranking among owner children and for top 1%. Standard errors in parentheses and clustered at family level.

C Data Construction and Definitions

C.1 Data sources

The data used in this paper cover all individuals residing in Finland during the observation year. They are drawn from high-quality administrative registers, which serve as the basis for official administrative decisions. The datasets are linked using pseudonymized social security identification numbers prepared for research purposes. Statistics Finland prepares the data for research use, and access is provided through secure remote servers.

Background information (for example education level, region, year of birth) is drawn from the so-called FOLK basic data modules, which consistently cover each year since 1987. A comprehensive income measure is compiled from the FOLK income data modules and additional detailed income variables, which are consistently available since 1995. Income items are based on tax returns. As almost all income is taxed and/or reported in tax returns, there is little measurement error in income measures. We also use the FOLK Household-dwelling unit module (available from 1987) and parent-child links to form household members and link family members to each other.

Firm ownership data and dividends paid from firms come from the so-called FLOWN Owner data module and FLOWN dividend data modules. These data are available from 2006. The Owner module provides information on both individual and firm owners. The data has complete recodrs of all owners in limited liability companies with at most 10 owners. If the firm has over 10 owners, the data cover those owners who own at least 10% of the company shares as well as owners who have received a shareholder loan. These datasets include both person and firm identifiers. With the firm identifier, we find the firms' financial statement information from the so-called FSS data modules.

We also have data on the ownership of real estate (apartments) and stock holdings for years 2011-2017, which also originate from the Tax Administration. We also utilize the survey of wealth available online on the Statistics Finland website.

C.2 Variable definitions

Education: Education categories follow ISCED classification. Tertiary education includes levels 6, 7, and 8.

Family types: Family legacy: at least one grandparent co-owns the privately held company with the underage child, and parents of the same parental line are entrepreneurs in the firm ("active") or are not entrepreneurs ("passive"); Entrepreneur-parent: grandparents are not current co-owners of the firm but at least one parent is an entrepreneur in the firm; Other: parents are not entrepreneurs in the firm and grandparents are not current owners of the firm.

Gross income: Sum of wages, salaries, self-employment income, capital income (excluding capital gains), and transfers received.

Industries: Categories for industries are based on the NACE 2008 classification at the one or two-digit level. We use the following industry groupings: Construction and manufacturing (cat-

egories 07–09, 1–3, 41–43), Retail and hospitality (45–60), and Financial, IT, and professional services (61–88) (sub-category Only finance contains categories 64–68), and the rest are coded into Other industries.

Net wealth: Defined at annual level and measured from balance sheet information as all assets minus liabilities.

Number of employees: The number of employees who worked in the firm during the accounting year.

Occupation: Data on occupations follow ISCO-08 classification. Our main occupational categories are defined at the 1-digit level: *Managers* (1), *Professionals* (2–3), *Administrative and service* (4–5), and *Manual* (7–8), and the rest are coded into *Other occupations*. We also separately report *Missing occupations*.

Ownership share: The company shares owned by the individual divided by the total number of company shares. For indirect ownership, when a person owns shares through other companies, we trace through all ownership layers to identify the ultimate owners and assign them their corresponding share of ownership.

Profits: Defined at annual level and refers to operating profits, excluding extraordinary items.

Region: Refers to place of residence at the end of the year, 20 categories.

Retained earnings: Defined at annual level and measures an individual's share of corporate income that is retained rather than distributed as dividends; specifically, it equals the individual's share of profits (or losses) for the financial year minus realized dividend payments.

Sales: Defined at annual level and includes income generated from a company's core operating activities during an accounting period.

Socio-economic status: This variable describes whether a person is for example an employee or entrepreneur at the end of the year. It is construced by Statistics Finland and follows UN Economic Commission standards. It is available from age 16 onwards.