

# The rise and decline of industrial foundations as controlling owners of Swedish listed firms: the role of tax incentives

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## ABSTRACT

Beginning in the interwar period, industrial foundations became a vehicle for corporate control of large listed firms in Sweden. In the 1990s they were replaced by wealthy individuals who either directly own controlling blocks or who own them through holding companies. We study potential explanations for this change and propose two tax-related candidates: shifts in the relative effective taxation across owner types and the dismantling of inheritance taxation that prevented the generational transfer of the ownership of large controlling blocks. We exploit newly computed marginal effective capital income tax rates across capital owners, accounting for all relevant factors, including rules governing tax exemptions. We show that the 1990–91 tax reform, abolition of the wealth tax for controlling owners in 1997, 2003 tax exemption of dividends and capital gains on listed stock for holding companies with a voting or equity share of at least 10 percent, and abolition of the inheritance and gift taxes in 2004 reversed the rules of the game. Recently, control has largely been wielded through direct ownership, and the role of foundations is rapidly declining. These findings point to the importance of tax incentives for the use of foundations as the control vehicle of listed firms.

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## 1. Introduction

In several countries, especially in northern Europe, industrial foundations play an important role as controlling owners of some of the countries' largest firms.<sup>1</sup> This is especially notable in Denmark, where foundation-controlled companies constitute approximately 70 percent of stock market capitalisation (Thomsen, 2017), and in Sweden where a few influential family groups, notably the Wallenberg group, have used foundations to exercise far-reaching control over Swedish industry.

An industrial foundation is a legal entity that is typically founded by an entrepreneur who wishes to secure the future of the company. The donation of the firm's shares to the foundation is irrevocable, and the foundation is governed by a board obligated to fulfil the goals expressed in the foundation's charter. Normally, the charter combines the goal of developing the business as well as possible with a non-profit philanthropic goal that is to be fulfilled with the proceeds from the business assets. The latter goal is normally a necessary condition for achieving a favoured tax status (Kronke, 1988, p. 7; Thomsen, 1999, pp. 119–121).

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<sup>1</sup>For an overview of the importance of foundation ownership around the world, see Thomsen (2018).

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The favoured tax status has been argued to be a main motive for establishing industrial foundations (Fama & Jensen, 1983). The ownership structure of Denmark and Sweden seems to support this view.<sup>2</sup> Denmark and Sweden have almost invariably had the highest tax burden in the world since the mid-1960s. *Prima facie*, the fact that the Swedish controlling foundations were founded prior to this period casts doubt on this explanation. However, the total tax burden may be too blunt an indicator of the tax incentives; tax incentives may be determined by details in the tax code that are largely uncorrelated with the aggregate tax burden. For instance, in the United Kingdom and the United States, inheritance taxes rose sharply in the interwar period and even more so after WWII. In 1950, the top inheritance tax rate reached 80 percent in the United Kingdom and 77 percent in the United States (Scheve & Stasavage, 2016, p. 112). Likewise, marginal income tax rates, and hence the dividend tax rate, rose sharply. In reality, these tax hikes precluded the retention and generational ownership transfer of large firms. If ownership was transferred to a foundation, both of these taxes could be avoided. A detailed analysis may also benefit from a long-run perspective as both the level and structure of taxation has changed radically over time (Henrekson & Stenkula, 2015).

The purpose of this study is to explain why industrial foundations became vehicles for wielding control over a major share of the large Swedish firms listed on the Stockholm Stock Exchange (SSE) and why their importance has waned at a rapid rate in recent decades. We hypothesise that the major explanation for this development is a combined effect of the relative effective taxation of different types of owners and the rules foundations must adhere to in order to be tax exempt. The analysis starts in 1903, the year when a progressive state income tax system was introduced and dividends became taxable, and ends in 2018.

The literature on industrial foundations is sparse and has mainly focused on the consequences of foundation ownership for financial performance (Thomsen, Poulsen, Børsting, & Kuhn, 2018). Our study contributes by making a long-run and detailed analysis of the tax incentives for establishing industrial foundations as control vehicles.

Swedish foundations with charitable purposes (*allmännyttiga stiftelser*) are exempted from tax on capital income, wealth, inheritance and gifts; nevertheless, their real after-tax return on investments in firms depends on corporate income taxation, inflation, the source of finance, and possibly other taxes unrelated to firm profits.

Previous research, e.g. King and Fullerton (1984), Södersten (1984, 1993), and Henrekson and Jakobsson (2001), has treated these foundations as ‘tax exempt’ in their analyses. Although formally correct, this treatment is still potentially misleading in regard to an analysis of the role of foundations as vehicles of corporate control because the foundations’ tax exemption is conditional on their giving away the bulk (in practice defined as at least 80 percent) of their net return to charitable purposes. However, for successful and profitable firms controlled by a foundation, this obligation drains the foundation of resources in a way that is equivalent to an equally large tax. Obviously, this cost is a constraint that makes it more difficult for a foundation to retain its ownership positions over the long term. In particular, foundations will have great difficulties in participating in any major new share issues should the companies they control need additional equity infusions either because they are in a crisis or because they need to raise capital to exploit a golden business opportunity.<sup>3</sup>

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<sup>2</sup>In addition to tax incentives and the willingness to promote charitable purposes, a motive for establishing private foundations can be to avoid inheritance division. By transferring ownership to a foundation, the founder avoids splitting the assets among several heirs, making it easier to maintain a critical level of capital within one voting structure. Furthermore, it effectively makes it impossible for heirs to directly squander the firm assets, and the family may gain social status.

<sup>3</sup>According to some research, such a difficulty may induce foundation-controlled firms to act inefficiently by being reluctant to pay out profits to shareholders despite meagre investment opportunities or shunning business opportunities that require new equity infusions (e.g. Holmén & Högfeldt, 2005, 2009; Morck, Wolfenzon, & Yeung, 2005). On the other hand, Hansmann and Thomsen (2018) find the reverse for Denmark, i.e. that foundation-controlled firms outperform other comparable firms. However, in a review of the international evidence, Thomsen (2017, p. 66) concludes that ‘successful foundation ownership requires a climate of good governance that cannot be taken for granted.’ The question whether foundations are efficient owners relative to other ownership types is beyond the scope of this study.

In addition to business acumen, controlling owners of firms aspiring to retain control for a sustained period must be able to grow their own equity base in line with the equity requirements of the firms they control. For some period of time, control may be retained by means of various methods that create a wedge between voting rights and cash-flow rights, such as dual-class shares, pyramiding and cross ownership. However, in the long run, an owner or owner type whose resources are drained by taxation or for other reasons to a greater extent than competing owners is likely to decrease in relative importance.

The calculation of the real effective taxation of an investment with a certain pre-tax rate of return is far from straightforward. Such a calculation depends in complex ways on the type of owner, the source of finance, the combined effect of all relevant taxes and the rate of inflation. We use the King and Fullerton (1984) framework to annually calculate the marginal effective tax rate on capital income for the type of industrial foundations used for the control of public firms and for direct individual ownership.

In addition to calculating and comparing the effective tax rates for these two types of owners, we account for the cash-flow effect stemming from the foundations' obligation to promote their stated charitable purpose in order to be tax exempt and for other tax effects that do not enter into the calculation of the tax rates, notably inheritance taxation and a more recent change in the tax law that makes it more advantageous to wield control via a wholly owned holding company.

For reasons explained below, the most relevant comparison concerns an investment financed by retained earnings, where a specified real rate of return before tax accrues to the foundation or the individual owner in one of three forms: dividends, capital gains, or as a mix of the two, where the proportion is set to the historical average of dividends and capital gains in the stock market return. The calculated tax measure accounts for the total effect of the taxation of owners, i.e. it includes the effects from corporate income taxation, capital income taxation, and wealth taxation, as well as the interaction of these taxes with inflation.

Our analysis helps explain why economically significant industrial foundations were established between WWI and the 1960s. Tax incentives for exercising control through industrial foundations were negligible until WWI. Increased taxes, especially after WWII, made it exceedingly difficult to retain and transfer the ownership of large family firms to the next generation. For instance, the establishment of the Ax:son Johnson foundations in 1947 was caused by increased taxation. It may seem contradictory that no major industrial foundation was founded from the mid-1960s through the 1970s, when the incentive for foundation control compared to individual ownership was strongest. This also has a causal explanation. Wealth that originated before World War II had already been transferred to industrial foundations, and little domiciled new wealth had been generated that could provide the basis for new influential foundations. Starting in the 1980s, tax reforms made the tax system more neutral. In fact, direct individual ownership became 'cash-flow favoured' following the 1990–91 tax reform; owners who hold stocks personally can now retain a larger share of the cash flow generated in firms because industrial foundations are obligated to distribute at least 80 percent of their capital income (excluding capital gains) to charitable purposes. The playing field was tilted even further away from foundation ownership by subsequent reforms: the abolition of the wealth tax for controlling owners in 1997, the abolition of the inheritance tax in 2004, and a further reform in 2003 that has made it possible for controlling owners to avoid (or indefinitely postpone) owner-level taxation altogether. In line with tax incentives, entrepreneurs who have created substantial wealth since the 1990s control their companies by direct ownership.

## 2. Industrial foundations: tax rules and use as control vehicles of public firms

Since the eighteenth century, foundations have been used to support education and care for the poor. Higher education and scientific research became more important for foundations in the late nineteenth century (SOU 1995:63). Foundations became separately regulated by law in 1929 through the so-called Supervision Act (*Tillsynslagen*). Foundations are self-owned (i.e. lack owners) and

governed by their statutes, and any property that is transferred to the foundation is permanently and irrevocably separated from the previous owner(s) and dedicated to the promotion of a particular purpose (Gunne & Löfgren, 2014).

### 2.1. The taxation of foundation income

There are several categories of foundations, but in this study, we are primarily interested in the type of ordinary foundations (*vanliga stiftelser*) used as the control vehicles of a firm or a group of firms and their tax status.<sup>4</sup> In general, ordinary foundations have to pay tax on all income (SOU 2009:65). However, foundations that promote charitable purposes (the law explicitly lists the eligible purposes; SFS (Swedish Code of Statutes) No. 1994:1220) are exempted from tax on capital income, wealth, inheritance, and gifts if the following conditions are fulfilled: (i) the purpose of the foundation is to promote charitable purposes and (ii) the foundation's return is used to a 'reasonable' extent to promote the stated purpose. Case law set the lower bound to 80 percent of the *net* return. This requirement has to be met as an average over five years.<sup>5</sup>

Failing to satisfy any one of the requirements is sufficient to make the foundation fully taxable (at the corporate income tax rate). Net return is defined as current income in the form of all revenues from interest and dividends minus administrative costs, while capital gains are excluded. Thus, to the extent that a foundation can influence the dividend strategies of the firms in which it holds shares, it can also influence how large a share of its total return it is obligated to pay out for charitable purposes.

By transferring personally owned shares to a foundation, it has been possible to use foundations to avoid tax on personal income, wealth, gifts and inheritance while keeping firms under family control across generations. There may also be other motives for using a foundation that are not connected to the tax system. For example, the original owner avoids dividing the assets among several heirs, making it easier to maintain a critical level of capital within one voting structure and avoid the risk that heirs squander the inheritance (except through mismanagement of the firms they may indirectly control through the foundation). Finally, the obligation to donate 80 percent of the foundation's net income to charitable purposes provides an opportunity for the family to gain social prestige.

However, the transfer of ownership to a foundation also comes at a cost. First, to control a company via a foundation, one has to relinquish ownership of the capital. Although the foundation charter may stipulate that the board should contain members of the family that transferred the corporate assets to the foundation, the foundation is governed by its board 'whose fiduciary duty is to the foundation and the goals expressed in its charter' (Børsting & Thomsen, 2017 p. 318). Second, the bulk of the net income must be used for purposes determined by law. Finally, the assets are locked in. If the taxation of direct individual ownership is eased, the opportunity cost of controlling firms through industrial foundations increases, and the domicile of the foundation cannot be changed, i.e. in contrast to an individual owner, a foundation cannot emigrate if the effective taxation of foundations is increased.

### 2.2. The rise of industrial foundations as controlling owners

There is no information or time series of foundations' total assets because this information has never been collected and reported to a central register. Foundations have, however, been important

<sup>4</sup>For details about the various types of foundations and the laws and tax rules that apply, Johansson, Stenkula, and Wykman (2018).

<sup>5</sup>Formally, the first condition consists of two requirements in the tax law: the foundation must have a charitable purpose (or purposes), and the aim of the foundation must be to *solely or virtually solely* promote those purposes. In practice, this requirement means that 90–95 percent of the resources used (i.e. the 80 percent of the foundation's net income) must be spent on activities that the tax authority regards as charitable.

devices for ownership groups to exercise control over Swedish industry. In particular, foundations have been used to build and maintain a strong influence over Swedish industry by a small group of successful entrepreneurs and their heirs. In combination with the use of dual-class shares, pyramiding and cross holdings, several companies can be controlled with a relatively small amount of capital.

Knut och Alice Wallenbergs Stiftelse was founded in 1917 and became the first industrial foundation of major importance as a control vehicle. Stiftelsen J.C. Kempes Minne (1936) and Stiftelsen Seth M. Kempes Minne were founded in 1936 and 1941, respectively, and became controlling owners of Mo & Domsjö, a major wood and paper company. All other foundations functioning as controlling owners of any significance were established in the post-war era: two Johnson foundations (1947), two Dunker foundations (1953 and 1962), the Åhlén Foundation (1954), Ollie and Elof Ericsson's two foundations (1958 and 1961), two additional Wallenberg foundations (1960 and 1963), two Söderberg foundations (1960), Carl Tryggers Stiftelse (1961), and Kjell och Märta Beijers Stiftelse (1974).<sup>6</sup>

The government commission on ownership concentration (SOU 1968:7) found that, in 1964, 17 ownership groups controlled one-third of the largest firms' capital, and one-fifth of all private sector employees were employed in firms controlled by these ownership groups (excluding banks and insurance companies). Fourteen of these groups were controlled by family groups, and foundations were used as the main controlling device in approximately half of the ownership groups.

Thus, foundations had become important as vehicles of control by the mid-1960s. The prime alternative to foundation control of a public firm is the ownership of control blocks through direct individual ownership.<sup>7</sup> When a foundation took over control of a firm, it replaced control based on direct individual ownership. We will now discuss the evolution of the taxation of direct individual ownership.

### 3. Corporate taxation and owner-level taxation of individuals, 1903–2018

Before 1903, the tax system did not incentivize the transfer of business ownership to foundations. Income taxes were of marginal importance, and the top marginal tax rate was a mere five percent or less in the latter part of the nineteenth century. In 1903, a new state income tax reform was implemented. All taxpayers were then obligated to file an income tax return; the tax schedule was also made progressive, and the dividends paid to individuals became subject to taxation.<sup>8</sup> These facts led us to begin our investigation in 1903.

Before we present the various taxes applicable to individual stock owners and the assumptions we make regarding their wealth, income, and the holding period of their stock, we need to present the evolution of taxation at the corporate level, which is unaffected by ownership type.

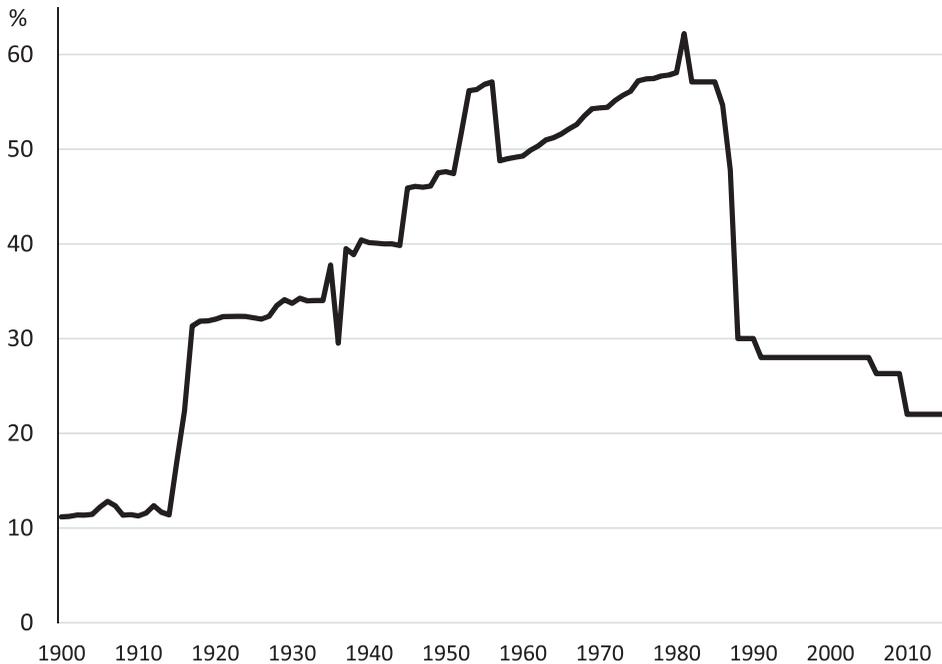
#### 3.1. Corporate income taxation

Profits made by incorporated businesses have been subject to corporate income tax throughout the period investigated. Figure 1 depicts the evolution of the marginal corporate income tax rate from 1903 to 2018. Corporate taxes were paid to the state (national government) and, until 1985, to the municipality (local government). The tax was progressive between 1903 and 1938. For simplicity, we use the highest statutory tax rate in our calculations during that period. The corporate tax rate does not depend on whether the firm is owned by a foundation or a natural person, and our

<sup>6</sup>See Johansson et al. (2018) for a detailed description.

<sup>7</sup>Yet another alternative, which dominates in the United States and Britain, is dispersed ownership and management control. For various reasons, this approach has been rare in Sweden (Henrekson & Jakobsson, 2012; Högfeldt, 2005).

<sup>8</sup>See Johansson et al. (2015).



**Figure 1.** The statutory marginal corporate income tax rate, 1903–2018.

Note: The statutory marginal corporate income tax rate refers to the total effect of local and state corporate income taxes. Only the highest marginal tax rate is shown in 1903–1938 when the corporate tax was progressive. The corporate income tax became proportional in 1939. Source: Johansson, Stenkula, and Du Rietz (2015) and updated by the authors.

conclusions would not be affected if we instead used any other tax rate in the interval between the highest and the lowest rates.

The corporate tax rate remained below 13 percent until the end of WWI. The highest marginal tax rate increased sharply after WWI and during WWII. The statutory tax rate continued to increase during the post-war period, exceeded 50 percent by the mid-1950s, and remained above that level until 1990. The 1990–91 tax reform reduced the statutory tax rate to 30 percent. The tax rate was then lowered in three successive steps, reaching 22 percent in 2013.<sup>9</sup>

Between 1939 and 1991, there were many accounting rules that enabled firms to substantially reduce their effective corporate income tax rates; by the early 1970s, the average effective corporate tax rate was below 20 percent in the Swedish business sector. This reduction resulted from the introduction of tax-reducing depreciation rules, inventory valuation rules, other idiosyncratic tax reductions, and the so-called investment fund system (see Bergström, 1982; Södersten, 1984, 1993).

### 3.2. Owner-level taxation of individuals

The main alternative to transferring ownership to a foundation is to retain direct individual ownership of shares. Profits at the owner level then accrue either in the form of dividends or capital gains.

Before 1991, dividends were taxed according to the same schedule as labour income; since 1991, a flat rate of 30 percent applies to dividend and capital gains on listed stock.<sup>10</sup> Since we focus on the

<sup>9</sup>Between 1984 and 1990, an additional ‘profit sharing tax’ (PST) on corporations was levied to finance the wage-earner funds. This tax has been estimated to increase the statutory corporate tax rate by approximately five percentage points (Agell, Englund, & Södersten, 1995). This surtax is not included in the figure, but it is accounted for in the marginal effective tax rate (METR) calculations in Section 4.

<sup>10</sup>Except for 1992–93, when the dividend tax was temporarily reduced to 25 percent, and 1994, when it was zero.

controlling ownership of large firms, we assume that the top marginal tax rate applied. This rate increased sharply immediately after WWI to 23 percent and then gradually increased to 47 percent in 1938. The top rate rose to 72 percent during WWII and hovered around that level until 1970. Then, the top rate began to climb and reached a peak of 87 percent in 1979. In the 1980s, the rate decreased somewhat, averaging approximately 80 percent.

Since our focus is on the long-term ownership of firms, we assume that personal owners, when applicable, can benefit from the tax rate for long-term holdings. Formal capital gains taxation was not introduced until 1911. Capital gains on stocks held more than five years were tax exempt. In 1966, long-term capital gains were taxed for the first time. Ten percent of the proceeds of the sale of shares were included in the income tax base of the seller for shares owned five years or more. In 1976, the rules were changed so that 60 percent of the gains on shares held for two years or more was tax exempt, while the remaining 40 percent was taxed at the marginal income tax rate.

In 1911, a wealth tax was introduced for individuals. Industrial foundations were exempted (Stenshamn, 1967). Initially, the wealth tax was integrated into the ordinary income tax system as part of the wealth was added to taxable income (and then, the taxpayer paid income tax on this new higher income level). The share of wealth that was added to income varied over time. Several temporary income taxes that were introduced during and between the World Wars had the same construction.<sup>11</sup>

In 1934, a new separate wealth tax not connected with the income tax system was introduced. The top marginal tax rate was initially set at 0.5 percent. Substantial increases followed in 1948 and in 1971, when it increased to 1.8 and 2.5 percent, respectively. The tax rate peaked in 1983 at four percent. Between 1978 and 1996, listed stock was valued at 75 percent of the quoted value. This rate was raised to 80 percent in 1997. In 1997, the wealth tax was repealed for owners of listed firms who controlled at least 25 percent of the voting rights.<sup>12</sup> Moreover, if firms that went public decided to list themselves on the so-called O-list rather than the A-list, the shares were not subject to the wealth tax (this was true for firms listed before 28 May 1997). Virtually all newly listed firms, therefore, chose the O-list, and as a result, we assume that the wealth tax was fully repealed for controlling owners as of 1997.<sup>13</sup> Finally, complicated reduction rules were introduced in 1934, which lowered the wealth tax for people with very high wealth by up to 50 percent in most years until the entire wealth tax was abolished in 2007 (Du Rietz & Henrekson, 2015); we assume that controlling owners of listed stock could fully benefit from these reduction rules. The resulting wealth tax rates used in the calculations are presented in Figure 2.

The wealth tax is included in the calculation of the marginal effective tax rate (METR) for direct individual ownership and is of significant importance for the magnitude of the METR for this owner category and thus for the relative advantage of ownership through industrial foundations.

#### 4. Comparing the owner-level taxation of foundations and individuals

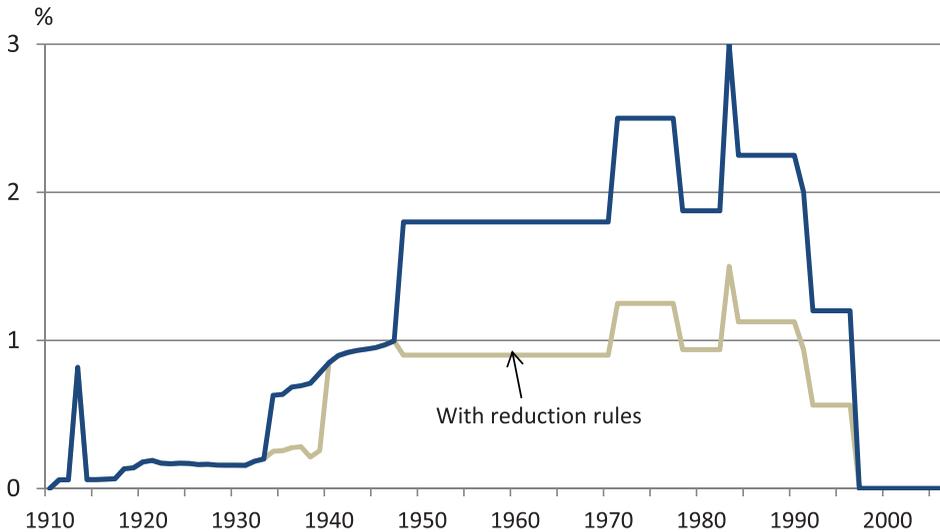
A person or a family can control firms by direct individual ownership, i.e. they can personally own the stocks, or they can control firms through an industrial foundation, i.e. they can transfer the shares to an industrial foundation that they control. For a good understanding of the tax incentives for controlling firms through industrial foundations, it is necessary to compare the real effective taxation of direct individual ownership and that of industrial foundations (including any cash-flow effect resulting from the donation requirement). Since the major holdings of the influential foundations are listed firms, the comparison will be made for listed firms.

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<sup>11</sup>See Du Rietz and Henrekson (2015) for an exhaustive account.

<sup>12</sup>The voting rights of family members and the rights held by the firms they controlled could be included.

<sup>13</sup>An alternative assumption would be to assume that the wealth tax for controlling owners was abolished in 1991 when the assessed value of unlisted stock was set to zero, which also applied to the stock of firms on the O-list.



**Figure 2.** Effective wealth tax rate on the market value of the shares of an individual controlling owner, 1911–2006 (%). Source: Du Rietz and Henrekson (2015).

King and Fullerton (1984) introduce a model that makes it possible to calculate the real effective taxation of the returns on an investment project based on the source of the financing and the type of owner.<sup>14</sup> In principle, the framework makes it possible to account for the combined effect of all relevant taxes and the rate of inflation.

We use this framework to compare the effective taxation at the owner level, where the owner is either a foundation or a natural person. In line with what is customary in studies using this framework, we will assume a *real* rate of return of ten percent before tax.

In the original King-Fullerton framework, the use of retained earnings enables investors to tax the return from the investment as capital gains rather than – as is the case with new share issues – as income tax (dividend tax). Receiving the return in the form of dividends or capital gains has a large effect for foundations due to the donation requirement, and we focus the analysis on these differences. Hence, we abstain from the original tax distinction between the sources of finance and instead analyse the METR when the return accrues to the owner either through the payout of dividends, through capital gains on the shares owned, or as a mix of the two. Retained earnings are the most relevant case for foundations as owners, but the only difference from a fiscal tax perspective between these two cases is the so-called Annell deduction.<sup>15</sup>

Actual inflation rates are used in the calculations. We also account for the effect of special tax rules during this period, such as the investment fund system, a special additional allowance provided between 1976 and 1978 and in 1980, and the tax equalisation reserve (the SURV). Those allowances lower the effective corporate tax rate in different ways. Between 1939 and 1951, the

<sup>14</sup>In the King-Fullerton framework, a further distinction can be made with regard to the type of asset (machines, buildings and inventories) and the industry (manufacturing, other industry and commerce). In total, this approach makes it possible to calculate effective tax rates for 81 different combinations of industry/asset/source of finance/owner type. In this study, we compute the METR for a marginal investment in machinery. Because the general tax system in Sweden is independent of industry and has seldom had industry-specific subsidies, we disregard industry in the calculations.

<sup>15</sup>This scheme allowed firms to deduct dividends on newly issued shares against profits, i.e. firms were entitled to a mitigation of the double taxation of dividends. In 1961, when the scheme was first introduced, the maximum deduction rate was four percent per year. This rate was increased to five percent in 1967 and to 10 percent in 1980. The time period was first set to six years. This period was later extended, first to 10 and then to 20 years (Södersten, 1984, 1993). The scheme was abolished in 1993. The Annell deduction reduced the METR for a foundation (including the drainage effect of the donation requirement) by, at most, approximately 15 percentage points.

immediate write-off of investments was also possible, which greatly reduced the effective corporate tax rate.<sup>16</sup>

#### **4.1. Foundations: tax exempt but cash-flow drained**

The King-Fullerton framework distinguishes among three types of owners: households, tax-exempt institutions, and insurance companies. Previous research has classified Swedish foundations used as control vehicles as tax-exempt institutions (e.g. Henrekson & Jakobsson, 2001; Norrman & McClure, 1997; Södersten, 1984, 1993). In a strict sense, this classification is a correct interpretation because donating a part of one's income should not be equated to a tax. However, the donation is not voluntary since tax exemption is conditional on the foundation donating at least 80 percent of its net income to charitable purposes. The requirement to donate the bulk of the net income to charitable purposes has a negative cash-flow effect similar to an equally large dividend tax, which reduces the ability to maintain control over the companies and hence provides a negative incentive for entrepreneurs to use industrial foundations as control vehicles. This cash-flow effect has not been considered in previous analyses.

#### **4.2. All returns in the form of capital gains**

In Figure 3, we present the evolution of the METR for industrial foundations and direct individual ownership when all returns accrue in the form of capital gains. It is clear that the effective taxation of individual ownership is not significantly disadvantaged relative to that of foundation ownership before WWII. Before 1966, when a capital gains tax is introduced on long-term individual holdings, the difference between the two owner categories stems only from the gradually increasing wealth tax.

From 1966 the relative tax advantage for foundations continually increases. This results from a combined effect of the fact that long-term capital gains are no longer tax exempt, a further slight wealth tax increase and a higher rate of inflation, which raises the real effective capital gains tax.

The 1990–91 tax reform resulted in a dramatic decline in the real effective taxation of direct individual ownership; the effective rate decreased from approximately 80 percent in the early 1980s to approximately 30 percent ten years later, and it remained at that level until 2018.

The effective tax rate for foundations remains below the level of that for direct ownership. The rate peaked at 43 percent in the early 1980s, and after a steep decline in the early 1990s, which was caused by the reduced corporate tax rate and decreased inflation rate, it oscillated in the 10–20 percent range.

#### **4.3. All returns in the form of dividends**

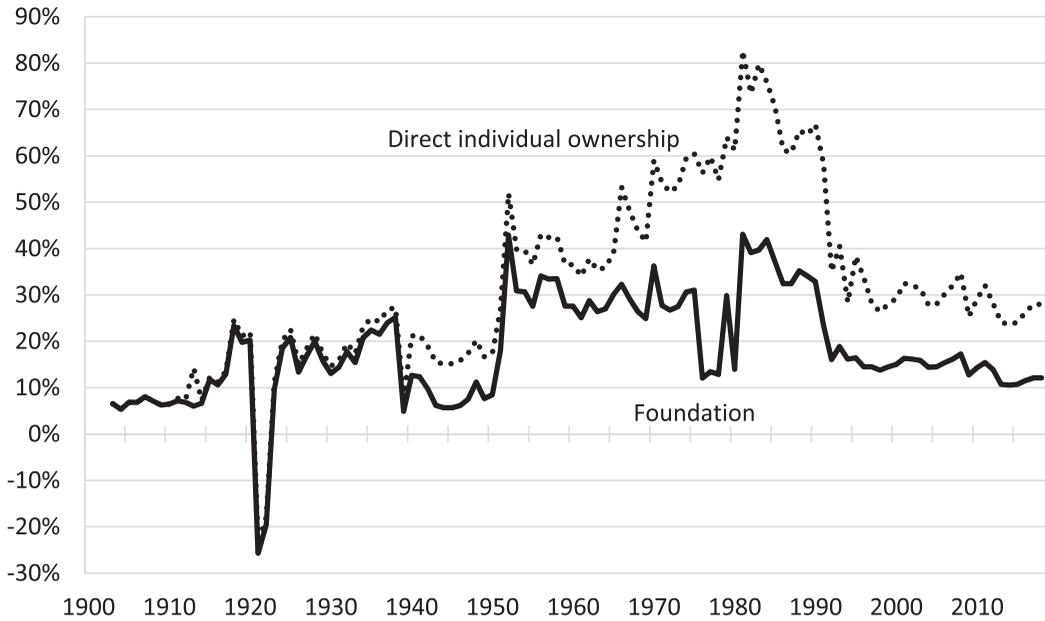
In Figure 4, we present the evolution of the METR for industrial foundations and direct individual ownership when all returns accrue in the form of dividends. In this case, the donation requirement for foundations strongly affects the comparison. For our purposes, it is reasonable to treat the donation requirement as equivalent to a tax, and since all rates of return accrue in the form of dividends, the 'tax rate' (or cash-flow drainage rate) is consistently 80 percent, i.e. the minimum share foundations are obligated to donate to charitable purposes to be tax exempt.<sup>17</sup>

Dividend income received by individuals was taxed according to the marginal income tax schedule through 1990. Since the highest marginal tax rates were low before WWI, the tax system provided no

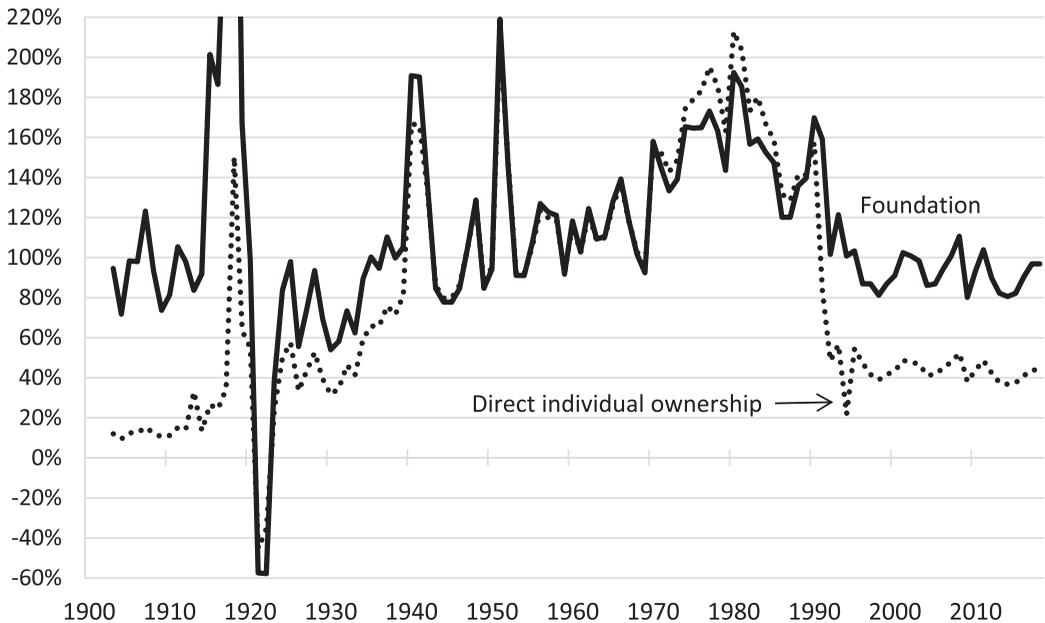
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<sup>16</sup>Those rules and how they are incorporated are described in Wykman (2019). According to Södersten's (1984, 1993) estimations, beginning in 1958, a large gap emerged between the nominal and effective corporate taxes. This gap widened considerably over time, and on average, the effective tax rate was roughly halved.

<sup>17</sup>During WWI, the METR could exceed 300 percent due to the very high inflation rate – which could have been well above 50 percent – in combination with the requirement to donate the bulk of the net income to charitable purposes.



**Figure 3.** Effective tax rate for industrial foundations and direct individual ownership: all return in the form of capital gains, 1903–2018. Source: Own calculation.



**Figure 4.** Effective tax rate for industrial foundations (including drainage effect of donation requirement) and direct individual ownership: all return in the form of dividends, 1903–2018.

Note: The figure is truncated, and spikes exceeding 220% (for foundations in 1917 and 1918) are excluded for increased clarity. Source: Own calculation.

incentive to transfer ownership to foundations. Despite rising marginal taxes, direct individual ownership remained more advantageous than foundation ownership until the eve of WWII.

For the next three decades (1940–1969) the effective tax rates largely coincide, while further increases in marginal taxes and the wealth tax mean that direct individual ownership was more heavily taxed than foundation ownership during the 1970s and 1980s.

Most importantly, with the exception of a few years, real effective taxation consistently exceeded 100 percent from 1940 until 1990, particularly during the 1970s when the average real effective taxation of dividend income in the case of direct individual ownership was almost 170 percent. In other words, an investment with a real rate of return of ten percent before tax had a return of minus seven percent after the payment of all taxes.<sup>18</sup> Accounting for the cash-flow effect, the real effect for foundations was almost as high (with an average of 155 percent during the 1970s).

The 1990–91 tax reform drastically lowered the real effective taxation of direct ownership. After having exceeded 100 percent in previous decades, the rate declined steeply in the early 1990s and has oscillated in the 40–50 percent range ever since.

The taxation of foundations, in the extended sense of the donation obligation, also declined after the 1990–91 tax reform, resulting from the combined effect of lower inflation and the successive reductions of the corporate tax rate. Nevertheless, due to the obligation to donate 80 percent of dividends received, the effective taxation remains very high, averaging 94 percent in 1992–2018.

#### **4.4. Returns as a mix of capital gains and dividends**

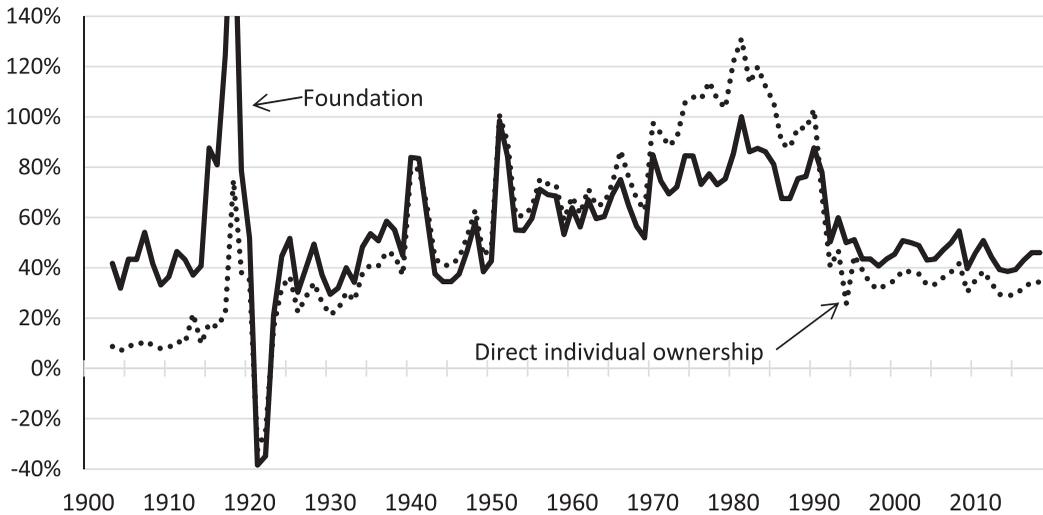
The long-run return on stock-market holdings consists of a mix of dividends and capital gains. Therefore, the most realistic comparison of the relative taxation of ownership by individuals and foundations would be a mixed case, where part of the return accrues in the form of dividends and part in the form of capital gains. Waldenström (2014) shows that the share of the dividend of the return on the public stock market for the period 1870–2012 was, on average, approximately 40 percent. Hence, the share of capital gains was 60 percent. We use these proportions in our calculation of the mixed case. The result is presented in Figure 5.

In this case, the owner-level nominal tax rate for foundations became 32 percent since 40 percent of their return accrued in the form of dividends, and of these, 80 percent had to be donated. The METR for industrial foundations, including the cash-flow effect, fluctuated by approximately 20–50 percent until WWI, which exceeded the METR for direct individual ownership. From the mid-1930s, the METR for industrial foundation and direct individual ownership largely coincide and fluctuate around approximately 50–85 percent until the beginning of the 1970s, when the METR for direct individual ownership exceeded 100 percent, which was higher than the METR for industrial foundations. After the 1990–91 tax reform, the METR decreased for both foundations and, especially, for direct individual ownership. The METR averaged 46 percent for foundations and 35 percent for direct individual ownership from 1992 until 2018.

#### **4.5. Implications of our analysis so far**

We now draw out the main implications of the comparisons of the two types of ownership. A relevant comparison must account for the cash-flow effect of the donation requirement pertaining to foundations. As long as the personal income tax rates remained low, the incentives to donate the bulk of an industrial foundation's income to charitable purposes to avoid these taxes were small. The most relevant comparison is the case in which the rate of return consists of a mix of dividends and capital gains.

<sup>18</sup>A negative tax rate implies that the rate of return after tax is greater than that before tax. For instance, a tax rate of minus 57 percent (the rate for foundations in 1921) implies that a real rate of return of ten percent before tax becomes 15.7 percent after tax.



**Figure 5.** Effective tax rate for industrial foundations (including drainage effect of donation requirement) and direct individual ownership: mixed case (capital gains 60%; dividends 40%), 1903–2018.

Note: The figure is truncated; the spike of 198% for foundations in 1918 is excluded for increased clarity. Source: Own calculation.

In the mixed case, the effective tax rate for direct individual ownership did not markedly exceed the level of that for foundations until the mid-1960s. At the same time, it is striking how high the real effective taxation was for both types of owners from the late 1960s until the end of the 1980s.

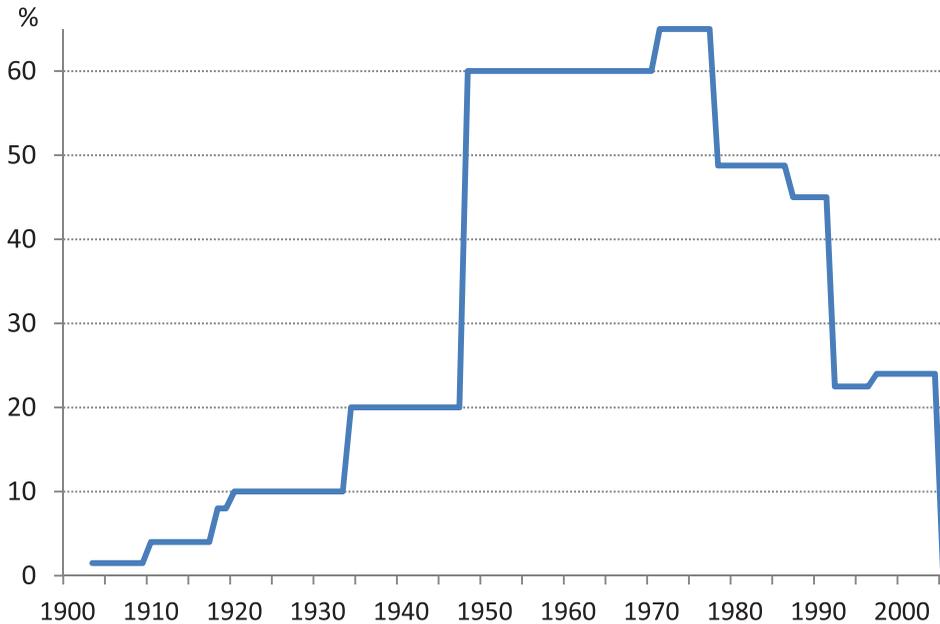
The 1990–91 tax reform substantially reduced the METR for direct individual ownership. The *de facto* abolition of the wealth tax in 1997 further decreased the METR for direct individual ownership, and since then, the METR in the mixed case has favoured direct individual ownership relative to foundation ownership.

In sum, taking tax incentives and cash-flow effects into account, direct individual ownership was more tax efficient until WWI. During the interwar period, the results were mixed. After WWII, the pendulum began swinging in favour of industrial foundations, but it was not until approximately 1970 that the tax advantage of industrial foundations became indisputable. The situation was reversed by the 1990–91 tax reform unless almost all returns accrued in the form of capital gains.

#### 4.6. Additional factors not accounted for in the METR calculations

Typically, foundations used as control vehicles are founded by entrepreneurs who wish to secure the future of the firm(s) they have created and developed, thereby hoping to secure the continuation of what they regard as their contribution to society and ensuring that their accomplishments and their family name will be remembered and esteemed for a long time to come (Thomsen, 2018). For instance, Schumpeter (1934, p. 93) was of the opinion that dynastic ambitions were a key incentive for entrepreneurs. This assumption has been supported by subsequent research, e.g. Gómez-Mejía, Haynes, Núñez-Nickel, Jacobson, and Moyano-Fuentes (2007). Assuming that such motives are important, high inheritance and gift taxes may preclude or make the generational transfer of ownership within a family prohibitively expensive.<sup>19</sup>

<sup>19</sup>There may be many different bequest motives, including egoistic, altruistic and strategic motives. Kopczuk and Lupton (2007) claim that U.S. data mainly support egoistic motives and that taxes on large bequests may be distortionary and effect individual decision making. By comparing the United States and Sweden, Laitner and Ohlsson (2001) find some support for an altruistic or dynastic model of bequest behaviour. Of course, building up a firm that heirs can inherit and continue to develop is only one motive that can be dominated by other motives (such as earning profits). Ohlsson (2011) finds strong incentive effects on bequests and gifts of changes in the gift and inheritance taxation in Sweden in the 1940s.



**Figure 6.** The top inheritance and gift tax rate for shares registered on a stock exchange for surviving spouse and descendants, 1903–2005.

Note: During the period 1978–1996, 75 percent of the market value was taxed, and during the period 1997–2004, 80 percent was taxed. Source: Du Rietz, Henrekson, and Waldenström (2015).

Figure 6 shows the top marginal inheritance tax rate for a surviving spouse and descendants for shares registered on a stock exchange from 1900 until 2005. Generally, the limit at which the top rate begins to apply is so low that it is realistic to assume that the inheritance of a controlling block of stock in a public firm would be hit by the top rate. The tax level was a modest 1.5 percent in the early 1900s, but it increased over time. The rate reached ten percent after WWI, doubled to 20 percent in 1934, and increased to 60 percent in 1948.<sup>20</sup> In the early 1970s, the top marginal tax rate peaked at 65 percent before the statutory tax rate started to decrease, and different forms of tax relief were introduced. The top marginal tax rate for publicly listed shares was halved to 22.5 percent in 1992, and the inheritance tax was completely abolished as of 17 December 2004.<sup>21</sup> In addition, if heirs had to sell shares to pay the inheritance tax, they always also had to pay capital gains tax since 1966. That fact further increased the effective tax rate on inheritance.

Hence, the tax incentive to transfer the ownership of large firms to industrial foundations was strong between the 1948 tax reform – when the top marginal statutory tax rate on inheritance was sharply increased to 60 percent – and the 1990–91 tax reform – when the top marginal statutory tax rate on inheritance for listed shares was reduced to 22.5 percent. For instance, the establishment of Axel och Margaret Ax:son Johnsons Stiftelse för allmännyttiga ändamål and Axel och Margaret Ax:son Johnsons Stiftelse in 1947 was explicitly motivated by the increased taxation, particularly

<sup>20</sup>From 1948 to 1958, there were both an estate tax and an inheritance tax, which effectively corresponded to an inheritance tax of 60 percent. Effective from 1959, the estate tax was abolished, and the inheritance tax was increased to 60 percent (Henrekson & Waldenström, 2016).

<sup>21</sup>The date of abolition was originally set to 1 January 2005. This date was later changed to 17 December 2004, as a result of the tsunami in the Indian Ocean on 26 December 2004. The date change was motivated by the fact that the heirs of the 543 Swedes who died in the disaster should not be hit by a tax that would have been abolished six days later.

the increased inheritance tax (de Geer, 1998, p. 209ff.; Feldt, 2012).<sup>22</sup> Obviously, this argument lost all significance when the inheritance tax was abolished.

Thus, even if it was not unequivocally tax efficient to transfer ownership to a foundation before the end of the 1960s as long as there was no change of ownership, it was still the case that the steep increase of the inheritance tax to 60 percent in 1948 made it necessary to transfer ownership to a foundation for a controlling owner who wanted the next generation to retain control.<sup>23</sup>

On 1 July 2003, a seemingly minor change in the tax code was enacted that greatly affects the effective taxation of business ownership. The change in the tax code implies that no tax is levied on profits distributed to the parent company from ownership in other unlisted firms, regardless of whether they can be considered part of the parent's business (*näringsbetingade andelar*). Capital gains on such shares also became tax exempt. Furthermore, the tax exemption applies to holdings of stock in listed firms as long as the holding company owns shares comprising at least ten percent of the votes or ten percent of the equity.<sup>24</sup> Figure 7 depicts the effective tax rates for industrial foundations and holding companies given the new tax rules.

The new tax code thus made it possible to avoid (or indefinitely postpone) owner-level taxation both for controlling owners of listed firms and for individuals with ownership shares in unlisted firms.

Tax will then only be paid on that part of the return that the owner requires for private consumption purposes. Typically, such withdrawals will be subject to a 20–30 percent tax. In other words, since 2003, owners of large firms and large industrial investors in unlisted firms – such as the startup sector – are subject only to a consumption tax, and profits remain untaxed as long as they are not paid out of their holding company. The change from the situation in the 1980s is no less than extraordinary.<sup>25</sup>

It should be noted that having one category of incumbent super-wealthy owners who can benefit from the tax exemption while challengers are drained of resources by being obligated to pay a tax or donate income to avoid being taxed is dynamically unstable. In our case, owners are either obliged to pay a 30 percent tax (which applies to direct individual ownership) or to donate 32 percent to charitable purposes (which is the case for foundations in the mixed case). Figure A1 in the Appendix illustrates the long-term effect of such differences across owner types. There are two owners who initially own 50 percent each of the business sector. One owner is tax exempt, while the other faces a 30 percent tax on profits. Both owners obtain a nominal rate of return of ten percent, and they both reinvest all their profits. After 50 years, the ownership share of the tax-exempt owner reaches 80 percent, and after 100 years, the ownership share is 94 percent.

## 5. The changing pattern of controlling ownership

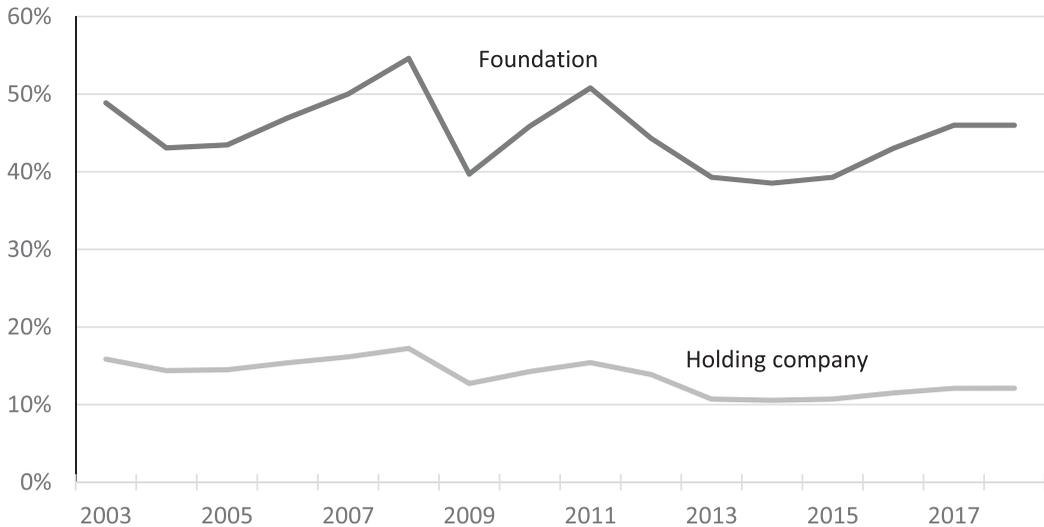
We noted in Section 2 that, by the mid-1960s, industrial family foundations had become important controlling owners of the largest Swedish firms. At that point, there were still a few wealthy families

<sup>22</sup>Knut och Alice Wallenbergs Stiftelse is another example. According to Olsson (2006) and Du Rietz and Henrekson (2015, p. 273), Knut Wallenberg managed to avoid paying the 1918 and 1919 surtaxes and subsequent wealth taxes by donating the bulk of his fortune to the private foundation, Knut och Alice Wallenbergs Stiftelse.

<sup>23</sup>This extreme taxation, bordering on confiscation, may seem odd to contemporary readers. However, this rate was the result of deliberate economic policy to convert companies to 'social enterprises without owners' (Henrekson & Jakobsson, 2001). It has been characterized as a policy aimed at creating a system of 'capitalism without capitalists' (Johansson & Magnusson, 1998, pp. 115–116).

<sup>24</sup>The new legislation also granted a full tax exemption to listed investment companies (Investor, Latour, Industrivärden etc.) for dividends and capital gains from firms in which they hold at least a ten percent voting or equity share. Prior to 2003, an investment company was subject to a 1.5 percent annual tax on its market cap, unless its dividend payouts were as large as all dividends received plus the 1.5 percent tax on its market cap.

<sup>25</sup>Even donations are tax exempt in the sense that owners of holding companies have the opportunity to decide before the annual general meeting to support a charitable organization by making it the beneficiary of an extraordinary dividend. In this case, the dividend payment remains untaxed at the level of the owner of the holding company.



**Figure 7.** Effective tax rate for industrial foundations (including drainage effect from donation requirement) and controlling ownership via holding companies: mixed case, 2003–2018.

Note: For maximum comparability with the previous analysis we assume that 60% of the return is in the form of capital gains and 40% in the form of dividends.

wielding control through direct individual ownership. In the next two decades, almost all of these families disappeared, and no new family fortunes based on entrepreneurship were created that could be transferred to a foundation.<sup>26</sup> Those families that succeeded did so because the owner emigrated, while a great many entrepreneurs sold their firms to closed-end investment funds listed on the SSE or to other large firms and emigrated.<sup>27</sup>

Within the next few years, ownership concentration increased considerably, and by 1967, the Wallenberg family alone controlled ten of the 25 largest companies (Glete, 1994, p. 289) through their foundations. Individual wealth was modest by current standards, and it is evident from the tabulations of the major shareholders of Swedish incorporated firms by Forsgren and Forsgren (1967, 1972) that there were very few sizeable stock holdings of natural persons in the late 1960s and early 1970s. It is also striking that, among the ten largest owners of the ten largest public firms in 1983, there were only three natural persons in total, and only one of them lived in Sweden (cf. Boman, 1982; Hedlund, Hägg, Hörnell, & Rydén, 1985, Chapter 2).<sup>28</sup>

The Swedish stock market was revived in the 1980s fuelled by aggressive devaluations in 1981 and 1982 that boosted profits and by the deregulation of financial markets in combination with several asymmetries in the tax system, which became particularly potent when the previously heavily regulated domestic credit market was deregulated. Nominal interest payments were fully tax deductible against the marginal tax rate until 1981 and, thereafter, at a rate of 50 percent. In contrast, as already noted, 60 percent of the capital gains on long-term stock holdings were tax exempt, and in the late 1970s, the government introduced stock market savings schemes that were tax exempt for households. As a result, the stock market index (including dividends that are assumed to be instantly

<sup>26</sup>Individual wealth was modest by current standards. Total privately held wealth among the members of the Wallenberg family in 1963 was estimated to be SEK 125 million (SOU 1968:7), which corresponded to 0.14 percent of GDP. This share can be compared to the private wealth of the richest industrial families in the 2010s. Their private net wealth relative to Swedish GDP was typically 10–20 times greater (Henrekson, 2017)

<sup>27</sup>The most well-known examples are IKEA (the founder Ingvar Kamprad emigrated in 1972), Tetra Pak (the founder Ruben Rausing emigrated in 1969 and his two sons Gad and Hans in 1982), H&M (the founder Erling Persson emigrated in 1982), and Fredrik Lundberg, who emigrated in 1985 (Henrekson, 2017). Lindkvist (1990) shows that 30,000 Swedes who emigrated in the 1965–89 period were granted permission by the Swedish central bank to export capital from Sweden.

<sup>28</sup>The only person who lived in Sweden was Anders Carlberg, who owned 1.1 percent of J S Saba.

reinvested) increased twelve-fold in the 1980s. The market was further stimulated in the 1990s when foreign exchange controls and all barriers to the foreign ownership of Swedish firms and real estate were removed, which increased the foreign ownership share on the SSE from 7 to 40 percent in ten years. From January 1980 to January 2000, the stock market index of the SSE increased 56 times, which was more than five times the U.S. and UK increases in the same period (Henrekson & Jakobson, 2012).

To defend against the threat to incumbent controlling owners caused by deregulation, the use of dual-class shares and pyramiding was accelerated. In 1950, only 18 percent of listed firms had dual-class shares. This share increased to almost 90 percent in the early 1990s. Pyramiding was achieved by means of closed-end investment funds (CEIFs). In 1985, there were 26 CEIFs listed on the SSE (SOU 1988:38, p. 221). The CEIFs enjoy a privileged tax status, and the share of the SSE market cap controlled by CEIFs peaked at 83.2 percent in 1993 (Holmén & Högfeldt, 2009). To retain control despite deregulation and the sharp rise in stock prices, the CEIFs increased the leverage of their control. Högfeldt (2005) calculates that ‘the control multiplier’ – the total equity value of firms controlled by CEIFs divided by the value of capital invested by the controlling owners – increased from 17.2 in 1993 to 22.3 in 2000. Hence, control was based on an increasingly narrow equity base.

Cross-holding arrangements also rapidly gained importance during the 1980s, where firms such as Asea, Volvo, and Skanska became controlling owners of several other large listed firms (Isaksson & Skog, 1994).

By exploiting these opportunities, some family foundations managed to increase their control of Swedish industries, particularly the Wallenberg Foundations.<sup>29</sup> The influence of the Wallenberg Foundations peaked in 1998 when the Wallenberg group, by means of their foundations leveraged by the CEIF Investor, managed to control 42 percent of the market cap of the SSE (Agnblad, Berglöf, Högfeldt, & Svancar, 2001).<sup>30</sup> At that point, the Söderberg Foundations controlled six firms through their CEIF Ratos, while most other foundations had become marginalised or had totally disappeared from the list of controlling owners on the SSE; some notable examples are the Kempe Foundations, which lost all their influence in the early 1990s, and the Johnson Foundations, which only controlled one listed firm in the late 1990s (the construction company NCC) (Sundin & Sundqvist, 1999).

The period of the great stock market revival (1980–2000) created a number of individual fortunes that were large enough for their holders to act as controlling owners on the SSE. This change is documented in Table A1 in the Appendix, where we list all individuals who are/were blockholders on the SSE during the period of 2000–2010 if the wealth of the individuals/families was created after 1979 and the registered personal wealth exceeded SEK 1 billion at some point in 2007–09.

Moreover, the revival of the stock market boosted the wealth position of a number of individuals who are first-, second- or third-generation industrialists/entrepreneurs who founded their wealth before 1980. Among them, one could mention Fredrik Lundberg (Holmen, Lundbergs, Hufvudstaden, Cardo),<sup>31</sup> Dan Sten Olsson and family (Concordia, Beijer Electronics, Midfart Sonesson, Gunnebo), Antonia Ax:son Johnson (Mekonomen, Axfood), Erik and Mats Paulsson (Peab, Skistar, Brinova), Jörn, Finn and Kirsten Rausing (Alfa Laval), Stefan Persson and family (H&M), and Jenny Lindén Urnes (Beckers, Höganäs).<sup>32</sup> In April 2018, 34 of the 85 largest firms on the SSE (these 85 firms constituted more than 90 percent of the total market cap) had a natural person or

<sup>29</sup>For detailed accounts of the activities of the Wallenberg family and their importance as controlling owners of Swedish industry, see Lindgren (1994) and Olsson (2001).

<sup>30</sup>At the time, Investor’s market cap was 4.6 percent of the total market cap of the SSE, and the Wallenberg Foundations had a 19.4 percent ownership stake (41.3 percent of the votes by virtue of dual-class shares) in Investor (Agnblad et al., 2001, p. 244). Thus, ownership of slightly less than one percent of the total SSE market cap was sufficient to *de facto* control 42 percent of the total market cap ( $100 \times 0.046 \times 0.194 = 0.892$ ).

<sup>31</sup>Lundberg returned from Switzerland in 1993, when the taxation of individual ownership had been greatly reduced.

<sup>32</sup>The firms in parenthesis are firms controlled by these individuals in 2010.

family as their largest owners, and in the overwhelming majority of cases, the controlling block was owned through a holding company.<sup>33</sup>

The creation of these new fortunes coincided with the period when the tax rules for direct individual ownership became more favourable, as analysed in Section 4. The mirror image of the rise of this new class of controlling owners was the decline of foundation control. By 2010, Wallenberg Foundation control had declined to 16.3 percent of the total market cap of the SSE, and it has remained around that level since then. The Söderberg Foundations have totally disappeared as controlling owners, and the Dunker Foundations (which have the city of Helsingborg as their principal and beneficiary) own a mere five percent of the shares in Trelleborg. The exception to the rule is the investment company Nordstjernan, owned by the Johnson Foundations, which has made an extraordinary comeback, and in early 2019, they were the largest owners of five firms listed on the SSE, constituting 0.68 percent of the total market cap on the SSE.

The leveraging of controlling ownership was rapidly scaled down beginning in the 1990s. All cross holdings were dismantled during the 1990s, and the share of firms with dual-class shares fell by half to 46 percent in 2006 and still stands at that level in early 2019. Furthermore, pyramiding by means of CEIFs, although still important, has declined substantially. By 2008, the share of the SSE market cap controlled by CEIFs fell below 50 percent (Fristedt & Sundqvist, 2009).

Thus, the controlling owners who have displaced foundations leverage their control to a much smaller extent, and in many cases, they neither use dual-class shares nor pyramiding by means of CEIFs.<sup>34</sup> Therefore, the equity and voting shares are identical; this is consistent with what one would expect when controlling ownership shifts from foundations to direct individual ownership since the personal economic incentive increases sharply in the latter case, whereas, for the board of a foundation, private economic incentives are largely lacking, which is likely to increase the value of non-pecuniary motives such as the wielding of control per se.

The reduced leveraging of control was also fuelled by the internationalisation of capital markets which made the valuation of a company's stock more dependent on the preferences of international institutional investors. These investors tend to put a discount on firms having blockholders with a wide gap between control rights and cash-flow rights (Denis & McConnell, 2003; Giannetti & Simonov, 2006).<sup>35</sup> As a result, firms adjust to the preferences of international institutional investors by reducing the use of dual-class shares.

## 6. Concluding remarks

During the early post-war period, influential family groups increasingly began to use industrial foundations as control vehicles after transferring their directly owned controlling blocks to tax-exempt foundations. In contrast, the more recent family groups that have attained major influence in Swedish industry do not rely on industrial foundations as control vehicles. Instead, these families have opted for personal ownership. Our analysis helps to explain why these shifts have taken place.

Industrial foundations do not have to pay taxes on capital income, wealth or inheritance and gifts. On the other hand, this tax exemption requires that the foundations donate at least 80 percent of their net income (less capital gains) to charitable purposes, which gives rise to a negative cash flow that hampers their capacity to retain control over firms. The requirement could be mitigated by selling shares instead of receiving dividends. However, this approach comes at the cost of losing control and has therefore generally been avoided. In previous research, the donation requirement

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<sup>33</sup>Fredrik Lundberg was the largest owner of five of those firms, the Schörling family of four, Carl Bennet of three, and Gustaf Douglas and the Paulsson families of two each (Source: Sven-Ivan Sundqvist, retrieved directly from the database SIS Ågarservice).

<sup>34</sup>The reduced use of dual-class shares is even more pronounced on the Nasdaq First North Market, where more than 300 firms were listed in April 2019. Based on a sample of 100 of those firms, we estimated that a mere 20 percent of those firms used dual-class shares, and in cases where the firm was controlled by a natural person or a team of natural persons, they almost invariably owned their shares through a holding company.

<sup>35</sup>For Swedish evidence, see Holmén and Nivorozhkin (2007) and Bjuggren, Eklund, and Wiberg (2007).

was disregarded, which is misleading if one wants to explain the evolution of the pattern of ownership and control of major Swedish firms.

Tax incentives for control through industrial foundations became strong after WWII. The increased capital income, wealth, inheritance and gift taxes made it difficult to retain control of large family firms, and the transfer of the ownership of large firms to the next generation became impracticable.

The 1990–91 tax reform, the abolition of the wealth tax on newly listed firm equity in 1991 (as they were listed on the O-list), the abolition of the wealth tax for controlling owners in 1997, the 2003 tax exemption of dividends and capital gains on publicly listed stock for holding companies with a voting or equity share of at least 10 percent, and the abolition of the inheritance and gift tax in December 2004 reversed the rules of the game. With these changes, only the drawbacks of foundation ownership remained: the irrevocability of the ownership transfer, the donation requirement, and the impossibility of moving the legal domicile out of Sweden should the rules become more unfavourable.

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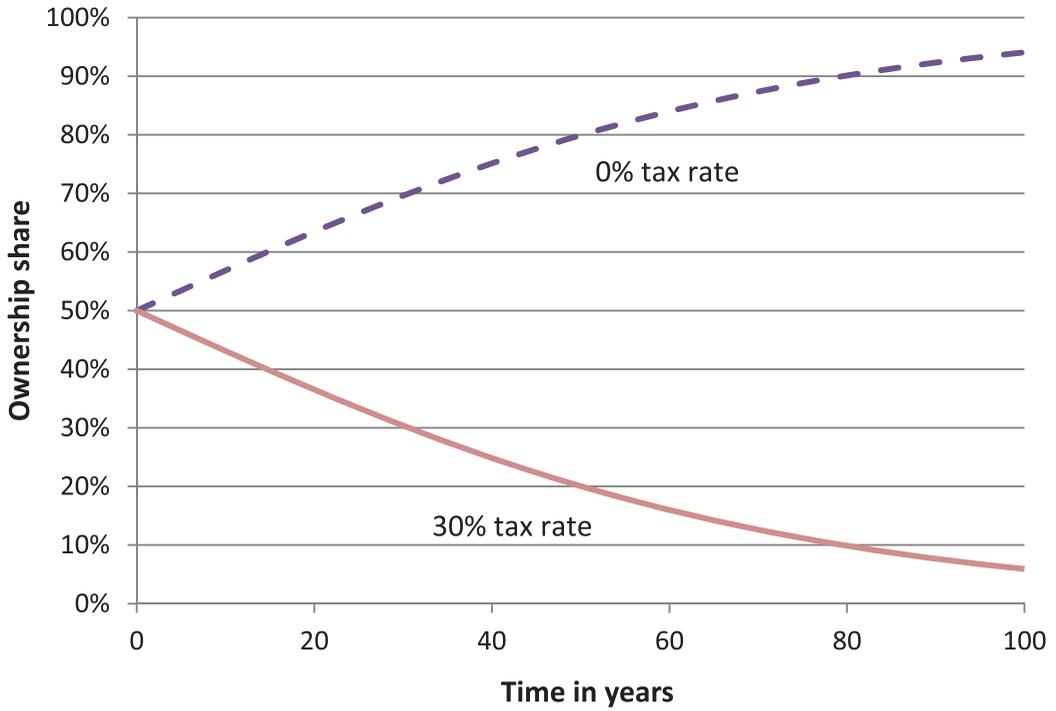
## Appendix

**Table A1.** Blockholders on the SSE in 2000–2010 with personal wealth exceeding SEK 1 billion in 2007–09, fortune founded after 1979, and companies controlled.

Family/person	Year founded	Net worth (billion SEK)	Companies founded or controlled
Arnhult, Rutger	1987	3.3	Corem Property Group, M2 Gruppen
Arnhög, Mats	1980	2.0	Active Biotech, MGA Holding
Bennet, Carl	1989	5.1	Elanders, Getinge
Bjäringer, Martin	1990s	1.3	Björn Borg, Doro
Brandberg, Christer	1981	1.6	Axis, Senea
Douglas, family	1980	22.5	Latour, Säki, Assa Abloy, Securitas
Elam Håkansson, Peter	1997	1.0	East Capital
Hagströmer, Sven	1981	1.7	Öresund, HQ Bank, Avanza
Hansen, Johan	1990s	2.6	Rörvik Timber
Holmström, Birgitta	1990	1.5	Atrium Ljungberg
Ljungberg, Åke	1990	1.5	Atrium Ljungberg
Hopkins, Thomas	2000	1.1	Realia
Hörnell, Erik	1999	1.3	Ongame
Jansson, Torsten	1990	1.7	New Wave
Johansson, Sven-Olof	1988	1.2	Fast Partner
Karlsson, Therese	1984	1.1	Axis
Köling, Mattias	1998	1.2	Allgon
Lidell, Claes	1999	1.3	Ongame
Lindqvist, Bertil	1984	1.2	PA Resources
Norfeldt, Sven	1988	1.4	Capinova, Riddarhyttan
Perlhagen, Carl	1991	1.1	Meda
Qviberg, Mats	1990	1.0	Öresund, HQ Bank, Avanza
Schörling, Melker	1987	10.0	MSAB, Assa Abloy, Securitas
Selin, Erik	1992	9.3	Balder/Din Bostad
Ström, Anders	1993	1.2	Unibet
Tigerschiöld, Dag	1980	1.1	Skanditek
Weil, Robert	1980	3.0	Proventus
Ågerup, Bengt	1987	1.9	Q-Med

Note: In most cases net worth is for 2009. Companies founded/controlled are taken from Fristedt and Sundqvist (2009) and from Daniel Waldenström's data base (Waldenström, 2010). In several cases the control block has been sold.

Source: Waldenström (2010) and Roine and Waldenström (2009).



**Figure A1.** The future evolution of ownership shares of two owners where profits are untaxed and taxed at 30 percent, respectively, and all after tax profits are reinvested.

Note: The two owners are initially assumed to own 50 percent each of all investment capital. Both owners attain an annual nominal rate of return of ten percent, and all after-tax return is assumed to be reinvested.