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The Social Background of Elite Executives: The Swedish Case

Magnus Henrekson and Odd Lyssarides

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Magnus Henrekson^{a,*} and Odd Lyssarides^{a,**}

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Abstract: Sweden is often described as a country where intergenerational social mobility is high, but research also shows that social mobility decreases the closer one gets to the extreme top of the income distribution. We study the occupational mobility for an extreme elite group in society: the CEOs of Sweden's 30 largest public firms since 1945. To our knowledge, there exists no similar study for any other country. The study is based on a hand-collected data set consisting of 229 former and current CEOs who grew up in Sweden and born between the late 1800s and 1970. We have information about paternal occupations for 185 (81 percent) of them, and 60 percent grew up in Social Group I, which implies an overrepresentation for Social Group I by a factor of 9.7. Consequently, Social Groups II and III are underrepresented. However, almost four out of ten CEOs born in the 1940s came from Social Group III and toward the end of the period, the share coming from Social Group II roughly doubled to about 35 percent. Wallenberg-controlled firms were slightly more likely to have CEOs with a Social Group III background. More than half of the CEOs have a father holding a managerial position. Seven of the CEOs have noble surnames, which implies an overrepresentation equal to that of Social Group I; however, among CEOs born after 1939 only two come from a noble family, which suggests a drop in the advantage conferred by a noble background. Finally, less than five percent of the CEOs were members of a family that was a controlling owner or had a father who was also a large-firm CEO.

JEL Codes: J00, J62, Z13.

Keywords: Social mobility, Chief executive officers; Occupational mobility; Sweden.

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1. Introduction

During the 1990s, two Swedish firms in particular stood out: Astra, the pharmaceutical company, and Ericsson, the telecom giant. In the late 1980s, Astra patented Losec, a medication against peptic ulcer disease. Within a few years Losec became the number one bestselling drug in the world. At the same time Ericsson became the world's leading mobile telecom firm reaching a market share of 40 percent for mobile phone systems. The CEO of Astra was Håkan Mogren, born in 1944, and the son of a carpenter. The CEO of Ericsson was Lars Ramqvist, born in 1938, and the son of a miner in a small mining town in central Sweden.¹

The careers of both these top executives are extraordinary, but are they representative? If they are, it would be a strong indication both that selection at the very top end is meritocratic and that Sweden offers excellent opportunities for talented and highly motivated persons irrespective of their social background.

This study focuses on one of the most extreme elite groups in Swedish society, namely the CEOs of the 30 largest Swedish public firms. Besides being iconic representatives of the extreme elite, this group of CEOs is interesting in terms of their highly disproportionate influence and their high personal incomes.

With few exceptions, the largest Swedish public firms are global giants. Thus, it is less likely that they can afford to allow nepotism and favoritism to weigh heavily in promotion decisions. Before a person reaches the CEO level, numerous steps on the career ladder must be climbed and fierce competition survived. Therefore, it is likely that the selection process is largely meritocratic, given the pool of people who are in a position to aim for the top in these firms.

An important aspect is then the extent to which persons can progress in the Swedish business sector, irrespective of their social background, so that they, like Håkan Mogren and Lars Ramqvist, can embark on an executive career that could potentially lift them to the very top of the pyramid of the largest Swedish firms.

Anecdotal evidence about the most powerful entrepreneurs and industrialists in Sweden's pre-welfare state era is presented by humanities scholar Göran Hägg (2013). He concludes that in order to join the extreme elite group, one had to be born on the upper rungs of the social ladder. He further claims that (p. 41), "geniuses with no more than their bare hands had no chance of becoming capitalist empire builders until the recent Social-Democratic era." However, he presents no systematic evidence to back this assertion.

The purpose of this paper is to study the social background of the fathers of the top Swedish CEOs in order to shed light on a key aspect of the CEOs' socioeconomic backgrounds. By comparing the father's occupations to the Swedish society as a whole, we can examine to what extent the social backgrounds of elite Swedish CEOs differ from that of the general public. Moreover, we will explore whether the social background has converged toward the social average when the extension of the welfare state opened up the opportunity to people of modest background to obtain an education

¹ Affärsvärlden (1998).

that made it possible to consider a career that could potentially take them to the extreme top of the largest public firms.²

We use a unique hand-collected dataset consisting of all individuals who have been CEOs of one of today's OMX30 firms from 1945 through 2014.³ The main analysis is based on the fathers' occupations, but we also analyze two other aspects of the CEOs' backgrounds: (i) whether their fathers worked as managers; and (ii) whether the CEO belonged to a noble family. Our data set covers 240 current or former CEOs. Out of the 240 CEOs, 229 grew up in Sweden and thus constitute our population of interest. To our knowledge, this study is unique; no similar study exists for any other country.

The paper is organized as follows. In section 2 we discuss the concept of social mobility and how it is measured empirically. Section 3 consists of a brief survey of existing empirical research on Swedish social mobility. Section 4 describes how the data were collected and categorized, and section 5 presents the results. Section 6 concludes.

2. What is social mobility?

Intergenerational social mobility reflects "equality of life chances" (Björklund and Jäntti 2011; Corak 2013). The concept inherently lacks an absolute definition, although it can be defined broadly as people having, "equal opportunity for welfare when the cards they are dealt are such that if they play their cards as well as one could expect, they gain the same expected welfare" (Arneson 1989). An individual cannot decide on the composition of her metaphorical hand of cards; she cannot choose her parents or any other initial condition in life. Hence, high intergenerational social mobility prevails when class of origin is of little significance in explaining class of destination when the effect of "individual IQ, effort, educational attainment and other relevant variables" is accounted for (Erikson and Goldthorpe 2002, p. 35–36).

From a social perspective, there are two reasons why high social mobility is desirable: (i) socially mobile societies allocate skill and talent more efficiently; and (ii) individuals in socially mobile societies are likely to be more productive as their motivation for hard work and effort increases if they know that this is a means by which they can improve their relative position in society (OECD 2010).⁴ In addition, on moral grounds many would claim that a socially mobile society is more equitable. It should also be pointed out that social mobility is not the same as equality, although cross-country comparisons show that high social mobility is positively related to low inequality

² It should be pointed out that there are only four women (1.7 percent) in the full sample. Thus, the opportunities are largely either open to or exploited by men. More generally, Sweden has had a small share of women CEOs in the leading firms compared to other countries at a similar level of development, which may be due to the fact that Swedish welfare state institutions have tended to blunt incentives for women to pursue careers that could eventually lead to these positions (Henrekson and Stenkula 2009). However, this appears to be changing: Bihagen, Neremo and Stern (2014) find that the likelihood of women to hold top wage positions in large Swedish firms more than doubled from 1993 to 2007.

³ A further condition is that the firm in question was listed when the CEO was in office.

⁴ There may be a tradeoff here. In the case of extreme social mobility, incentives for effort may be reduced since individuals who succeed in climbing the social ladder by expending great effort know that there is a high probability that they will be unable to retain the position they have worked so hard to obtain.

(Breen, Mood and Jonsson 2016; Causa and Johansson 2010; Corak 2013; Hassler, Mora and Zeira 2007).

This study is about *occupational* mobility, while most economic research on mobility focuses on economic mobility and not on class mobility, largely due to the fact that socioeconomic variables are more easily measured.⁵ By contrast, occupational mobility is a vibrant research field in sociology where class is closely tied to occupations (Erikson and Goldthorpe 1992).

The social mobility literature typically focuses on five measures: educational mobility, occupational mobility, wage mobility, income mobility and wealth mobility (Beller and Hout 2006). Measuring social mobility in terms of occupations becomes harder since it faces the problem of valuing different occupations against each other over time. By contrast, correlations between parents' and children's incomes give consistent estimates of how much income variation that is explained by parental income variation and, as income quantiles always have the same size, each individual's upward movement will be mirrored by somebody else's downward movement.

In an analysis of occupations, a larger fraction may move up than down due to structural changes. To weed out such structural effects, sociologists developed the concept of social fluidity,⁶ which controls for changes in the distribution of occupations between parents and their children.

In a careful study, Breen et al. (2016) document a positive association between social fluidity and income mobility. However, it is far from perfect. Based on Swedish data they find that the overlap ranges from 32 to 49 percent.

3. Social mobility in Sweden

There are several studies not just on Swedish intergenerational income mobility but also on Swedish occupational mobility. Economists typically conduct the former, while the latter are by sociologists.

3.1. Income mobility

Income mobility studies include studies both of income and earnings mobility (Beller and Hout 2006). In a meta study, Corak (2006) reports that Swedish earnings elasticity estimates vary between 0.13 (Österberg 2000) and 0.30 (Lindahl 2008).

The role of family background is also estimated by studying the correlation between siblings' incomes. This correlation can be viewed as the fraction of the variance in income attributable to factors shared by the siblings, such as family background and community characteristics. Björklund et al. (2002) study a sample of individuals born between 1951 and 1964 and find a brother correlation of 0.25. The correlation is similar for other Nordic countries but significantly lower than for the United States (0.43). The authors hypothesize that family background and community factors are less important in the Nordic countries and that a more centralized wage-setting model results in a weaker relationship between productivity and earnings.

⁵ For an exception, see Long and Ferrie (2013).

⁶ See, e.g., Breen and Jonsson (2007) and Erikson and Goldthorpe (2002).

Björklund, Jäntti and Lindquist (2009) find an intergenerational income elasticity of 0.34 for individuals born in 1930, which decreases to 0.23 for individuals born in 1950, where it stabilized through 1968, the last birth year in their data. Thus, they find evidence of increased social mobility among people born after World War II.

Using a data set of over 100,000 father–son pairs born in the 1960s, Björklund, Roine and Waldenström (2012) study income and earnings mobility in the extreme top compared to the whole population. Mobility falls as one moves upward in the income and earnings distribution. For the bottom half of paternal income, the income elasticity is 0.14, whereas the elasticity among the top 0.1 percent is a staggering 0.90. For earnings, the elasticity for the bottom half is 0.065, i.e., “generational dependency is almost absent.” For the top 0.1 percent the earnings elasticity is 0.45.

A fair share of research on intergenerational income mobility focuses on what proportion of income earners remain in the same quantile of the distribution as the previous generation(s). Lindahl et al. (2012) analyze Swedish data covering three generations, where the first generation was born around 1900 and the third roughly between 1950 and 1960. They find an especially high persistence in the top quintile; 34 percent of grandsons to members of the top quintile remain in the top quintile.

A second type of evidence of Swedish social mobility, which is closer to ours since it focuses on elite representations, is provided by Clark (2013). He measures Swedish intergenerational social mobility by utilizing the fact that some surnames are more prestigious. Noble and Latinized surnames are shown to be overrepresented in various elite groups, such as among attorneys, physicians and holders of Master’s degrees. Clark finds no support for the common assertion that Swedes enjoy higher mobility rates than the UK and the U.S.

3.2. Occupational mobility in Sweden

Malmenström and Wiedenborg (1958) is most comparable to our own study. We will therefore discuss their results in connection with the presentation of our own results in section 5.

Vogel (1987) uses Statistics Sweden’s *Socioekonomisk indelning* (SEI) classification, a classification that we cannot use, for reasons to be explained later. Thus, Vogel’s findings are not directly comparable to our results. The empirical analysis is based on a sample of the Swedish population aged 30 to 74 in 1985.

Vogel provides estimates of *total* occupational mobility, i.e., the percentage of individuals who did not end up in the same social category as their fathers. *Table 1* shows that occupational mobility increased during the period. Among individuals born before 1920, 66.7 percent of men and 70 percent of women changed their social category, whereas the corresponding values during the 1940s were 76.3 and 79.3 percent, respectively.

Table 1: Percentage of individuals in other social categorization than their father in the first half of the 20th century.

	All ages (30–74)	Born before 1920	Born 1920– 1929	Born 1930– 1939	Born 1940– 1949
Men	73.5	66.7	75.1	76.9	76.3
Women	75.1	70.0	75.2	76.8	79.3

Source: Vogel (1987).

The SEI category “professionals” can be subdivided into “lower,” “middle,” and “higher professionals.” Vogel defines “executives” as a subcategory of higher professionals.⁷ He estimates the flow into all SEI categories, but we focus on the “prestigious” categories as they are most relevant for our study. *Table 2* presents estimates for professionals, higher professionals and executives. Columns 1–3 show the social category of the fathers. Column 4–6 presents a normalization where each cell in columns 1–3 is divided by the overall composition of sons’ backgrounds. This ratio can be interpreted as the representativeness of each social category in each of the groups of interest. For example, 21 percent of the executives grew up in working class homes whereas almost half (49.1 percent) were sons of professionals, out of which 23.7 percentage points were sons of higher professionals. Hence, sons of workers are underrepresented by a factor of 0.45, which implies that men with a working-class background were less than half as likely as the average person to become executives as adults. By contrast, sons of higher professionals were more than five times as likely to become executives than the average person. The more prestigious the social category, the lower the representativeness of men with a working-class background, and the higher the representativeness of professionals, notably higher professionals.

A shortcoming of this analysis is that it does not account for changes in the composition of social categories over time, which distorts the results. This caveat does not apply to newer studies, which instead use social fluidity as their measure of social mobility. Erikson and Goldthorpe (1992) study relative social mobility by comparing the likelihood of those originating in a specific class to those originating in another class to end up in one of their seven social classes net of changes in the marginal distributions of these classes. Their main finding is that social mobility increased during the post-war period through the beginning of the 1980s. Their study is extended through the 1990s by Jonsson (2004) who studies changes in the Swedish class structure (using nine classes) for all the gainfully employed between 25–64 years of age. Jonsson (2004, p. 247) concludes:

Swedish society became more open after the 1940s, and educational inequality continued to decrease up until the mid-1970s. This development meant that Sweden was probably one of the countries in the world where equality of opportunity was greatest. ... while class background clearly meant less for the attainment of higher education among those born in the late 1940s as compared to older cohorts, a similar change is not observed among children born in the 1950s, 1960s, and 1970s.

Breen and Jonsson (2007) study the evolution of social fluidity in Sweden from the mid-1970s to the late 1990s. Their data cover all cohorts born between 1912 and 1974. They find that social fluidity increased the most for cohorts born in the first half of the 20th century. It also increased in the late 20th century, but the increase in that period disappears once differences between cohorts in educational attainment are controlled for.⁸

⁷ The category “executives” is not formally part of the SEI classification. Vogel estimates the category to consist of 35,000 individuals (roughly 1 percent of all salaried workers at the time).

⁸ Engwall, Gunnarsson and Wallerstedt (1996) confirm the rising importance of having an academic degree in order to embark on a career that could potentially lead to the extreme top of the largest public firms: 84 of the 99 CEOs of public firms in 1994 responding to their survey had an academic degree. This can be compared to Carlson (1945) who found a share of 52 percent among the CEOs and deputy CEOs of a sample of the largest Swedish firms in 1944.

Table 2: Son's and father's social category (SEI) association and each social category's representativeness in the general public (%).

	Son's social class			Ref.	Representativeness		
	(1)	(2)	(3)		(4)	(5)	(6)
Father's social class	All professionals	Higher professionals	Executives		All professionals	Higher professionals	Executives
All workers	40.8	29.8	21.0	46.3	0.88	0.64	0.45
All professionals	29.8	41.7	49.1	16.5	1.81	2.53	2.96
Higher professionals	9.5	17.2	23.7	4.4	2.16	3.91	5.38
Agriculture and self-employment	29.4	28.5	29.9	37.2	0.79	0.77	0.80
Total	100	100	100	100			

Note: Based on Vogel (1987) who uses Statistic Sweden's SEI classification, which is not directly comparable to other classifications. The categories "All workers" and "All professionals" contain further subcategories. The sample consists of all Swedish men aged 30–74 in 1985. The column "Ref." gives Vogel's estimate of the share of each category in the total sample. The three "Representativeness" columns report the ratio of the son's association and the reference value, where a value < 1 implies that a person with a particular background is underrepresented in the category of interest, and analogously overrepresented when the value is > 1.

Bihagen, Neramo and Stern (2013) study the effect of class origin on becoming part of the business elite between 1993 and 2007 for men aged 35–44, where the elite is defined as the top 1 percent of wage earners in large firms. The most significant result is that the advantage of originating in the highest of their classes falls somewhat, while there is a consistent disadvantage of having a working-class background. After introducing controls, they show that education and personality traits explain most of the gap. The importance of personality traits is found to increase over time.

3.3. Social mobility: some preliminary conclusions

Our brief survey of existing research shows that estimates of Swedish income mobility differ, partly due to different data, partly due to the methodology used, and whether income is defined broadly or only includes earnings. Moreover, the intergenerational persistence is found to be higher when estimated using tri-generational data and long-term persistence is also found based on an analysis of surnames.

The most relevant finding for our study is the finding that income and earnings mobility is very low in the extreme elite in society. Does this result hold also for occupational mobility? Vogel (1987) already shows that for the flow to the top occupational categories, paternal occupational status is an important predictor. However, his most narrow definition of the elite (“executives”) consists of some 35,000 individuals, or roughly 1 percent of the working population. By contrast, we use a far more restrictive definition of the elite.

Björklund et al. (2009) and Lindahl et al. (2012) show that Swedish income mobility increased during the 20th century. Vogel (1987) shows, although without properly controlling for structural changes in society, that this is also the case for occupational mobility.

In recent studies where social mobility is defined as social fluidity, the effect of changes in the overall occupational distribution is controlled for. Generally, these studies show that social mobility increased greatly for the cohorts up to the 1940s, but it then stagnates once the effect of other factors, notably educational attainment, are controlled for.

4. Method

The representativeness of the CEOs’ background is primarily measured by the occupations of the CEOs’ fathers. In addition, two aspects are studied: (1) Whether the father held a managerial position; and (2) whether the CEO’s family is a member of the Swedish nobility.

We compiled a dataset containing the CEOs of Sweden’s 30 largest public firms (OMX30). Combined with historical records on occupational statistics, we are able to gain an understanding of the representativeness of these elite CEOs. This section describes how the data were collected, how occupations were classified, and how historical occupational statistics were found.

4.1. Data collection

The empirical analysis is based on a data set consisting of current and former CEOs. The CEO succession lines for the 30 OMX30-listed firms⁹ of the Nasdaq OMX Nordic Stockholm, i.e., the Stockholm Stock Exchange (SSE), in the summer of 2014 were collected.¹⁰ The full list of CEOs consists of 240 individuals and we managed to collect all the necessary data for 185 individuals. The data set contains the names of the CEOs from 1945 through 2014, or if the company was founded after 1945, from the year when the company was founded. CEOs born in countries other than Sweden are excluded unless the CEO moved to Sweden at a very young age.

Birthdates and parish of birth were then collected for all CEOs by using the National Archives of Sweden's *Sveriges befolkning* database for the years 1990, 1980, and 1970 (Svensk arkivinformation 1991; Sveriges Släktforskarförbund 1971, 1981). This resource contains civil registry data on all Swedes alive in the specific year. For a CEO with a very common name, the search returned multiple hits and in most cases the correct individual could be identified by means of complementary information (in most cases obtained from the firm's website or newspaper interviews). We deem it highly unlikely that there is even a single instance where a namesake has mistakenly been substituted for the actual CEO.

The parish book data on the father's occupation is from the point in time when the child was born. Böhlmark and Lindquist (2006) find that the most unbiased proxy for an individual's lifetime income is his or her annual income around the age of 35. This age is in line with Bukodi and Goldthorpe's (2011) estimate of the age at which a person reaches "occupational maturity."

The Swedish civil registry is confidential for a period of 70 years after birth. Thus, information on individuals younger than 70 is not accessible to the public. We sent a total of 94 questionnaires to those CEOs who were born in 1944 or later. This questionnaire included a description of the study and a few questions, including some about their father's occupation both at the time of birth (to resemble the data in the parish books) and during the CEO's teenage years. The response rate was 53 percent (50 out of 94). Some paternal occupations were found in different editions of the bibliographical lexicon, *Svensk biografisk handbok – Vem är det?*¹¹ In 27 cases, such lexicons were used in combination with information from the parish books, if the writing was illegible or the occupation listed there could not be readily classified. In 21 cases we were unable to find the entry in the parish book and in these cases we exclusively used the information from the lexicons. For the

⁹ These firms are the ones with the highest market cap. In the summer of 2014 the following firms were included: ABB, Alfa Laval, Assa Abloy, AstraZeneca, Atlas Copco, Boliden, Electrolux, Ericsson, Getinge, H&M, Investor, Lundin Petroleum, Modern Times Group, Nokia, Nordea, Sandvik, Kinnevik, SEB, Securitas, Skanska, SKF, SCA, SSAB, Stora Enso, Svenska Handelsbanken, Swedbank, Swedish Match, Tele2, TeliaSonera and Volvo. During the 1980s SEB (then Skandinaviska Enskilda Banken) had up to five CEOs simultaneously, but one always had the position as the primary CEO. Eighteen of these firms were large firms that were listed on the stock exchange throughout the whole period. The CEOs of the other twelve firms become eligible upon the firm's initial listing on the SSE.

¹⁰ Thus, a large public firm that was delisted before 2014 is not included in our sample, which implies that a classical firm like AGA (delisted in 2000) and the large shipping companies and shipyards that were so important until the 1970s are excluded. If the social backgrounds of the CEOs are related to when in time a firm was listed on the SSE in some way, this may distort our results. However, we deem this to be unlikely.

¹¹ As we have used multiple editions of this series, we will only cite the first edition (Thyselius 1912)

remaining cases, information was collected by a combination of Internet research and the help of leading experts on Swedish public firms, notably Sven-Ivan Sundqvist.

In total, out of the 240 CEOs in the sample, we managed to determine the father's occupation for 185 individuals, or 77 percent. However, 11 of the 240 CEOs did not grow up in Sweden, thus the relevant sample for which it is possible to collect the father's background shrinks to 229. Hence, we have managed to determine the father's occupation for 80.8 percent of the CEOs.

4.2. Classification of occupations

The occupations must be classified according to some principle. Our analysis requires a straightforward, transparent, and, most importantly, consistent classification method. Statistics Sweden uses the standard *Socioekonomisk indelning* (SEI) that was launched in 1974 and revised in 1982. The stated purpose of the standard is to “elucidate the hierarchical structure of a society, based on the individual's position in the labor market, which is assumed to be of decisive importance for the distribution of individual welfare and life chances.”¹²

We cannot use SEI for at least three reasons: (i) It was not used before 1974 and we need to compare the occupational composition in our sample with the composition in society to draw conclusions regarding representativeness; (ii) SEI is, to a large extent, based on labor union association and educational attainment, information that is missing for many of the occupations in our sample; and (iii) SEI's detailed distinctions cannot be meaningfully used due to the small size of our sample.

Nor can we use the EGP (Erikson, Goldthorpe and Portocarero) Class Schema, which distinguishes seven main classes, and finer distinctions within three of the classes resulting in as many as eleven classes. The EGP classification is now the dominant classification used in sociological studies of social mobility (Breen et al. 2016).

Given the limitations of our data, it is more suitable to use the *Social Group* classification introduced in 1911 (Haldorson 2007). Occupations and activities, such as university enrollment and unemployment, are divided into three categories; initially denoted “the higher class,” “the middle class,” and “the manual labor class,” later referred to as Social Group I, II and III. *Table 3* exemplifies the types of occupations in each group. For our purposes the Social Group classification is satisfactory because (i) historical statistics of the relative share of each Social Group covering almost our entire period are available, and because (ii) it is easier to classify occupations according to the Social Groups than according to the SEI's much finer categories.

¹² http://www.scb.se/sv/_/Dokumentation/Klassifikationer-och-standarder/Socioekonomisk-indelning-SEI/ (accessed May 12, 2016); translated by the authors.

Table 3: The three Social Groups.

Social Group I	Firm owners, management professionals, higher professionals, university graduates
Social Group II	Farmers, small-firm owners, supervisors, technicians, office employees, lower professionals, students at senior high school
Social Group III	Smallholders, blue-collar workers, assistants, unemployed, invalids

Source: Haldorson (2007).

4.3. Historical labor force composition

In order to measure the representativeness of the fathers' social position, historical data on occupational composition is necessary. We rely on Statistics Sweden's series of *Riksdagsmannavalen* publications, which contain descriptions of the composition of the Swedish voter base. The publications are produced between parliamentary elections. We use the first report published in each decade, except for the 1930s when the survey of the composition of the labor force was not conducted before the 1936 election. The composition of the electorate provides a good estimate of the size of each Social Group. *Table 4* presents the shares of each Social Group per decade. As the classification was first introduced in 1911, data is missing for the first decade. For that decade we use the 1910s shares. For the 1960s, we use the values reported by Haldorson (2007).

Table 4: Composition of Social Group I, II and III according to Statistics Sweden's electorate surveys.

Decade	Social Group			Source
	I	II	III	
1900s	6.4	40.5	53.1	Statistics Sweden (1912)
1910s	6.4	40.5	53.1	Statistics Sweden (1912)
1920s	8.0	40.7	51.4	Statistics Sweden (1922)
1930s	4.6	39.5	55.9	Statistics Sweden (1938)
1940s	4.5	38.2	57.3	Statistics Sweden (1941)
1950s	6.1	37.4	56.5	Statistics Sweden (1949)
1960s	7.8	37.4	57.5	Haldorson (2007)
Unweighted average	6.2	39.1	55.1	

Note: The last time that Statistics Sweden estimated the composition of the Swedish voter base in terms of Social Groups is the 1948 election (Statistics Sweden 1953, p. 61). Social Group I has then increased to 5.2 percent. We assume that the rising trend continued in the 1950s and approximate its share by the average of the share in the 1940s and the 1960s.

4.4. Categorization of managers and nobility

In Statistics Sweden's Social Group classification, occupations that include managerial responsibilities are not immediately classified as Social Group I. For example, small-firm owners are classified as members of Social Group II. Having a father in a managerial position could affect a son's choice of occupation, which is why we also analyze the share of CEOs that are sons of managers.

The occupations in our sample that include managerial responsibilities are identified by a dummy variable. Admittedly, this classification is less distinct than the Social Group classification as a single word or a pair of words for describing someone's occupation may be insufficient to determine whether the individual's occupation included managerial responsibilities. A title such as engineer

makes it highly likely but far from certain that this person’s job description included managerial tasks. Such cases were classified as non-managers. The use of this principle suggests that the fraction of managers in our sample will be biased downwards. On the other hand, when filing the parish records, the fathers were probably more prone to overstate the prestige of their occupation. Consequently, these two biases pull in opposite directions.

The Swedish Peerage Book (*Adelskalendern*) provides a list of noble surnames in Sweden. Thus the surnames inherently reveal whether they belong to the nobility.

5. Results

First, we present the findings from the analysis on representativeness of the CEOs’ Social Group associations, both for a static measure and across time. Subsection 5.2 presents results regarding the CEOs who had fathers in managerial positions and subsection 5.3 presents the results of the analysis of noble surnames.

5.1. Social group representativeness

5.1.1. A static measure

Table 5 shows the frequencies and percentages of the fathers’ occupations according to each Social Group classification.

Table 5: Distribution of CEO fathers across the Social Groups.

Social group	No.	Percentage
I	111	60.0
II	39	21.1
III	35	18.9
Total	185	100

In the full sample, 60.0 percent grew up in homes classified as Social Group I, while this group represents an average of 6.2 percent of society in the period 1900–1969. Hence, children of members of Social Group I are heavily overrepresented among the CEOs by a factor of 9.7 ($60.0/6.2$).

Analogously, Social Group II averages 21.1 percent in our sample, whereas the corresponding share in society over the same period was 39.2 percent. The group is underrepresented in that its share is only 53.8 percent of the size ($21.1/39.2 = 0.538$) necessary for it to match its share of the total population.

CEOs that grew up in Social Group III make up 18.9 percent of the sample, while its share of the total population averaged 55.1 percent. Hence, Social Group III is underrepresented in that its share is only 34.3 percent of the size ($18.9/55.5 = 0.343$) necessary for it to match its share of the total population.

A further indication of the importance of social background is to examine what proportion of the CEOs either belonged to a family of controlling owners or had a father who was also the CEO of one of Sweden’s largest firms. There are only 11 such cases in the sample. Thus, less than five percent

(11/229 = 0.048) of the CEOs were members of a family that was a controlling owner or had a father who was also a large-firm CEO.

5.1.2. Change over time

Thus far, the data shows that the sample CEOs were born into families that did not represent society as a whole in terms of social background. Social Group I is heavily overrepresented. An interesting question is whether this skewness is stable over time or whether the representativeness of the social backgrounds of the CEOs has been evened out during the post-war period.

Table 6 shows the evolution by decade of the composition of the CEOs' social background. Individuals born before 1900 (n = 6) were coded as born in the 1900s. Individuals born in 1970 (n = 2) were coded as born in the 1960s. In Table 7, the CEOs' Social Group association is divided by the corresponding fraction in society as a whole in order to get a measure of the representativeness of each Social Group (cf. Clark 2013, 2014).

Table 6: Distribution of CEO fathers across the Social Groups by birth decade, percentages in parentheses.

Decade	Social Group			Total
	I	II	III	
1900s*	13 (65.0)	3 (15.0)	4 (20.0)	20 (100)
1910s	11 (73.3)	2 (13.3)	2 (13.3)	15 (100)
1920s	13 (65.0)	4 (20.0)	3 (15.0)	20 (100)
1930s	18 (69.2)	3 (11.5)	5 (19.3)	26 (100)
1940s	15 (45.5)	5 (15.2)	13 (39.3)	33 (100)
1950s	27 (60.0)	13 (28.9)	5 (11.1)	45 (100)
1960s**	14 (53.8)	9 (34.6)	3 (11.6)	26 (100)

Note: *Includes six persons born before 1900. **Includes two persons born in 1970.

Table 7: Social Group representativeness per decade, the sample share relative to society's share.

Decade	Social Group		
	I	II	III
1900s	10.2	0.37	0.38
1910s	11.5	0.33	0.25
1920s	8.1	0.49	0.29
1930s	15.0	0.29	0.35
1940s	10.1	0.40	0.69
1950s	9.8	0.77	0.20
1960s	6.9	0.93	0.20

Note: Social Group representativeness is defined as the share of CEOs belonging to a specific Social Group divided by that Social Group's share of the total Swedish population.

At first glance, it may be difficult to detect any trend. With the exception of the 1940s birth-year cohorts, the share of CEOs coming from Social Group I is consistently above 50 percent, despite the fact that this group only constitutes around six percent of the total population. Among CEOs born before 1910, 65 percent came from Social Group I, and this share increased to 73 percent among

those born in the 1910s. The share declined somewhat for CEOs born in the 1920s and 1930s, and it declined substantially to below 50 percent among those born in the 1940s. Then it rose again and more than half of the CEOs born in the 1960s had a Social Group I background. However, it should be noted that excess representativeness was more than halved from the 1930s to the 1960s – see *Table 7*.

Regarding the shares of Social Groups II and III, it is noteworthy that 20 percent of the CEOs born before 1910 had a working-class background. The Social Group III share peaked at 39.3 percent among CEOs born in the 1940s,¹³ while the share coming from Social Group II is not even half as large. Interestingly Social Group III beats Social Group II in terms of representativeness before 1910 and in the 1930s and 1940s.

The share of CEOs with a working-class background declines sharply among CEOs born in the 1950s and 1960s, while the share with a Social Group II background increases more than commensurately. In fact, the Social Group II share is almost as large as the size of the group in the whole population.

The two CEOs mentioned in the introduction were both CEOs of firms controlled by the Wallenberg sphere. Is this a coincidence or is the Wallenberg Group more inclined to recruit CEOs from a humble background? In *Table 8* we split the sample between CEOs of Wallenberg-controlled firms and CEOs of other firms. The small sample size precludes strong conclusions, but we note that the share of CEOs with a working-class background is four to five percentage points higher in Wallenberg-controlled firms. The difference is largely explained by the fact that six out of 13 Wallenberg CEOs born in the 1940s came from the Social Group III.

Malmenström and Wiedenberg (1958) study the social and educational background of all CEOs of Swedish business firms having at least 500 employees in 1957. Based on a response rate of 84 percent they obtain data on the social background of 245 CEOs. Since their study is the one most similar to ours, we will discuss their results in contrast to our own. They found that 74.5 percent of the CEOs had a Social Group I background, and that 22 and 3.5 percent grew up in Social Group II and III, respectively. Moreover, they found that 38 percent of the CEOs were either the son of an owner or of a CEO of a firm with at least 200 employees.¹⁴ Thus, this study for a specific year in the 1950s for a less select group of firms found a greater overrepresentation of Social Group I than in our study. In particular, the extremely low share having a Social Group III background stands out.

¹³ The number of CEOs with a working-class background born in the 1940s is larger than the total number of CEOs with that background during the three preceding decades combined.

¹⁴ Another 20 percentage points were found to have fathers who were owners or CEOs of firms with less than 200 employees (cited from Carlson 1964, p. 148).

Table 8: Distribution of CEO fathers across the Social Groups in Wallenberg-controlled firms compared to other firms by birth decade.

Decade	Social Group I		Social Group II		Social Group III		% Social Group III	
	Wallenberg	Other	Wallenberg	Other	Wallenberg	Other	Wallenberg	Other
1900s	7	6	1	2	3	1	30.0	11.1
1910s	6	5	1	1	0	2	0.0	25.0
1920s	7	6	3	1	2	1	16.7	12.5
1930s	9	9	1	2	2	3	16.7	21.4
1940s	6	9	1	4	6	7	46.2	35.0
1950s	5	22	3	10	1	4	11.1	11.1
1960s	2	12	2	7	1	2	20.0	9.5
Total	42	69	12	27	15	20	21.7	17.2

Note: The following firms are classified as belonging to the Wallenberg sphere: ABB (Asea until 1987), AstraZeneca (Astra until 1998), Atlas Copco, Electrolux, Ericsson, Investor, SEB, SKF and Stora Enso (until 1998 Stora/Stora Kopparberg).

5.2. The share of sons to managers

We now consider the share of CEOs who had a father who held a managerial position. The results of this comparison are presented in *Table 9*. For the entire period, 57 percent were born in a home where the father had a managerial position.

Comparing the two birth-year periods 1900–1939 and 1940–1969, we find that 52 percent born in the early period are sons of managers whereas the corresponding figure in the late period is 60.6 percent, and for CEOs born in the 1960s it is as high as 73 percent. No data exists on the proportion of individuals who were managers in society at large and we refrain from drawing any conclusions from the indicated change. If the share of managers in society is substantially higher in the late period compared to the early period, even the higher fraction of manager backgrounds in the sample would suggest a decreased overrepresentation over time.

Table 9: Number and fraction of CEOs whose father held a managerial position by decade and period.

Decade/Period	# managerial	Percentage	# non-managerial	Percentage	# total
1900s	9	45.0	11	55.0	20
1910s	8	53.3	7	46.7	15
1920s	11	55.0	9	45.0	20
1930s	14	53.8	12	46.2	26
1940s	14	42.4	19	57.6	33
1950s	30	66.7	15	33.3	45
1960s	19	73.1	7	26.9	26
1900–1969	105	56.8	80	43.2	185
1900–1939	42	51.9	39	48.1	81
1940–1969	63	60.6	41	39.4	104

5.3. CEOs with noble surnames

Table 10 presents the number and fraction of CEOs who come from a noble family. In contrast to the comparisons so far, we can now use the full sample, i.e., include CEOs who were not born in Sweden and CEOs born in Sweden for whom we do not have data on the father's background. Among the 229 CEOs, seven (3.1%) come from noble families. According to *Riddarhuset*, the Swedish nobility consists of slightly less than 30,000 people,¹⁵ i.e., 0.3 percent of the Swedish population are noble. This indicates that CEOs belonging to the nobility are overrepresented by a factor of ten. This is on par with the overrepresentation of CEOs from Social Group I.

However, among CEOs born after 1939, only two CEOs belong to a noble family, which suggests that the importance of a noble background has fallen.

¹⁵ <http://www.riddarhuset.se> (accessed April 24, 2016). *Riddarhuset* is both the name of the Swedish Nobility's palace in Stockholm and the organization for the nobles in Sweden.

Table 10: Number and percentage of CEOs who come from a noble family by decade and by the early and late period.

Decade/Period	# noble	# not noble	# total	% noble
1900s	2	34	36	5.6
1910s	1	14	15	6.7
1920s	0	22	22	0.0
1930s	2	26	28	7.1
1940s	0	35	35	0.0
1950s	1	57	58	1.7
1960s	1	34	35	2.9
1900–1969	7	222	229	3.1
1900–1939	5	96	101	4.9
1940–1969	2	126	128	1.6

6. Conclusions

There are many approaches to measuring social mobility. In this study of occupational mobility, we document the social background of the CEOs of the largest public firms in Sweden. In this pioneering study—we have not managed to find a single similar study for any other country—we examine three aspects: the representativeness of the CEOs’ fathers’ occupations, whether their fathers held a managerial position, and whether their families are members of the nobility.

The results show that a typical Swedish CEO in one of the largest public firms during the post-war period grew up in a home where the father was a member of Social Group I. The father was also likely to hold a managerial position. Sons born into noble families are also overrepresented among Swedish CEOs.

When we extend the analysis to study trends over time, the picture becomes more nuanced. Even before 1910, a fifth of CEOs had a working-class background. This share peaked in the 1940s when 39.3 percent of the CEOs had fathers who belonged to Social Group III. Judged against the findings from class mobility research, this is a large share, considering that both “class-specific inheritance effects” and “hierarchy effects” (Erikson and Goldthorpe 2002, p. 36) work strongly against such exceptional class trajectories.

By contrast, the share of CEOs with a Social Group II family background is quite small for CEOs born before 1950. The Social Group II share begins to rise sharply in the 1950s; among CEOs born in the 1960s the Social Group II share is almost as large as that group’s overall share in the population. On the other hand, the Social Group III share falls by more than two-thirds from its peak in the 1940s, and in the 1950s and 1960s only one in nine of the CEOs have a working-class background. In the last period slightly more than half of the CEOs came from Social Group I, while only two CEOs born after 1939 came from a noble family compared to a total of five CEOs in the period before 1940.

A tentative conclusion consistent with the observed patterns is that families in Social Group II have benefitted the most from the educational opportunities and the ensuing expansion of “life chances” offered by the welfare state, with the exception of a one-off effect for people of working-class background born in the 1940s. This is consistent with the finding that class inequality in educational

attainment was relatively strong for cohorts born before the 1930s compared to later cohorts (Jonsson and Erikson 2000), and also with the Breen and Jonsson (2007) finding that social fluidity increased the most among cohorts born during the first half of the 20th century, but after that point there is no increase in social fluidity when education is controlled for.

So, what is the conclusion of this study with regard to social mobility in Sweden? Björklund, Roine and Waldenström (2012) document exceedingly low downward income mobility at the extreme top (top 0.1 percent, i.e. about 10,000 individuals), but our study is even more about the extreme top: 30 jobs out of close to 5 million jobs in the economy, and we certainly find significantly more mobility than they do.

We do not find clear-cut support for Hägg's claim that the post-war Social-Democratic era was unique in allowing "geniuses with no more than their bare hands" to reach the highest positions in Swedish business life. Rather, we identify quite a number of individuals with a family background in the working class who reached the top positions, even before the Social-Democratic hegemony began in 1932. Moreover, the Social Group III share peaked among those born in the 1940s and then declined sharply. Since the large expansion of the welfare state did not start until around 1960, our evidence suggests that, if anything, the late Social-Democratic era mostly benefitted ambitious people from the middle class.

Future studies on the same subject should first of all increase the sample size, primarily by adding CEOs from firms that were previously listed on the SSE large firm list, such as AGA, ASG, Custos, Gränges, Esselte, Nobel Industries, Pharmacia, PLM, Svedala and Sydkraft. Other interesting aspects to consider would be the geographical origins and the level of education for both the CEOs and their fathers. Furthermore, a larger sample size would make it possible to study whether the representativeness of the respective Social Group varies for firms of different size and for firms in different industries.

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