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Abstract
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Keywords: inequality, distribution, education, wealth, wages

JEL: D31, N00, N10, N13, N14, N33, N34

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How Deep are the Roots of Swedish Egalitarianism? A multidimensional approach

Johan Ericsson[*] and Jakob Molinder*[†]

Abstract:

When did Sweden become equal? This question has far-reaching implications for our understanding of Swedish history, as well as for theories about inequality, institutions, and politics more broadly. In this article, we present the first multidimensional comparative analysis of the development of inequality in Sweden. Unlike most other studies, we combine a variety of measures to provide a more comprehensive view of inequality. Our findings reveal that, although the share of income and wealth accruing to the absolute top was very high at the beginning of the 20th century, Sweden was more equal than many other countries when focusing on the lower parts of the income distribution. Additionally, several indicators suggest that the decline in inequality began in the decades before the turn of the 19th century. These results imply that the development of the Swedish welfare state was both a cause and a consequence of decreasing inequality. We emphasize the importance of widespread access to education as a key factor in shaping distributional outcomes.

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Introduction

At the beginning of the 1980s, Sweden was one of the developed countries with the most even distribution of income. At the same time, it had some of the highest taxes and one of the most generous welfare systems. This has made people wonder what part the government and redistribution policies have played in making Sweden more equal. In the end, the debate comes down to whether equality was a result of the welfare state or whether equality was a prerequisite for the welfare state and made it possible because Sweden was already an equal society.

One way to explain why Sweden became egalitarian after World War II is to see it as the result of a longer historical trend with roots in the political culture. Those who support this argument often point to the fact that farmers were one of the four estates in parliament before the move to bicameralism in 1867. At the local level, parish assemblies also gave farmers a voice. The strong and independent farmer class is sometimes seen as the historical precursor to the social democratic movement, which took over the populist ideas that the farmer class had been carrying. This is the argument made by Trädgårdh (1997), who asserts that democratization should be seen as a generalization of the egalitarian political culture that already existed in the local peasant assemblies. Rothstein and Uslaner (2005) use this supposed historical Swedish egalitarianism to make a broad statement about the role egalitarian social structures play in the rise of welfare states. They claim that Sweden and the rest of Scandinavia have "histories of greater equality" and that "[a]t the beginning of the modern era, the Scandinavian countries had a more equal social structure than the rest of Europe" (p. 44 and 57). They say that this is why the Scandinavian countries developed large welfare states, because their history of equality and social trust made it possible for the government to spend more on social security, health care, and education. In the case of penal systems, John Pratt argues that in the Nordic countries, "social conditions [in the past] provided for little class distinction and high levels of egalitarianism," and that "these very flat class relationships" created "solidarity and cohesion" (2007, p. 124).

Esping-Andersen (1992) has given an even more detailed description. He says that Sweden was a good place for the labor movement because there was a high concentration of capital among a small number of wealthy families, while the popular masses of workers and small peasants were only separated by geography. He says, "To a society so homogeneous, a broad sense of solidarity came much more easily than either individualism or corporatism" (Esping-Andersen, 1992, p. 41). Researchers from the Power Resource school, on the other hand, focus on the political power of the labor movement in pushing for equal outcomes. People

who believe this often point to Sweden as an example of how powerful, centralized unions and a strong social democratic party worked together to push for reforms that led to a relatively low level of economic inequality in the years after World War II (Korpi 1983; Korpi and Palme 1998). In this view, the welfare state is the most important factor in bringing about equality. Others in the same tradition think that changes in institutions in the first half of the 20th century led to more equality. Bengtsson (2019) says that in Sweden's past, there were huge differences in wealth and political power. After the estate parliament was done away with, Sweden set up a proprietarian system that was more extensive than the rest of the Western world (Piketty, 2020). The number of people who could vote in Sweden was one of the smallest in Europe, and at the local level, votes were distributed according to income and wealth. Bengtsson argues that the extreme inequality of the 1800s led to its own counter-hegemony in the form of popular movements that worked together to fight for suffrage reform. This movement laid the groundwork for the Social Democratic Party to become the most powerful political party in the 1930s. When the party was in power, they made Sweden more equal by raising taxes on the rich, limiting the power of private business, and growing the welfare state.

Gärtner and Prado (2016) also aruge that there was a big leveling of incomes between the wars (See also Prado and Waara, 2018). They also focus on the role of institutions, but instead of emphasizing redistribution, they highlight the labor market and argue that collective action led to smaller differences in wages. They argue that this created equality, which led to more social trust and paved the way for the creation of the welfare state.

The question of when and how Sweden became egalitarian is important not just for Swedish history, but also for general theories about the relationship between institutions, politics, and equality. Acemoglu and Robinson (2010), for example, use Sweden as one of five examples to show how inclusive institutions lead to more redistribution, which reduces inequality. According to them, social unrest began in Sweden in the 1870s because of the growing gap between rich and poor. To satisfy the people, the elites implemented almost universal suffrage in 1920. As a result, there was a rise in the demand for redistributive measures, and social expenditure grew, reducing inequality. Thomas Piketty (2020) also mentions the case of Sweden. In his account, Swedish egalitarianism only appeared in the 20th century. This shows that "inequality is not the result of some essential cultural predisposition" (p. 188). On the other hand, DeLong (2007) thinks that Swedish-style welfare states are not likely to work in many other places because Sweden has a long history of equality.

Sweden as a case can also help us understand more general theories of inequality. Piketty (2014) and Scheidel (2018) discuss how capital was destroyed during the world wars

and how top marginal tax rates went up at the same time, often to pay for the war effort. Kuznets (1950) and Frey (2019) instead look at changes in the economy's structure that led to similar results in most Western countries. Focusing on the similarities between countries forces you to ignore the differences, and even though the Swedish path had a lot in common with many others, as we will see, there were also important differences. Since the Swedish case has been so important to research on welfare states around the world, the timing of economic equality in Sweden is important for a better understanding of the factors that cause economic inequality and redistributive policies. The research that has been done on inequality in Sweden, on the other hand, is not clear-cut. Even though a lot has changed in the last few decades, there are still holes to fill. Roine, Waldenström, Erik Bengtsson, and their co-authors have made large contributions to research on top incomes and wealth which has taught us a lot about inequality in the past. Estimates of the highest incomes only go back to the beginning of the 20th century, and there are few observations for this early period. Focusing only on the highest incomes leaves out, of course, other important parts of how income is distributed. We take a broader approach and look at how Sweden's relative economic inequality has changed over time in a few different ways. To do this, we use existing databases, calculations from a new collection and treatment of secondary sources, as well as results from new archival work. One of the most important things this article adds is a comparative perspective. Even though Swedish research that can tell us about inequality has grown in recent years, the bigger picture has sometimes been missing. So, in this article, we will try to bring together several different factors to paint a fuller picture. Using this new way to look at inequality, we can discern three conclusions. First, we show that Sweden at the turn of the 19th century was very unequal. Second, the gap between the richest people and the rest of society was similar in Sweden and in other places. However, the gap between people with low incomes was smaller. Third, a process of levelling began as early as the second half of the nineteenth century.

Top Income and Wealth

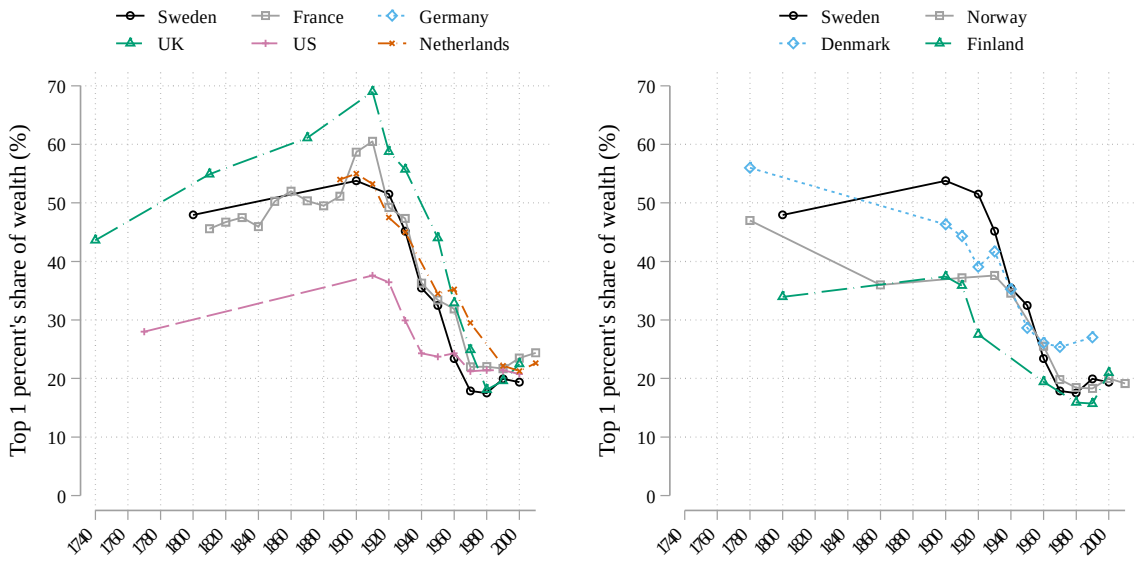
In recent years, examination of the share of income or wealth accruing to the richest in society has grown in popularity as a method for comparing levels of inequality between different countries and across time. A clear advantage of this approach is that evidence goes back further in time than for complete income and wealth distributions, and since a standardized method has been developed, it is also possible to compare countries. It has also been suggested that top shares correlate with overall inequality when both measures are available (Waldenström, 2009).

The evidence that goes back the furthest in time is the series on wealth. In figure 1, the share of assets held by the top one percent in society is shown for a number of now advanced economies, in many cases going back as far as the eighteenth century. For Sweden, a benchmark is available for 1800, followed by a more continuous set of observations starting in 1900. According to these estimates, the top one percent wealth share increased slightly over the course of the nineteenth century, from 48 to 58 percent. Starting in 1900, and then with full force from the 1920s, the top wealth share fell continuously reaching a low in the 1970s and 1980s of below 20 percent. In the most recent decades, the top wealth share has been increasing slightly, but changes are very minor in light of the large twentieth century decline.

Interestingly, the data does not suggest that Sweden had a comparatively equal distribution of wealth in the nineteenth century. The top wealth share was similar to that observed in France and the Netherlands, and much greater than in the United States. The pattern for the Nordic countries was also quite mixed, with Sweden and Denmark displaying high wealth inequality, and Norway and Finland less so. It was only after the significant leveling in the twentieth century that Sweden began to stand out against the other non-Nordic countries, and the divergence happened quite late. It would take until the 1960s before Sweden got a more compressed wealth distribution than France and the Netherlands, and until 1970s in the case of the United States. It is also of note that even though the Nordic countries started out with very different levels of wealth inequality in the nineteenth century, by the 1970s shares were very similar across the region.

Another saliant pattern is the uniformity in the fall in top wealth shares over the course of the twentieth century. All countries in the comparison experienced a significant reduction; By the 1970s the difference across countries was much smaller than prior to the levelling. Thus, whatever forces that brought down wealth inequality in Sweden, seem to have operated in other countries as well.

Figure 1: Top 1 Percent's Share of Wealth (%), Decadal Averages.

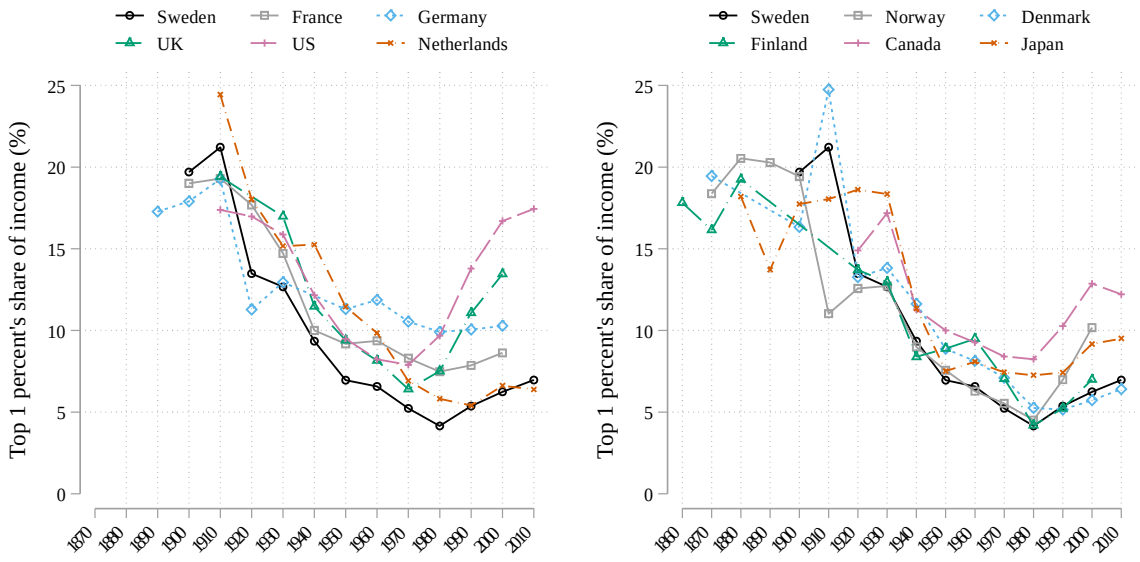


Source: Roine and Waldenström (2015).

Note: Decadal averages.

What does the pattern for income look like? Figure 2 shows the share of income accruing to the top one percent of earners by decade for the same set of countries. For top incomes we also have data for Canada and Japan. In this case of top income, the evidence typically does not stretch back as far in time as for wealth. In some instances, it goes back to the 1870s, but in most cases only to the early twentieth century. This is the case, for example, for Sweden.

Figure 2: Top 1 Percent's Share of Income (%), Decadal Averages.



Source: Roine and Waldenström (2015).

Note: Decadal averages.

In many ways, the development of income inequality mirrors that for wealth. In Sweden, the top income share stood at more than 20 percent in the first two decades of the twentieth century, before it began to decline in the 1920s. From this point on, it fell continuously reaching a trough in the 1980s of below 5 percent, before rising slightly in in the most recent period. In terms of income, just as for wealth, Sweden does not stand out as comparatively equal in the early twentieth century. Quite to the opposite, among the countries in the comparison, the Netherlands and Denmark in the 1910, are the only country more unequal than Sweden prior to the start of the levelling in the 1920s. Places such as the United Kingdom and the United States had a lower share of income accruing to the top one percent.

Just as in the case of wealth, it is only with the twentieth century levelling that Sweden begins to stand out. From the 1920s onwards, the decline in income inequality went furthest in the Sweden and Norway, but Denmark and Finland followed a very similar pattern overall. The shift came slightly earlier for income than for wealth, however. Already by the 1920s, Sweden had a lower top income share than any of the non-Nordic countries in the comparison. Except for Norway, the Nordic countries have also retained their position during the period of rising inequality since the 1980s.

The general pattern for both wealth and income are very similar for most countries, indicating that general long-run forces must have been at play that cannot be

explained by country specifics. But there are also important nuances. The timing for changes in inequality levels differs for various countries, and so does the magnitude of the changes. None of the Nordic countries stand out as being particularly equal in the early twentieth century, but they all drop more than other countries over the course of the levelling.

Looking at these figures, it is easy to understand why for example Bengtsson (2019), Gärtner and Prado (2016) and Acemoglu and Robinson (2010) have singled out the 1920s as a breakpoint. There are however some problems with this interpretation. While the creation of top wealth and income estimates have in many ways helped us improve our knowledge of historical inequality, there are some important drawbacks to this approach. The first and most obvious is that it only relates to the part of income inequality driven by top wealth holders and income earners. It does not tell us anything about inequality among the bottom 99, or at best, the bottom 90 percent, of the population. It this sense, it only gives a partial view of societal inequality. The second is that it is not obvious that the most relevant dividing line is between percentiles of the income distribution. Other cleavages also have significant societal impact, such as that between the working class and white-collar workers, between men and women, and between geographical areas. Top wealth and income shares have nothing to say when it comes to these aspects. The third is that there are likely significant measurement issues in the estimates, particularly for the early years. This is especially true for the top income series. These rely on an assessment of total reference income, which in turn relies on historical national accounts which are produced with significant margins of error.[1] Especially in the agricultural sector, income is likely to be underestimated in these accounts, and as a consequence, countries with more subsistence agriculture will look more unequal. In addition to the problem stemming from the assessment of total reference income, the income earning unit often also varies across studies. In some cases, it is the individual, other times the family, and in yet others the tax unit. This might also make the estimates less comparable than is often assumed. We will return to the issue of these estimates for the Swedish case at the end of the article.

A More Detailed Look at Inequality

To overcome the problem with top share estimates, we broaden the scope in this section and examine several complementary dimensions of inequality. Specifically, we look at skill differentials among blue-collar workers, the income advantage of white-collar professionals, the gender wage gap, regional inequality, and inequality in agricultural land holdings. We focus

[1] Waldenström (2021) has recently critiqued the wealth estimates underlying the top wealth share estimates.

on metrics and concepts that are comparable across countries, and where there is prior work for other countries that makes it possible to put the Swedish case in comparative perspective. In this way we can circumvent some of the issues associated with the top shares data. By looking at specific dimensions of inequality in this way, rather than the summary top income and wealth statistics, we can explore more precisely how countries differed and what changes took place over time. We are also in a better position to discuss the factors that drove these differences.

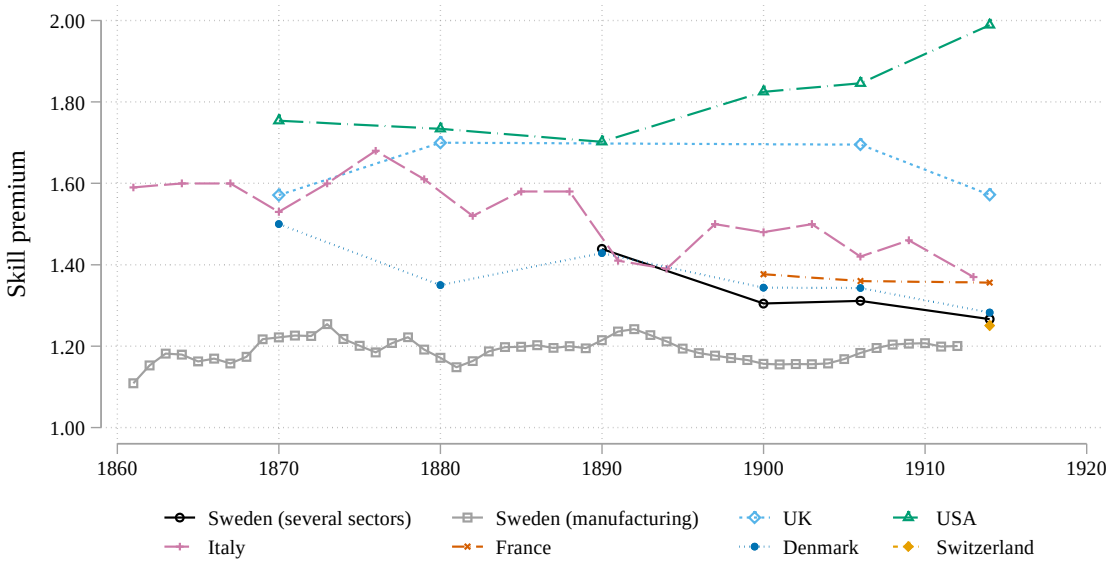
Return to Skill Among Blue-Collar Workers

The gap in pay between skilled and unskilled workers, sometimes referred to as the "skill premium", has received quite some attention in the historic literature since it is relatively straightforward to measure (Williamson, 1980; Williamson and Lindert, 1980; Zanden, 2009, chap. 5). Van Zanden (2009) interprets the skill premium as an outcome of the quality and inclusiveness of institutions for training, such as schooling and apprenticeship. In times of increased demand for certain skills, such as with the technological changes following industrialization, the flexibility of supply also determines to what extent premiums rise. Goldin and Katz (2010) conceptualize the skill premium as the outcome of a race between education and technological change. Technological progress raises the demand for skilled workers, and the expansion of education need to keep up for the return to skill to remain constant. If growth in schooling outpaces the increase in demand, skill premiums will fall. Drawing on this framework and applying it to the nineteenth century, Federico et al (2021) presents a number of factors that can be seen as important for the evolution of skill differentials. On the supply side, educational expansion and overseas migration were major factors while on the demand side, technical and structural change, was influential.

Figure 3 shows the information on blue-collar skill-premiums in the pre-WW1 period collected by Betrán & Pons (2013). We have supplemented their data by adding the series for Italy from Federico et al (2021) and for the Swedish manufacturing sector from Prado (2010). The evidence presented in the figure suggest that Sweden had relatively low skill premiums. The series that comprises several sectors suggest that the premium was around 40 percent in the 1890s, and then fell to about 25 percent by WW1. Together with Denmark, Sweden displays the smallest pay gap among the countries in the comparison. The two countries also followed a very similar trend, with premiums falling over this period of rapid industrialization. The series for the Swedish manufacturing sector suggest an even smaller wage premium and displays remarkable stability over time, despite rapid industrialization. A premium of just around 20 percent might seem low but is in line with detailed evidence from

the engineer industry as well as for construction workers (see Prado, 2010, p. 184). For Switzerland, the only data point is for 1913, but it suggests that the country had a similar skill premium as Sweden and Denmark.

Figure 3: Blue-collar Skill Premiums, 1860–1913



Note: Sweden (several sectors) come from Bertrán and Pons (2013) and is a weighted average for the building industry, engineering, and iron and metal works, chemistry, wood and furniture, stone, clay and glass, food and transport.

Source: Sweden (manufacturing) from Prado (2010) and Italy from Federico et al (2021). All other data from Bertrán and Pons (2013). We are thankful to Leonardo Ridolfi for sharing the data underlying their graph in Federico et al (2021).

The other countries display somewhat different patterns. The Italian and French premiums are slightly larger than the one in Sweden and Denmark and display more stability after 1890. Among the European countries in the comparison, the UK displayed by far the largest premium, however. The premium was stable around 70 percent up to the turn of the nineteenth century when it fell slightly to about 60 percent. The United States deviates the most, with skill premiums of 70 percent in the 1890s increasing up to 100 percent by WW1. According to Panza and Williamson (2021, figure 2) the skill premium in Australia was even greater than in the United States, with skilled workers earning almost three times as much as unskilled workers in the late 1870s, dropping to slightly more than two in the 1880s and down towards 1.5 in the early 1900s. Compared to Latin American countries, Sweden come out even better. In 1900,

Argentina had the lowest skill premium at 2.02 out of six surveyed countries. The other five all had premiums exceeding four (Astorga 2017, table A1).

Betrán and Pons (2013) argue that high levels of human capital in the beginning of the process of modern economic growth might explain why Sweden and Denmark did not experience increasing wage inequality at that time. Among the European countries in the comparison, the difference in skill premiums lines up quite well with levels of basic human capital as revealed by comparative evidence on schooling and literacy. The Lee and Lee (2016) dataset on educational performance show that in the late nineteenth century, Sweden, Denmark, and Switzerland had the highest number of years of primary schooling: 2.5 years on average or more. France and the United Kingdom came after with slightly less than two, while Italy displayed the lowest level just north of one year on average in the 1890s (see Panza and Williamson, 2021, for a similar comparison). Sweden also stands out in terms of literacy. Numbers are not available for as many countries, but according to Pamuk and van Zanden (2010), in 1870 the share of literate was 80 percent in Sweden, while the corresponding number was 76 percent in the United Kingdom, 69 percent in France, and just 32 percent in Italy.[2] The United States is an outlier, with a high level of education as well as a high skill premium. But the evidence for Latin America and Australia suggest that high skill-premiums was a common phenomenon to the New World.

On the demand side, technical change, structural change, and labor mobilization might affect the structure of pay. Federico et al (2021) point to the low number of Italians with US patents as an indication that technological development was rather tepid, and came mainly through the importation of foreign technologies. Looking at the same data on patents granted to foreign residents in the United States per million of inhabitants, Sweden seems to have been more innovative. While the Swedish patent rate in the US was lower than for the United Kingdom, Switzerland, and Germany, it was greater than in the Netherlands and France, and

[2] Crafts (1997), which is one of the publications that Pamuk and van Zanden is based on, has Sweden at 75 percent. It is not clear if the difference is an error on behalf of the latter or if they have made adjustments. There are however other indications that Sweden had high levels of human capital. O'Rourke and Williamson (1995) show Sweden and the Nordic countries among those with the highest literacy rates. Flora (1973) provides figures for illiteracy rates. In 1890 Sweden, Denmark, and Switzerland had the lowest illiteracy rates, all below 4.5 percent. In the United Kingdom and United States, it stood at around 13 percent, while it was 20 percent in France and as much as 55 percent in Italy.

way above Italy and Spain. There was also a rapid increase in the rate of Swedish patenting over the period (See table 2 in Nuvolari and Vasta, 2015).

Structural change can also impact the skill premium by shifting employment toward sectors where the demand for skills is greater, such as the engineering industry, and away from sectors where skills are less demanded, such as agriculture. The increase in demand resulting from this process is likely to have been great in Sweden. Over the period from 1860 to WW1, the share of employment in agriculture declined from 70 percent to 45 percent (Schön and Krantz, 2007). Simultaneously, the share of workers grew in "modern" industries such as chemical processing and pulp and paper, and in particular the engineering industry which expanded immensely. This period saw the establishment of what has been dubbed the Swedish "brain industries" (*Snilleindustrier*) which built on new innovations in mechanical engineering and electrical machinery.

Taken together, both aspects of demand show sign of rapid expansion in Sweden in the years leading up to WW1. The economy was teeming with innovative activity and employment was shifting towards more skill-intensive activities. Despite this, the effect on supply coming from expanding education and emigration was large enough to counteract increasing demand, keeping the skill premium intact or even slightly falling. While demand for skilled workers was likely increasing much faster in Sweden than in Italy, both countries saw significant flows of overseas migrants, suggesting that this cannot be the only explanation for the lower skill premium in Sweden. Most likely, the wide diffusion of human capital explains most of the difference. The small impact of emigration on skill differentials is also in line with the conclusions from Anderson (2001).

Earnings Advantage of White-collar Professionals

A second aspect of earnings differentials is the gap in pay between regular workers and those at the top of the human capital distribution: the white-collar professionals. The development of the professionals' earnings advantage has been linked to the same type of education-related factors as the blue-collar skill premium, but in this case, it is not the distribution of basic human capital that plays the pivotal role. Instead, the diffusion and accessibility of higher education, such as secondary and tertiary schooling, is what matters the most.

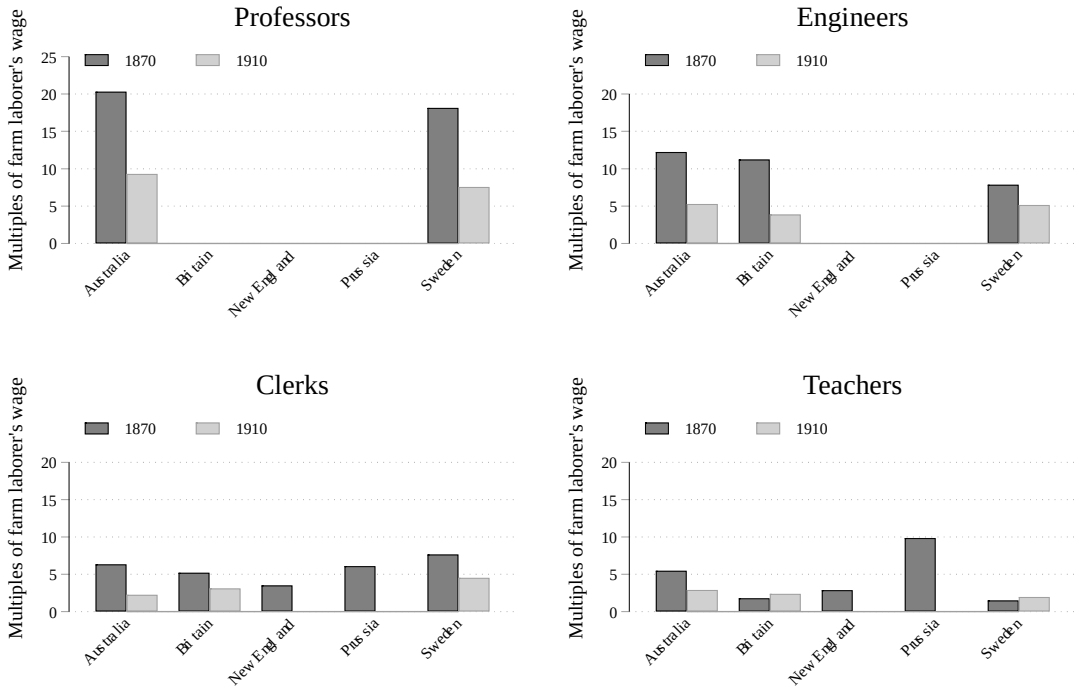
A difference from the case of blue-collar skill premiums is also that the training to become a white-collar professional requires a much larger monetary investment and time in formal education. The financing of higher education therefore becomes more important in determining access to this type of human capital, and in turn, the premium earned by those

possessing it. This theory thus predicts that lower fees and more generous financing for higher education increases educational enrollment and, in turn, reduces earning premiums (Jones and Yang, 2016). Sociologists also point to another channel by which access to education might reduce the professional earnings advantage net of its effect on skills. Through social closure, elites were previously able to earn significant rents above the market value of their skills because they held the right school-taught cultural dispositions. With the expansion of higher education, they gradually lost that advantage (Bowles and Gintis 2002; Checchi and van de Werfhorst, 2018).

How has earnings premiums for professionals developed over time and across places? Starting with the evidence for the pre-WW1 period, Figure 4 shows the difference between the earnings of different groups of white-collar workers compared to unskilled workers circa 1870 and 1910 in Sweden and a few other countries and territories for which we have been able to collect comparable data.

The top professions of professors and engineers are shown in the top panel. Individuals in these occupations earned between seven and twenty times as much as an unskilled worker in the 1870s. The comparative evidence is quite scant, however. For professors we only have data for Sweden and Australia, and for engineers for those two countries and Britain. A professor earned more than fifteen times more than an unskilled worker both in Sweden and Australia in the 1870s while the premium for engineers was smaller, about ten times an unskilled worker's wage. The advantage for engineers was slightly smaller in Sweden than in Australia and Britain in 1870, but this was no longer the case in 1910. Interestingly, there seems to have been a similar fall in the wage premium across all three places for both professions and over the period. The premium for professors fell to a multiple of less than ten, while the decline for engineers brought their advantage down to about five.

Figure 4: White-collar Workers Earnings Advantage in Sweden Compared to Other Countries, ca 1870 and 1910



Note: Years differ between countries. Australia and New England 1870, Britain 1871, Prussia 1863, Sweden 1880.
Source: Australia from Panza & Williamson (2019); Britain from Williamson (1982); New England from Lindert & Williamson (2016); Prussia from Erfurth (2021); Sweden from Bengtsson & Prado (2020), Bagge et al (1935), Sociala meddelanden (1927), Welin (1906), Molinder & Ericsson (2020), Granholm (2013).

For the two white-collar occupations further down the ranking, clerks, and teachers, which are shown in the lower panel of Figure 4, the earnings difference to unskilled workers was smaller. In the case of clerks about five times the earnings of a farm laborer in 1870, and for teachers the variation is large but the median across the different territories was close to three. In 1870, the premium for clerks seems to have been relatively large in Sweden compared to the other places, while the opposite was true for teachers. Just as in the case for professors and engineers, the earnings advantage of clerks fell between 1870 and 1910 down to about 2.5. For teachers, the change is more varied, but in Sweden there was a very slight increase over the period, but their earnings advantage remained very small.

For the first half of the twentieth century, we have access to slightly more information on comparative professional earnings. American economist Tibor Scitovsky collected data on earnings for different professions presented as multiples of per capita income

of the occupied population from the turn of the nineteenth century to the 1950s, with most observations concentrated in the later part of the period. The countries covered are the United States, the United Kingdom, Canada, France, Germany, Canada, Denmark, Norway, and Sweden. He collected information on five occupations: physicians, dentists, lawyers, professors, and high civil servants. Scitovsky only has information on physicians in Sweden up to 1930 and for lawyers only in 1930. We complement his information with some new benchmarks drawn from an ongoing project that is currently collecting a large sample of historical tax records for Sweden (Bengtsson, Molinder, and Prado, 2022). Using this data, we are able to add information on physicians in Sweden in 1940 and 1950, lawyers in 1920, 1940, and 1950, and professors in 1900.[3] The exact numbers in the comparison should be taken with a grain of salt, since the quality of the underlying data and what exactly defines a particular professional group may vary from country to country. It should, however, be possible to discern broader trends.

The series are shown in Figure 5. A clear trend of a falling earnings advantage can be seen for all professions and across countries. A typical white-collar professional earned a multiple of six in the early twentieth century, a lead that had deceased to around 2.5 by the 1950s.

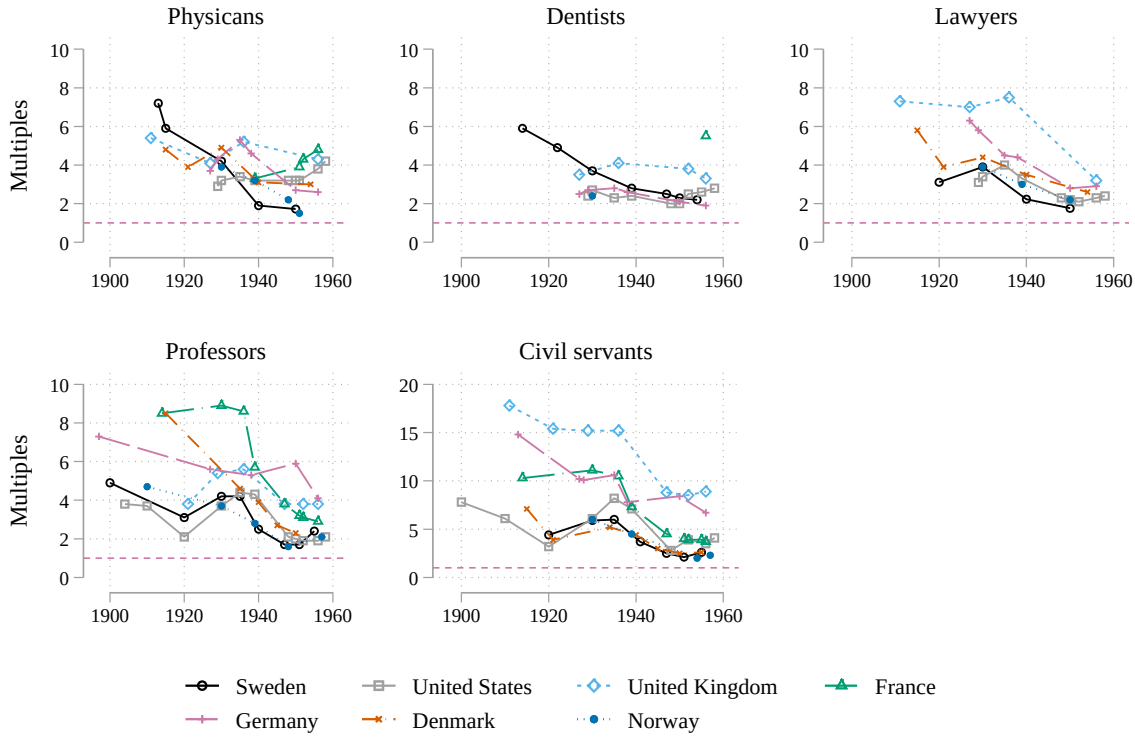
For the early twentieth century the evidence for Sweden shows a mixed picture. The medical professions: physicians and dentists, had comparatively high relative earnings, while lawyers and professors held a relatively small advantage. The trend of falling earning premiums is evident for all occupations, however. For physicians, dentists, and to a lesser extent professors, it was a continuous process starting in the beginning of the century. For lawyers and civil servants, the fall in the earnings advantage was concentrated to the 1930s and 1940s. By the 1950s, Sweden was among the countries with the smallest premiums in all occupations.

In the cases where all three of the Scandinavian countries have data, the trends look quite similar, suggesting that similar processes played out across the region. The exception might be professors, which in Denmark started out with much greater relative earnings than in Sweden and Norway. Interestingly, the United States appear to have started out with the smallest earning gaps in the early twentieth century. The levelling did not go as far there,

[3] The validity of our additional benchmarks can be gauged by comparing Scitovsky's estimate for professors in 1940 and 1950, when we can estimate income from the tax records for the same group. Scitovsky's data suggest a multiple of 2.5 in 1940 and 1.7 in 1951, while the tax records suggest an advantage of 3.7 in 1940 and 2.35 in 1950. Thus, our data from the sample of tax records suggest a slightly larger advantage than Scitovsky's numbers, but the trend of falling relative earnings is very similar.

however, and by the 1950s differences were smaller in Sweden and several of the other countries.

Figure 5: Earnings of Professionals as Multiples of Per Capita Income of the Occupied Population



Source: Scitovsky (1966) and Bengtsson, Molinder, and Prado (2022).

Note: We have added benchmarks for Sweden in the case of physicians in 1940 and 1950, lawyers in 1920, 1940, and 1950, and professors in 1900. To estimate per capita income of the occupied population we use national income divided by total employment from the historical national account estimates by Schön and Krantz (2007). The "civil servants" category in Scitovsky's data only refer to the highest paid civil servant in each country.

The trend of a falling professional earnings advantage in Sweden over the period from the late nineteenth century to the postwar period is evident in other studies as well. Ljungberg (2006) presents the pay advantage of graduate engineers, technicians, and grammar teachers from 1870 to 2000. He shows a declining trend in the premium starting in the 1880s that would last until the 1990s. Bengtsson and Prado (2020) present information on the earnings advantage of some groups of salaried employees from 1830 to 1940. They similarly find a trend of decreasing earnings ratios beginning in the early 1900s, following an increase during the nineteenth century. Granholm (2013) shows evidence on relative pay for different public officials from the 1860s to the present. The data depicts a rapidly declining advantage from the 1860s to the 1950s

and more stability thereafter. Finally, Bengtsson and Molinder (2021) show the earnings advantage of the professional elite in two rich Stockholm areas between 1909 and 1950 taken from tax records. In 1909 these professionals had earnings on average ten times GDP per capita, an advantage that had reduced to five by 1950.

In terms of explanations for historical and comparative patterns, Scitovsky himself emphasized access to higher education. In addition to the evidence on professional earnings in the seven countries presented above, he also collected cross-sectional data on the salary of the head meteorologist as multiple of office messenger's pay for a large number of developed and developing countries in 1953. He then plotted this relative earnings data against higher education enrollment per one thousand population in the same countries revealing a very strong correlation between the two.

It is well-known that the US historically was by far the world leader in terms of university enrollment, a leadership that lasted up until recently. In the 1950s almost 15 percent had enrolled in tertiary education. According to the Lee and Lee education dataset, the share of the adult population in Sweden with at least some college education rose during the first half of the twentieth century from almost nothing to about five percent in 1950, the highest after the US among the countries compared in Figure 5. Denmark followed a similar pattern to Sweden and ended up in third place by 1950. The fact that both Sweden and Denmark started out with among the lowest levels of tertiary level educational attainment around 1900 also might help to explain why the two countries experienced a shift in comparative levels of professional earnings premiums from the middle of the pack to having in most cases the smallest differentials by the 1950s. In addition to education, the explanations invoked by Alvaredo et al (2013) emphasizing the introduction of progressive taxes might also have capped pre-tax top salaries, as we know from the research of Bengtsson and Molinder (2021) that many high-paid professionals made it into the top percentiles of the income distribution.

Gender Wage Gaps

A salient phenomenon in economic inequality is the lesser pay for women compared to that of men. But despite the universal existence of a female wage penalty, the extent of the gender pay gap varies significantly across countries and time periods.

In terms of explanations for the size of the gender gap in pay, Olivetti and Petrolongo (2016) lists equal pay legislation, technological shifts, and evolving social norms as reasons for wage convergence between men and women over time. In particular, technological change that has raised the value of nonmanual and nonroutine tasks relative to manual and

routine jobs have shifted demand towards female labor. A similar process has also resulted from the shift to a service economy, which have led to the creation of jobs suited to women's skills and preferences. A strand of research has focused on the evolution of social norms around women's work as significant drivers of wage equalization (Fernandez, 2013; Fernandez et al, 2004). This suggests that gender norms change as more women enter the labor market through a positive feedback loop. The importance of institutions is also illustrated by the greater gender equality in countries which experienced socialism during the twentieth century (Klasen, 2017). Across countries, it is also clear that more progressive attitudes toward gender roles are positively associated with more egalitarian gender outcomes (Fortin, 2005). A recent literature has, however, illustrated the existence of deep historical roots in differences across countries in gender outcomes. One example shows that the descendants of societies that traditionally practiced plough agriculture have less equal gender norms today than those from societies with plough-free cultivation systems. Another study puts emphasis on a specific type of climatic and geographical conditions especially prevalent in north-western Europe, that created opportunity endowments to reduce fertility pressures for women and encouraged later marriages in the pre-industrial era, which as signified by the European Marriage Pattern (EMP). The resulting family and household pattern placed women in a more favourable position to strive for gender equality during the transition to later stages of development (Santos Silva et al, 2017). There is also research showing that societies that historically had nuclear family systems and those shaped by Protestantism display higher gender equality today.

Another factor that might influence the gender pay gap is the overall dispersion in wages. The reasoning being that in places where the wage distribution is more compressed, such as in Scandinavia today, individuals' characteristics such as skill, experience, and type of firm has a smaller influence on wages, and as a consequence, brings down the difference between men's and women's pay. Olivetti and Petrolongo (2016) emphasize the impact of structural change, and argue that the shift to a services economy can account for the simultaneous rise of women's relative wages and hours worked. The issue with the explanation is that there are major differences in gender gaps between countries that have similar employment shares in industry.

We have collected available historical data on gender gaps in wages from several secondary sources. We have opted for wage gaps either in manufacturing or, whenever available, for the economy as a whole. For Sweden we have two sources for the historical gender wage gap. The first is the series for manufacturing starting in 1865 reported by Prado (2010). He combined wage gaps for different subindustries and weighted them according to

employment. The second is the economy-wide series collected by Svensson (2003) which starts in 1920. He composed a series from official wage statistics covering industry and services. The OECD also provide data on economy-wide gender gaps for employees since 1970, although some countries only start reporting later.

There are two principal ways to calculate the gender wage gap. The first is the unadjusted pay gap, where average earnings of women are compared to average earnings of men. The second is the adjusted pay gap, which tries to measure the difference between the genders when controlling for characteristics that tend to influence the wage level, such as skill and education. The unadjusted pay gap tends to be larger than the adjusted pay gap, which reveal that a large part of the differences between women and men stems from the fact that female dominated occupations have lower wages than male dominated.

We have attempted, whenever possible, to use unadjusted, economy-wide, gender gaps. The reason is that we believe this measurement is more suitable for assessing the overall status of women in society. If there is a strong selection into female dominated occupations and they have markedly lower wages than male dominated occupations, the adjusted pay gap might indicate that disparities are small while they in practice are quite substantial. Some could argue that the unadjusted pay gap is "natural" and not a sign of discrimination, and that women are hardwired to pursue certain occupations that have lower productivity. This however neglects the historical fact that what types of jobs that are interpreted as feminine and masculine is not fixed. There are several jobs that have undergone a masculinization or feminization processes which is not directly related to shifts in production methods and technology (Sommestad 1994, Wikander 1988).

While we prefer to use the economy-wide unadjusted pay gap, it has not always been possible since there are only a few countries where these are available for longer periods. This means that we have chosen to include wage gaps in manufacturing as a substitute when such data are available. Our estimates are likely to underestimate the pay gap in countries where we only have numbers for manufacturing. Importantly, for Sweden, we have access to both the industry-specific and the economy-wide series from 1920, which provides a cross-check of the validity of the two series.

In addition to Sweden, the countries and territories that we have been able to collect data for are Great Britain, Canada, the United States, Denmark, Norway, Germany, the Netherlands, and Italy. Figure 6 shows the series for each place compared to Sweden.

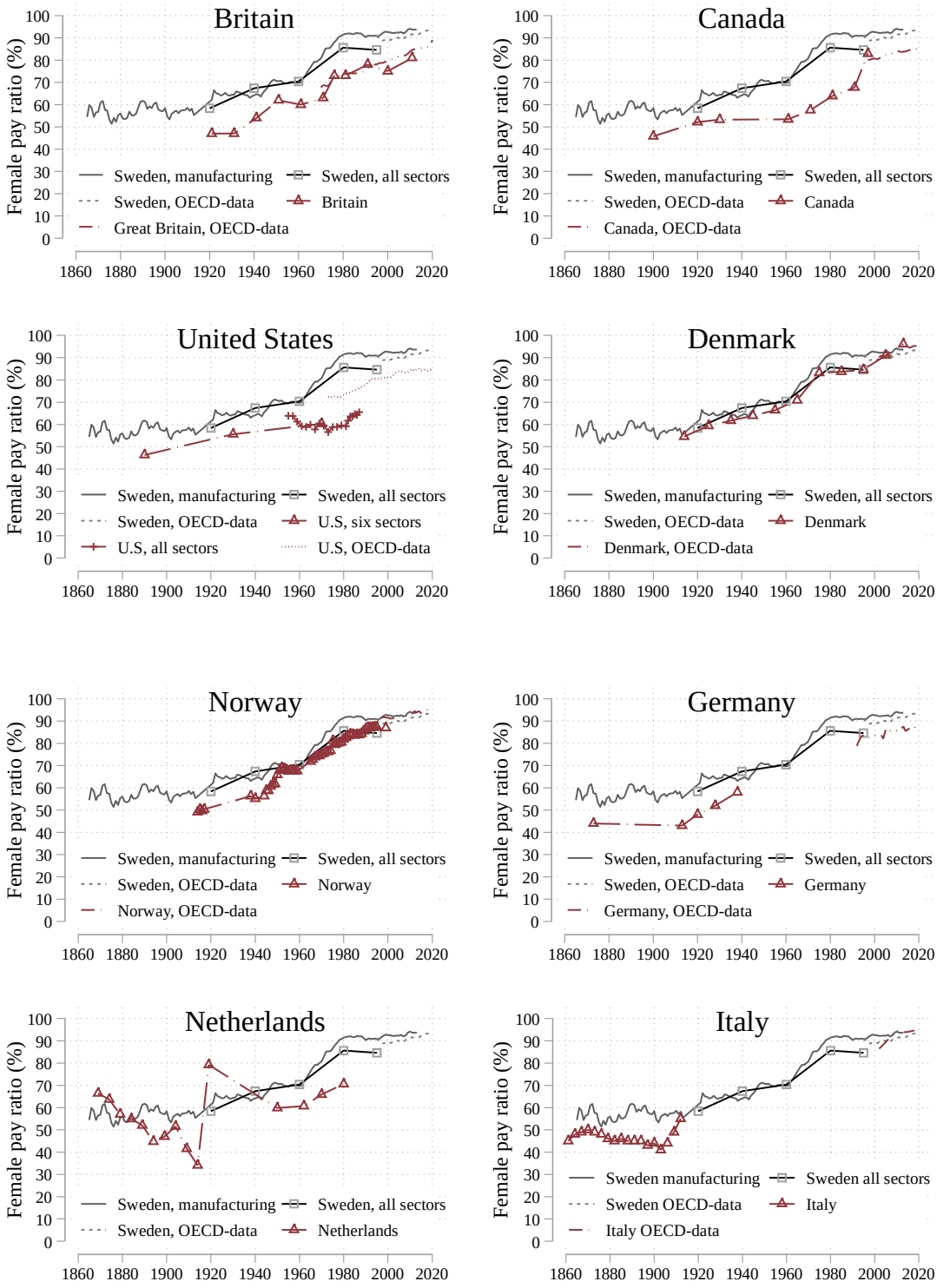
Starting with the evidence for Sweden, the gender wage gap in manufacturing started out at around 60 percent in the 1860s and then remained stable during the period up to

WW1. From this point on, it started to increase. The rise was slow but continuous until the 1960s when a rapid increase ensued that lasted until about 1980 and that brought the gap from about 70 to 90 percent. Since the 1980s, the gap has been stable. The economy-wide series tells a similar story, but stagnates at a lower level in the 1980s. The OECD-data, only available from 1990, also depicts stability in the gap during the last couple of decades.

In comparison to the other countries, a few interesting patterns emerge. The gender pay gap in Denmark and to some extent Norway followed a very similar trajectory as that in Sweden. In Denmark, the wage gap in the 1920s and 1930s was basically the same as in Sweden, while it was slightly larger in Norway. Norway caught up during the 1940s, however. In contrast to the English-speaking countries: Britain, Canada, and the US, the gender pay gap in Sweden and the other two Scandinavian countries was clearly smaller both historically as well as in the more recent decades. For the countries in North-Western Europe the pattern is more mixed. The gap in Germany in the later nineteenth and early twentieth century was clearly greater, while the Netherlands shows large variation over time. The Dutch series begin at almost 70 percent but declines throughout the period prior to WW1, and then sees a quick upsurge during the war but then falls back again in the early postwar period. The only Southern European country for which we have found historical data for this period is Italy. The Italian series shows a gap of just below 50 percent in the late nineteenth century with a slightly declining trend up to the early twentieth century when the ratio shoots up. Unfortunately, the

Italian data ends in 1912 so it is not possible to discern whether it was a temporary swing or a more permanent shift.

Figure 6: Gender Wages Gap in Sweden Compared to other Countries.



Note: Swedish industrial wages from Prado (2010), economy wide 1920-1990 from Svensson (2003); Britain from Bryson et al (2020), full time manual employees 1921-1961, full time employees after that; Canada economy wide,

1900-1930 from Altman & Lamontacne (1996), 1961-1997 from Fortin & Huberman (2002); United States 1861-1970 six sectors and 1955-1987 economy wide, both from Goldin (1990); Denmark crafts and industry, from Danmarks Statistik (2015); Norway from Norge. Statistisk sentralbyrå, various years; The Netherlands casual industry labor 1869-1919 from Boter (2017), 1950-1980 hourly wages in industry for 1950, after that industry and services from Schippers & Siegers (1986); Italy from Federico et al (2021). OECD for all countries except the Netherlands. The data for Italy has kindly been shared by Leonardo Ridolfi.

There is some further scattered evidence for other countries of the industrial gender wage gap for the early twentieth century collected by Ewout Frankema. In Chile (1909), Australia (1912) and New Zealand (1906), women in industry earned some 40 to 46 percent of men whereas the same number in Sweden was above 55 percent. Brazil and Buenos Aires in Argentina however had a similar wage gap as Sweden in 1917 and 1920 respectively. In the late 1930s, Mexico and Colombia also had numbers that were close to Sweden. Buenos Aires is the only of those places with another observation further in time, one for 1940, which suggest that the gender gap had increased during the intervening period (Frankema 2012, table 2).

While the historical data is far from perfect, taken together, the evidence suggests that the gender pay gap in Sweden, and perhaps in Scandinavia as a whole, was relatively small historically. It thus seems that the gradient in gender pay gaps that we can observe in modern data, and where the Scandinavian countries typically come out on top, has some historical precedence, at least in contrast to the English-speaking areas.

One factor that must be considered for understanding the gender pay gap is differences in female labor force participation across time and across countries. Research has found that in places with a larger gender gap in participation, such as in southern Europe, working women tend to have characteristics associated with high wages. In places with lower participation gaps, women from the lower end of the potential distribution of wages are also working, leading to a bigger gap in wages than in places where working women are a more strongly selected subset of all women (Olivetti and Petrolongo, 2008). In the Swedish case, we can however exclude a low female participation rate as the cause for the relatively small gender wage gap historically. Research has shown, to the contrary, that Sweden had a comparatively high female participation rate already in 1960, and likely also earlier in the twentieth century. When the participation rate for Swedish women began to expand from the 1960s, it did so from a level that was already high by international standards (Costa, 2000; Molinder, 2022).

While there are significant differences between countries observed at the same point in time, the main story that the data conveys is clearly that of more or less consistent progress over the long run in all countries in the comparison. The gap of 15 percentage points

between Sweden and Germany in the late nineteenth century is smaller than the difference of 30 percentage points between Sweden in the 1860s and Sweden today.

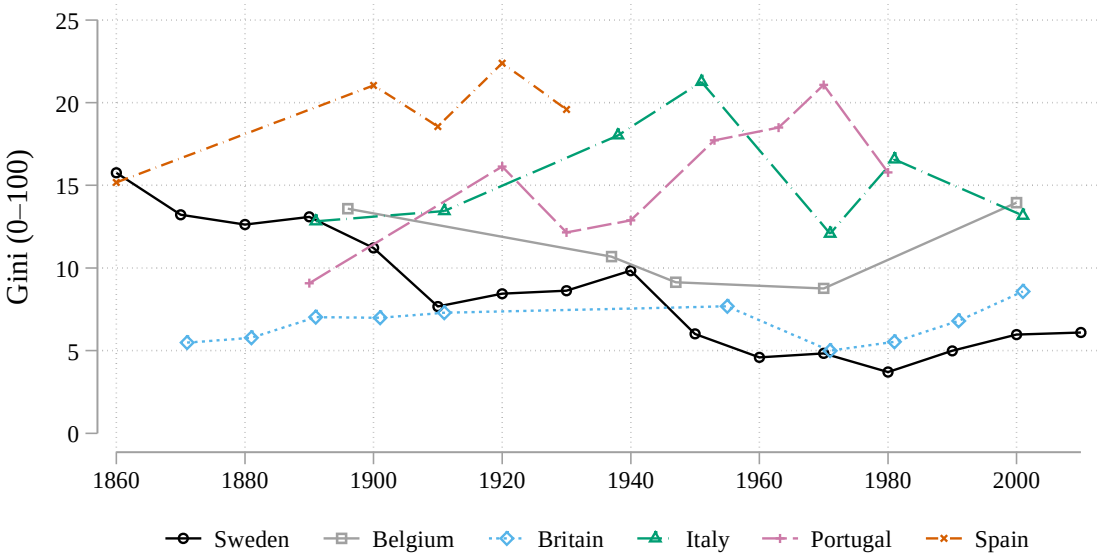
Regional Differences

The difference in incomes across regions of a country is another salient cleavage both in industrial society and today. In a famous study, Jeffrey Williamson posited a Kuznets-like pattern of regional inequality over the process of economic development; In the initial stages of industrialization regional dispersion in incomes tend to increase until development reaches a point where inequality starts instead to decrease. Williamson argued that this pattern resulted from the fact that industrial expansion was concentrated to specific locations during the initial stages of development, while the remaining regions remained predominantly agricultural. Over time, industrialization spreads more widely, and regional disparities decrease as a consequence. According to Williamson, market integration through the flow of capital and labor contributes to the process (Williamson, 1965, Barrios and Strobl, 2009)

In Figure 7 we have collected the available evidence on the dispersion of regional GDP per capita for countries with data that goes back to at least the early twentieth century (See Enflo and Roses, 2015 for a similar comparison). These data are not completely comparable as estimates differ to some extent in their methodology. The figure, however, provides an outline of the broad trends. As can be seen in the figure, Sweden started out in the early twentieth century with levels of regional inequality similar to other Western and Southern European countries. In the late 1800s, the Gini of regional GDP per capita in Sweden was on parity with that in Italy and Belgium, and higher than in Spain and Britain. However, over the course of the late nineteenth and early twentieth century regional inequality kept decreasing in Sweden, such that by the 1950s, Sweden had the lowest dispersion in regional GDP per capita of all the countries in the comparison. There were two main episodes of levelling. The first consisted of the early industrialization period from the 1860s to the outbreak of WW1. The second took

place in the decades after WW2. Regional inequality reached its low-point in the 1980s, after which point it has increased slightly but remains low compared to the comparison countries.

Figure 7: Dispersion of Regional GDP per capita in Sweden Compared to Other Countries



Note: Own calculations based on regional GDP per capita series. Sweden: Enflo et al (2014); Britain: Crafts (2005); Belgium: Buyst (2010); Italy: Felice (2011); Portugal: Badia-Miró et al (2012); Spain: Martínez-Galarraga (2013). See Enflo and Roses (2015) Figure 3 for a similar comparison.

What is remarkable is that Sweden's regional inequality trended downwards while it was increasing in most other places. The only other country that experienced falling inequality over the same period was Belgium. The by far most developed of the economies in the comparison: Britain, started out with very small regional differences, and even though dispersion remained mostly stable, it was eventually overtaken by Sweden. While theory link rising inequality to the unequal distribution of industrialization and the creation of national markets, it is interesting to observe that the same process in the Swedish case was not associated with rising disparities, but rather, the opposite. The pattern is also not the result of differential levels of national economic development across countries, as Sweden show lower regional dispersion for all levels of GDP per capita (Enflo and Roses, 2015).

In recent years, there has also been an upsurge in studies of regional wages that confirm the results for Sweden on regional GDP per capita. Collin, Lundh, and Prado (2019) examine the evolution of regional wage differentials for manufacturing workers across the 24 historical Swedish counties between 1860 and 2009. They show that the labour market became increasingly integrated over time, as differences in wages declined and the regions with the

lowest wages at the outset experienced the most rapid increase. The same is the case in the series for wages of day-workers in agriculture across the same 24 counties over the 1757 to 1980 period presented in Prado et al (2021), and for construction workers between 1831 and 1900 analysed by Ericsson and Molinder (2020) (see also Collin, 2016).

What could explain the rapid rate of regional convergence in Sweden? One prominent factor is geographical mobility. Enflo, Lundh, and Prado (2014) show that internal migration was very responsive to wage differentials and shifted supply away from low wage regions, acting as a catalyst for wage growth in those places.[4] In a similar vein, Söderberg (1985) examined the responsiveness of internal migration to regional dispersion in wages and showed—in a comparison with France, Britain, and Prussia—that Sweden displayed the highest receptiveness. These results indicate that responsiveness to changed market conditions could help explain the pattern of rapid regional convergence.

What could then explain this high responsiveness of the Swedish population to the changes that came with industrialization? An interesting potential explanation come from the work of Michael Heffernan. He looked at the difference in geographical mobility between literate and non-literate conscripts in a region of France during the latter half of the nineteenth century and found that the literate group had significantly higher migration rates (Heffernan, 1992). If literacy (and human capital more broadly) is important for mobility, then the overall level of human capital in the population might be relevant for how well people are able to act on the opportunities that came with economic development. As we have surveyed earlier in this article, Sweden had an early advantage in basic human capital, signified both by high rates of literacy and primary schooling. These high rates of basic human capital might have made Sweden particularly well equipped to deal with the opportunities that came with economic growth, and this could be a reason why regional convergence was so rapid.

Inequality in Land Holdings

A particular aspect of inequality in wealth is the distribution of land. In agricultural societies, land constitutes the most important factor of production, and social standing and political influence are often strongly tied to its ownership. It is thus likely that the distribution of land holdings influences subsequent societal developments. There is evidence that a more egalitarian distribution of land historically facilitated investments in public goods and led to greater levels

[4] See also Enflo and Rosés (2015) and Collin, Lundh, and Prado (2018) for a similar explanation for the strong rate of real wage convergence.

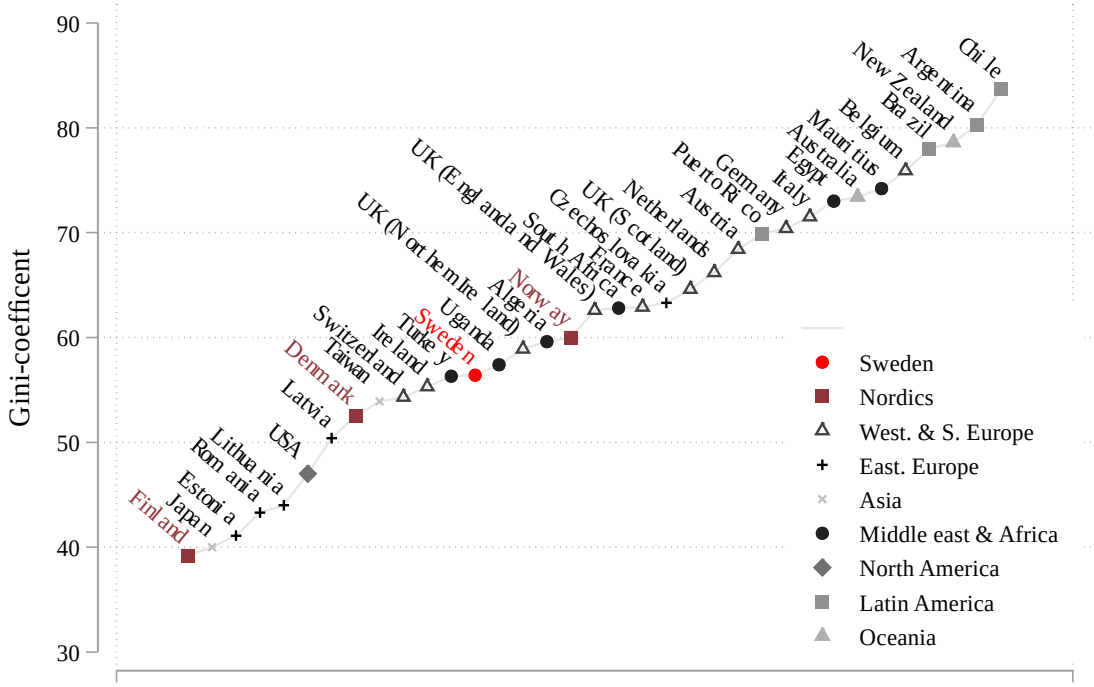
of human capital (Franck and Michalopoulos, 2017) as well as to better economic outcomes (Frankema, 2010; Nugent and Robinson, 2009). In the specific case of the Americas, Sokoloff and Engerman argued in their famous account that the more egalitarian land distribution in the United States and Canada resulted in more inclusive political institutions and greater investment in public goods compared to the more unequal countries in Latin America (Sokoloff & Engerman 1997, 2002).

Frankema (2009) has collected comparable data on land holdings from national and international sources going back to the late nineteenth century. These are compiled on the basis of the decile distribution of the total number of land holdings or farms, and the total amount of agricultural land nation-wide, excluding communal pastures and forests. The first observation for Sweden in Frankema's dataset is for 1919. We have stretched the record back further by adding an estimate for 1900. This estimate is based on a sample of tax records, from which it is possible to observe the distribution of the cameral measurement *mantal*, which was a fiscal measure historically used to describe the number of families that could be supported by a particular plot of land, and this include both the size and the productivity of the land. It is thus not exactly analogous to the measure applied by Frankema. The resulting land distribution Gini for Sweden in 1900 of 56.4 is, however, very similar to the value for 1919 reported by Frankema, which is 57.3; Suggesting stability over the intervening period. Aggregate data on the distribution of land holdings by field acreage from official statistics also depicts a strong stability in the distribution between the 1890s and the 1950s (Historical statistics for Sweden: Tab. D 12. p. 26; Tab. D 14., p. 27).

Figure 8 shows the available cross-country evidence on historical land inequality by plotting the Gini-coefficient in the earliest year for each country with data prior to 1930. The variation is large, ranging from a Gini of 39 in Finland to 84 in Chile. The value for Sweden of 56.4, puts it in 13th place (from most equal to least equal) among the 35 countries for which there is data. Among the Nordic neighbors, both Finland and Denmark had a more egalitarian land distributions than Sweden; Finland, in fact, the most egalitarian out of all countries. Sweden's Gini was, however, lower than Norway's, and the Nordic countries are all found in the lower half of the distribution. Sweden, while having a more unequal distribution of land than countries such as Japan and the United States as well as most of the countries in eastern Europe, were at the same time more equal than Western and Southern European countries such as France, the Netherlands, Germany, and Italy. From this comparison we cannot conclude that

Sweden historically had an unusually egalitarian distribution of land; In a comparative perspective, it places in the range of other European countries.

Figure 8: Historical Inequality in Land Holdings, 1880–1930



Note: The figure show Gini-coefficients for the distribution of land from the Frankema (2009) dataset. The earliest year is shown for every country with data prior to 1930. The earliest data point is for the United States in 1880. We have added a benchmark for Sweden in 1900, suggesting a Gini-coefficient of 57.3.

What do we know about the historical evolution of the inequality in land ownership in Sweden? Bengtsson et al (2018) present the Gini for rural real estate, which consist of both the value of land and buildings. While inequality was very stark, the Gini is stable over time, decreasing slightly from 0.95 in 1750 to 0.92 in 1900. Bengtsson and Svensson (2019) restricts the analysis to peasant farmers, which makes the measure of wealth inequality more similar to that for land holdings in Frankema (2009). Unfortunately, it is not possible from their study to pick out only rural real estate. They find that the Gini for wealth ownership among peasant farmers grew from 0.46 in 1750 to 0.73 in 1900. They argue that Swedish peasant farmers in 1750 were economically speaking a rather homogenous and equal group. Over the next 150 years, however, stratification within the group increased. Peasants became wealthier everywhere, but the growth in wealth was concentrated to some geographical areas. Those who benefited most

were the farmers in places close to major urban centers, harbors, and railways, and those with access to more productive soil.

Discussion and Conclusions

In this article we have provided the first encompassing comparative investigation of inequality in Sweden in the nineteenth and early twentieth century. In fact, it is as far as we know the first systematic review of comparative historical inequality for any country. By extending the range of inequality indicators, we have been able to offer a new interpretation of the evolution of inequality in Sweden.

As described in the introduction, ideas about historical levels of inequality in Sweden have varied significantly. Authors like Rothstein and Uslaner (2005) have pointed to an initially more egalitarian social structure as the reason Sweden and the other Scandinavian countries developed extensive welfare states, but without any data to back up their claim. Bengtsson (2019) to the contrary, pointing to data on top income shares and wealth inequality, argues that Sweden in the late nineteenth century was among the most unequal countries in the western world. Our examination of top income and wealth shares also confirmed that Sweden was among the most unequal according to this metric. However, top distribution measures do not reveal anything about the distribution among the vast majority of the population and does not allow any examination of specific economic cleavages between different groups.

Along some dimensions, such as blue-collar skill premiums and the gender wage gap, it appears that equality was greater in Sweden already in the late nineteenth century when our earliest data series starts. Along other dimensions, such as the spread of regional GDP per capita and inequality in land holdings, Sweden appears in the middle of the pack, but hardly among the more unequal of the comparison countries. Our results thus conform quite well with Esping-Andersen's notion of a Swedish socio-economic structure characterized by a very rich elite but with much smaller economic cleavages among the large majority of the population, even though his notion that the "popular masses were divided by very little except geographic distance (Esping-Andersen, 1992, p. 40)" might be slightly exaggerated.

It is also of note that in cases where comparable data exist, it seems that the other Scandinavian countries followed a trajectory similar to Sweden. In terms of gender wage gaps and skill differentials among blue-collar workers, they were similarly small in Denmark and Norway. The same is true for the evolution of white-collar income premiums, where the Scandinavian countries seem to have followed in the reversal from large to relatively small differences. Explanations for the trajectory of economic inequality in Sweden should therefore

also conform with the experience its Scandinavian neighbors. It is also important to emphasize that in terms of top income shares, white collar income premiums, and gender wage gaps, all countries in the comparison experienced significant levelling over the period. As Frey (2019) argues, the technological development associated with the second industrial revolution seems to have been conducive to wage growth and decreased inequalities. These technologies were however widely adopted across the western world and do not seem to explain the differences across countries. Instead, the wide distribution of literacy and basic human capital probably goes a long way in explaining why wage differentials among blue-collar workers of different skill were quite small in Sweden. This factor might also explain that labor markets were so well integrated. Workers were able to react to price signals and were willing to migrate to places with greater prospects, which in turn explains why regional differences in GDP per capita and wages converged so rapidly.

Our new evidence also highlights a different timing of the start of equalization. While Bengtsson (2019) and Gärtner and Prado (2016) claims that inequality only started to decline in the 1920s, we show that this process began several decades earlier. This casts the development of inequality and institutions in a different light than many previous explanations. It doesn't square very well with Acemoglu and Robinsons (2010) interpretation that rising inequality led to extension of the franchise which in turn lead to lower inequality through redistribution since the near universal suffrage wasn't introduced until the 1920s, and the levelling process had started before that. Other factors, such as the labor movement, collective bargaining, and social spending, which all have been emphasized in earlier research, were still important. The way in which they mattered though is cast in a different light by our findings. Rather than politics being the prime mover, changes in the economy came first. When the labor movement gained strength, they did this on the back of rising real wages and an improved relative position. Another case in point is women's relative wages. Even though there was a pronounced gender gap in Sweden, this was lower than in many other comparable countries. Women's wages started increasing in spite of political decisions.

Our results also have further implications. Since incomes seem to have been more compressed at the bottom, this means that consumption could also be more evenly spread. That

would have allowed the poorer segments to enjoy a living standard that in many ways was comparable to, or even higher than, in countries with higher estimated GDP.

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